Problems of monocities of the Extreme North and their place in the economic development of the Arctic zone

A D Stoyanov, A S Sakharova
St. Petersburg State University, St. Petersburg, Russia

sa1516119s@gmail.com

Abstract. In the modern world, the development of the Arctic and Antarctic regions is becoming increasingly important due to their resource attractiveness and, in the context of global warming, their potential use as new routes of transport connection. Of course, in this context, the development of infrastructure is of a particular importance, for example, in the Russian Federation, due to the raw material orientation of the economy, many cities located in the Arctic and Subarctic zones are built around a city-forming enterprise aimed at the extraction or processing of raw materials, such situation results in a fairly substantial list of problematic questions. This study focuses on the analysis of the position and role of single-industry cities in the development of the Arctic region of the Russian Federation. The conclusions and results obtained in the following work may be interesting in the context of studying impact factors on the development of the Arctic and Subarctic territories of Russia. Also, this work is aimed at developing proposals for changing the situation in single-industry cities in order to accelerate the development of this region and improve the overall economic situation, in the aggregate, this can be useful in developing territorial development strategies not only for government bodies and programs, but also for private companies interested in investing in development projects.

1. Introduction

The relevance of the studied issues is determined by the inclusion of the Arctic issue among the priority areas of Russian policy, in connection with which the state requires developed, economically and socially stable northern cities that could become international ports or federal research bases. In addition, the Extreme North is the main source of the country, and since the reorientation of the Russian economy from the raw materials industry is not expected in the nearest future, the prosperity of the Extreme North cities is a necessary condition for the welfare of the entire country. However, contrary to the foregoing, the demographic situation in the north continues to be characterized by massive outflows of the population, and the economy is characterized by circularity and non-diversification, which contradicts sustainable effective economic development and does not allow these cities to become a full-fledged pillar in the implementation of Arctic projects of the Russian Federation, in particular, the Northeast Passage.

In accordance with the foregoing, the following goal was set: to identify problems and prospects for the development of single-industry cities of the Russian Arctic zone. To achieve this goal, the following tasks were solved:

1) to identify and evaluate indicators of the level of economic development of cities in the Arctic zone of the Russian Federation;
2) to determine ways of solving the problems faced by northern single-industry cities;
3) to analyze the role of northern single-industry cities in restraining the economic development of the Arctic zone.

2. Materials and Methods
In the following work, a number of methods were used, which together make it possible to understand the essence of the problem under consideration. Among these it is possible to distinguish analytical, inductive and other methods, as well as a systematic approach, which together allowed, while turning to particular examples to draw general conclusions and patterns, as well as develop possible recommendations aimed at solving the problems of single-industry cities of the Arctic region of the Russian Federation. In the course of study were used monographs on concerning issues, opinion polls, statistics and media reports as well as official documentation.

3. Results
The starting point in solving the tasks is to illustrate the current situation in the cities in the Far North of Russia, taking into account their current economic level of development.

First of all, it should be noted that most of the Russian cities in the Arctic zone are characterized by a single-industry economic cycle, self-contained on the activities of one enterprise. A single definition of the term “status of a single-industry city” does not contain a single regulatory act of the Russian Federation, however, Government Decree No. 709 from July 29, 2014 includes a number of criteria for classifying municipal entities as single-industry cities, namely:

1) the number of employees of one of the organizations over the past 5 years is at least 20% of all employees in all organizations of a considered territory;
2) the activity status of the organization in which the majority of the population is engaged - mining operations (excluding gas and oil), production or processing of industrial products;
3) not less than 3000 permanent residents [1].

Also, this decree offers a classification of single-industry municipalities according to the level of socio-economic problems [1]. The separation criterion itself unequivocally indicates that the majority of single-industry cities are in decline. This normative act divides them into three groups: the red zone, that includes cities with the most difficult situations, the yellow zone - the cities in which there is a threat of deterioration, and the green zone, which includes cities with a more stable situation. About 2/3 of the 319 monotowns belong to the red and yellow zones, so the situation there is assessed as complicated or complexified. However, it is impossible not to emphasize that this division is reasonably controversial, because it is based both on objective parameters (unemployment rate, state of a city-forming enterprise, and so on), and on a subjective factor, namely, a population survey. In addition, even in the case of green zone cities, they also have a number of unresolved issues [2].

The criteria put forward by the Ministry of Regional Development of the Russian Federation also deserve attention, according to them a single-industry city is characterized by the presence of one enterprise and the dependence of a significant part of the budget of the municipality on the activities of this organization. At the same time, the aforementioned enterprise becomes not only a source of jobs, but also an important link in maintaining and developing the city’s infrastructure and social policy [3]. The lack of diversification of the economy and the monopoly of the city-forming enterprise lead to an unstable economic situation. For this reason, in the early 2000s, the government demanded from the city-forming enterprises to create individual restructuring plans, nevertheless the crisis of 2008-2009 did not allow this initiative to be carried out on a full scale, moreover, due to the complicated economic situation, enterprises had to make a number of job cuts [4]. In general, enterprises are not always able to adapt to the conditions dictated by the reforms, this creates a “knot of stagnant socio-economic problems” [5]. In a study made by the World Bank Group, monotowns are called a “big social problem for Russia,” which is a legacy of the USSR and a burden for the regions at the present stage [6].
Contrary to the fact that the term “single-industry city” is not common outside the scientific community, the phenomenon itself is ubiquitous and it would be a mistake to underestimate the significance of the challenges faced by single-industry towns. These settlements exist in 61 regions of the Russian Federation, and their combined population is about 14 million people, which is a tenth of the total population of the country. In 10 regions, more than 20% of the population lives in single-industry cities; moreover, there are regions in which the vast majority belongs to residents of single-industry cities. Among the districts with the largest number of single-industry towns is the Siberian Federal District, where 66 of the 319 single-industry towns are located [4]. Most of the Siberian Federal District consists of regions of the Far North, as well as territories equated to them [7]. In this regard, an analysis of the situation in the cities of the Far North of Russia would be incomplete without studying the state of single-industry cities.

4. Discussion

Further, it seems necessary to move from the general characteristics of single-industry cities in the Russian Federation to specific problems of those that impede the development of the economic potential of not only the settlements themselves, but the entire Arctic zone as a whole.

One of the most important problems is the dependence of the population and infrastructure of the city on the enterprise, which leads to the fact that, in the event of the closure of the organization, all of the city’s activities will be in danger of a complete halt. A number of experts argue that it is more difficult for monotowns that are located far from their regional centers to resolve such situations, as a rule, it is precisely such a situation that characterizes the state of single-industry cities in the Far North region. For this reason, those people who did not manage to get a job have no opportunity to continue living in it and at the same time commute to work in another city.

So, as an example, Norilsk is being considered, it is dependent on OJSC Norilsk Nickel, it employs about 12,000 people, the company takes an active part in the life of the city and provides about 90% of the municipal budget, if it is closed or a wave of large-scale job-cuts begins, the consequences can be extremely negative, both for the residents and the economy of the city and the region [8]. Norilsk is located 1500 km from Krasnoyarsk (its regional center and in conjunction with its closest major city). The city is located in the permafrost region and does not have any railroads or motorways leading from the city. In the event of complete or partial termination of the airport, a significant number of residents would be left without means of subsistence and any ability to move elsewhere.

In the context of the aforementioned problem, it is necessary to consider another dimension, for example, the opposite situation also entails certain risks in which the city-forming enterprise, on the contrary, is developing successfully. In this case, the salaries of the organization’s employees will increase, which will entail a high differentiation of income within the single-industry town.

The next rather important aspect to be discussed is the low level of economic diversification, as well as the commitment of the majority of single-industry towns to the raw materials sector, which limits the abilities of residents by reducing the diversity of labour supply. According to a survey among the residents of single-industry towns, 89.5% of respondents believe that it is difficult for them to find decent work in their place of residence [9]. An unfavorable situation on the labor market is also confirmed by official statistics: the average unemployment rate in single-industry cities is almost 1.5 times higher than the all-Russian indicator [4].

Based on the foregoing, logically the problem of population outflow among young people follows. The results of a study conducted by sociologists from St. Petersburg and Moscow show that on average 75% of graduates leave and do not return to monotowns in the Extreme North. The lack of a sufficient number of educational institutions annually provokes migration waves, but this does not explain the fact that graduates after graduation from higher educational institutions do not return. This trend is due to the fact that those who have received a specialty in which the city-forming enterprise is not interested have rather ambiguous prospects not only for career growth, but also for employment in general. For this reason, targeted training and the opening of branches of universities in single-industry towns does not have the expected effect [10].
This study also focuses on suggesting options for overcoming the problems identified, therefore, it seems appropriate to go on to methods aimed at resolving the issues, which would not only improve the economic and social situation within the single-industry cities themselves, but would also speed up and intensify the process of reclaiming and economic development of the Arctic region.

At the moment, the non-profit organization “Monocities Development Fund” has taken the most active role in ensuring the development of single-industry cities. The Fund proclaimed its mission “to assist in the development of infrastructure and diversify the economy of single-industry cities in order to stabilize their socio-demographic and economic status”. Basically, the activities of the Fund are reduced to studying the situation of single-industry cities, attracting investments for the implementation of a number of projects and the construction of infrastructure facilities in single-industry cities. In addition, an important task for the Fund now is the organizational support of the Complex Development of Monotowns program, which the organization marks as a priority [11]. If we consider the Fund’s contribution to the federal districts on the territory of which the single-industry cities of the Far North are located (and these are the Siberian Federal District, the North-West Federal District and the Ural Federal District), then it is possible to notice the following: the average investment in the volume of investments and obligations assumed by the Fund to the subjects is significantly lower than the financial assistance to Volga Federal County [12].

When providing support, the Fund proceeds from the individual indicators of each city, dividing the single-industry cities into 4 segments depending on the level of the following indicators: unemployment, per capita income, forecast of changes in indicators based on macro factors for one year, the number and turnover of enterprises other than the city-forming, the number of employees engaged in GROF. Based on the classification, a cluster was created in which cities are located by the principle of a difficult / stable socio-economic situation and low / high potential. It should be noted that most cities (134 out of 319) are characterized by both low potential and a difficult socio-economic situation. For each segment, the Fund has developed its own list of measures [12]. Among the projects carried out by the Fund, it is important to mention the one that is not related to financing, but has more fundamental goals - education for mayors and employees of Institutes for the development of single-industry towns, which is designed to change the way of thinking, as well as provide the necessary knowledge to the managerial staff. First of all, we are talking about the ability to attract investors and conduct a productive dialogue with them. 200 teams of mayors from to 200 cities have passed the course at the moment [13].

Turning to specific proposals for diversifying the economy of northern cities, it is worth noting that one of the options could be the development of the service sector, for example, the emergence of the tourism potential that was originally laid in the northern territories [14]. This program would not only solve the problem of employment and the dependence of the municipal budget on the city-forming enterprise, but would also allow it to be done without increasing the extraction of natural resources. Despite the underdeveloped transport infrastructure and the high cost of the route, according to surveys, the Far North seems to most respondents (77%) an attractive tourist destination [15]. World practice shows that for many cities in the Arctic zone (Tromso, a number of cities in Greenland) tourism has become a significant budget item [16]. The experience of the Swedish northern single-industry city of Kiruna deserves special attention. The local city-forming enterprise is represented by the successful mining company LKAB. In order to resolve the problems existing in the city, the authorities resorted to diversification of the economy. Now the city is in a phase of active changes, forming enterprise is represented by the Fund, it is important to mention the one that is not related to financing, but has more fundamental goals - education for mayors and employees of Institutes for the development of single-industry towns, which is designed to change the way of thinking, as well as provide the necessary knowledge to the managerial staff. First of all, we are talking about the ability to attract investors and conduct a productive dialogue with them. 200 teams of mayors from to 200 cities have passed the course at the moment [13].

Speaking of traffic flows, despite the fact that aviation is practically the only means of communication between cities in the Arctic region, this system is also imperfect. A flight from Norilsk to another city of the Far North Naryan-Mans would be about 1,400 km, but there is no such flight
(like most others), and therefore it is necessary to make a route through Moscow. Thus, a one-way flight takes 15 hours. Northern cities are not only weakly connected with large cities (including their regional centers), but also usually do not have connections between themselves [18]. This situation is also an open question, since active communication, supported by joint municipal programs in the field of economics and education, could contribute to the development of these cities, as well as partially compensate for the insulation and isolation that negatively affect the consciousness of residents of the northern regions. However, today the majority of northern cities are “enclaves” that have a fairly developed internal infrastructure, but the development of the territory is not carried out outside the boundaries of the cities [19].

Finally, turning to the means of communication, the distribution map of the baseline networks demonstrates that the main Russian providers (Rostelecom, Megafon, Synterra, TransTeleCom and Orange Business Service) almost do not operate in the north of the country [20]. The geographical isolation of the Arctic cities should be compensated by informational remote involvement in the life of the state.

5. Conclusion
Thus, summarizing the research carried out above, it is necessary to note the following - in general, the region is distinguished by degradation in most areas (economy, education, infrastructure, etc.), which is largely due to the isolation of cities, their insufficiently developed or absent transport links with other settlements. This prevents the exchange of technology and knowledge, the development of private business, and also makes cities unattractive for life, which leads to massive outflows of the population. However, there are a number of measures that could contribute to the development of single-industry cities, the overall improvement of the economic, transport and social sectors, with the aim of attracting personnel and investments for the development of the Arctic and Arctic zones and the implementation of the Northern Sea Route project, as well as other similar initiatives. It is important to note that without resolving the accumulating problems of single-industry cities, revealing the economic potential of the Arctic for Russia will be extremely difficult due to the remoteness of the main infrastructure facilities and the underdeveloped transport communications.

References
[1] Decree of the Government of the Russian Federation No.709 29.07.2014 On the criteria for classifying municipalities of the Russian Federation as single-industry (single-industry towns) and categories of single-industry municipalities of the Russian Federation (single-industry towns) depending on the risks of worsening their socio-economic situation
[2] IISS analytical report 2017 Institute for Integrated Strategic Studies Overview of Russian single-industry towns
[3] Prusova V I, Kovalenko N V, Beznovskaya V V, Kirillova V O 2017 Russian monotowns: problems and development prospects International Journal of Humanities and Natural Sciences 187-193
[4] Miroshnikov S N 2017 Monocities: modern practice and prospects Eurasian Scientific Association 151-154
[5] Buchwald EM 2017 Single-industry towns in the strategic planning system in Russia Theory and practice of social development 75-78
[6] World Bank 2018 Overcoming spatial inequality
[7] The list of regions of the Far North and equivalent localities Available from: http://www.gks.ru/bgd/regl/b09_22/isswww.exe /stg/territoriya.htm [Accessed 1 February 2020]
[8] Single-industry towns and city-forming enterprises of the sphere of activity of the Ministry of Industry and Trade of the Russian Federation Available from: http:/ /minpromtorg.gov.ru/common/upload/o_data/addition_material/monog_list.pdf [Accessed 1 February 2020]
[9] Portal of the state and municipal financial audit - Survey of residents of single-industry towns
Available from: https://portal.audit.gov.ru/#/surveys/announcements/view/144358222
[Accessed 3 February 2020]

[10] One way ticket. How to keep youth in single-industry towns of the North? 2017 The latest news
Available from: https://newizv.ru/news/politics/06-10-2017/bilet-v-odin-konets-mozhno-li-uderzhat-molodezh-v-monogorodah-severa?id=bilet-v-odin-konets-mozhno-li-uderzhat-molodezh-v-monogorodah-severa & published_date = 06-10-2017 & rubric = politics & type = NewsItem [Accessed 3 February 2020]

[11] Fund About the Fund The Monotown Development Available from: http://xn--80afd4affbbat.xn--p1ai/about/
[Accessed 9 February 2020]

[12] Reports on activities and presentations The Monotown Development Fund Available from: http://xn--80afd4affbbat.xn--p1ai/upload/manual-upload/report_2017/mobile/index.html
[Accessed 9 February 2020]

[13] Second Life of single-industry towns: retraining of mayors and comprehensive improvement Available from: https://tass.ru/ekonomika/4046308 [Accessed 9 February 2020]

[14] Stoyanov A D, Sakharova A S 2019 The Development Prospects of Tourist Infrastructure in the Cities of Extreme North Arctic: History and Modernity Works of the Annual International Scientific Conference 18-19 April 2019 Saint-Petersburg 58

[15] Zhibikovskaya M S 2018 The Arctic as a tourist destination Social and economic sciences in modern research 36-400

[16] Advarer mot turistboom i nord Available from: https://www.nrk.no/troms/advarer-mot-turistboom-i-nord-1.14448135 [Accessed 9 February 2020]

[17] Jobben finns i Kiruna trots låg arbetslöshet Available from: https://www.nsd.se/nyheter/jobben-fins-i-kiruna-trots-lag-arbetslosset-mm4718658.aspx [Accessed 9 February 2020]

[18] How the Extreme North is degrading without roads Available from: https://www.rbc.ru/society/20/11/2015/56bc8c789a7947299f72b8a4 [Accessed 7 February 2020]

[19] Kurilov O It’s not just about money Available from: http://newslab.ru/article/716731 [Accessed 9 February 2020]

[20] Top-10 providers of Russia and Top-3 of the largest providers in Moscow Available from: http://rubroad.ru/magazine/providers/4530-top-10-magistralnyh-provajderov-rossii-i-top-3-krupnejshih-magistralnyh-provajderov-moskvy.html [Accessed 3 February 2020]