

The “Silk Road of China” and economic priorities of the Pacific Russia

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Abstract. The article discusses the strategic initiative of China, "One Belt, One Road" (OBOR), aimed at creating a new model of international economic cooperation. This megaproject, except establishment of new and modernization of centuries-old trade routes for the direct supply of goods from China through Eurasia to Europe and Africa, is aimed at the cardinal improvement of transport, logistics, energy and telecommunications infrastructure, which requires a fundamentally different level of coordination in the field of macroeconomic policies of states, readiness to reduce trade barriers and build more open contacts between people. "The new Silk Road of China" provides a new vector to a single Eurasian economic space, in which China expects to receive a system-forming role. In essence, this multi-purpose project leads to the practical testing of a new model of globalization, and at the same time inevitably generates a completely different context of anthropogenic impact on the environment, including environmental impact, and providing huge social, cultural, economic, institutional multi-level impacts. An example of this is the situation in the transboundary basin of the Amur River. The conservation value of the Amur ecoregion is selectively represented here; the differences in the transport accessibility of the border administrative facilities of the three countries are shown in comparative terms, the most likely options for the formation and development of infrastructure projects are discussed, the necessary restrictions as the conditions for ensuring the nature conservation values of the territory are discussed.

1. Introduction

The project of revival of the Great Silk Road, which is an ancient transcontinental trade route, which was opened before our era and united the Chinese and Roman empires, gave the name to the new strategic initiative of China "One Belt, One Road" (OBOR). In the framework of this megaproject, the two largest Chinese strategic projects are actually united: the "Economic belt of the Silk Road" and the "Silk Road of the XXI century", implemented in Asia, Africa and Europe, respectively, in order to create a new model of international economic cooperation. In total, this grandiose project, announced by the Chairman of the People's Republic of China Xi Jinping in September 2013, covers more than 60 countries, including 40% of global GDP and 4.4 billion of the world's population.

In the future, the new Silk Road, besides Africa and Europe, can cover Latin America. Within the framework of this initiative, six major existing and planned transport corridors are provided: Bangladesh-China-India-Myanmar, China-Mongolia-Russia, China-Central Asia-West Asia, China-



Indochina, China – Pakistan, and the Eurasian Continental Bridge through the territory of Kazakhstan [1].

It seems that with such a large-scale economic and social implementation of territorial transformations of raw materials, real environmental threats must be assessed. The most important threat is illegal logging and forest fires in Russia. Overgrazing by livestock sporadically occurs in Mongolia and Russia, and is rapidly growing throughout northeast China. Expansion of agriculture and infrastructure is largely an issue in China where rapid economic growth has enabled large government investments in irrigation, flood control, and road-rail infrastructure. Transboundary transport infrastructure is rapidly growing to connect Russia and Mongolia with China and other Asian markets. Excessive harvest of biological resources: timber, terrestrial wildlife is also triggered by international market demand. Fish resources are overexploited and total catch decreased manifold in recent decades, which necessitated Russia and China to agree on common fishing rules. Transboundary pollution and degradation of spawning rivers by logging and mining adds pressure on remaining fish populations [2].

Against this background, it is obvious that the extensive resource development model existing in Russia, dominating in the forestry and agrarian sector, will inevitably be complicated by the often poorly conceived options for a hasty creation of a new environmental management infrastructure that provides only immediate interests of investors but does not ensure the country's environmental and economic security. Therefore, in this report we focus on the fact that the alleged intensive development of a vast infrastructure and production, providing fundamentally different levels of transport access to the natural resources of the Russian territory (construction of new roads, bridges, pipelines, power lines, etc.), and construction of export-oriented large infrastructure facilities (hydroelectric power stations, ore mining and processing plants, coal mines, mines, etc.) will lead to large-scale changes in Siberia and the Far East.

We believe that large scale local-level programs and projects, in particular, Russian projects for the creation of infrastructure for Advanced Development Territories (ADT, or TOR) and the Free Port of Vladivostok (FPV), should also be included in the assessment of large-scale impacts. The state policy in the sphere of land use is also in need of revision; the ongoing process of practically uncontrolled implementation of the state program "Far Eastern Hectare", fundamentally changing the ownership structure in Russia due to the free distribution of land for the purpose of settling the Far Eastern region of Russia, needs reconsideration.

2. Materials and Methods

Within the framework of the Chinese megaproject, it is planned to establish seven "belts": transport, energy, trade, information, scientific and technical, agrarian, and tourist. The result may indeed be the emergence of a large-scale free trade zone from the north-western provinces of China, Central Asia, to Central and Eastern Europe. About 3 billion people live in the project area. Domestic geographers understand the surface of the Earth as a complex that arose and develops under the influence of mutually interconnected and interpenetrating processes, which unfold on land, in the atmosphere, in the hydrosphere, and in the organic world, which jointly make up the geosphere. In March 2015, Russian First Deputy Prime Minister Igor Shuvalov said about Russia's decision to take part in the strategy of the Economic belt of the Silk Road: "We are pleased with the opportunity to increase cooperation in the format of China and the Eurasian Union... Free movement of goods and capital within the framework of the EAEC brings together the economies of Europe and Asia, which echoes the initiative of the economic belt of the Silk Road put forward under the Chinese leadership. We are sure in the Russian Federation that the joint work on the development of the Eurasian partnership and economic belt of the Silk Road will create additional opportunities for the development of the countries of the Eurasian Union and China" [3].

The geographical approach to the study of human habitat is based on the identification and consideration of various natural and social factors, where the natural environment constitutes the basic part [4]. The work considers methodological issues that are important for the ecological economy,

necessary for taking into account when optimizing the location of production, agriculture, practical implementation of the sustainable development paradigm and sustainable nature management, biodiversity conservation and the study of ecosystem services in Russian territorial policy. Territorial resources represent a special group of geographic resources, since they must represent in an adequate form a very complex combination of the space-time diversity of the dynamically changing world.

Geosystem concept, landscape concept, and concept of territorial socio-economic systems can be noted as the most applicable in domestic geography, and the basic theory of the geosystems by Acad. V.B. Sochava provided a principle basis for applying system principles for assessing the human impacts on the environment. Geoinformation approach and GIS allow to provide generalization of phenomena on general geographic, natural-ecological and socio-economic multiscale maps, provides hierarchical decomposition of phenomena, situations and processes, allows modeling of internal structure and variety of geosystems [5]. A special condition is the choice of the basic spatial units: the primary component in geography is landscape (geosystem); the population is characterized by indicators of population, location, and many social and demographic indicators; the economy can be comprehensively defined through the establishment of volumes of goods and location of production facilities, and identification and mapping of infrastructure and communications providing certain geographic "linkage" [6].

We draw attention to environmental priorities, which are mainly expressed by the issues of biodiversity conservation, ecosystem services, maintenance of biosphere functions and preservation of ecological balance in the largest region of the world and Eurasia. Previously, we formulated and implemented the scientific tasks of analytical comparison and generalization of various schemes of physical-geographical, ecological-geographical and natural-economic zoning, with the purpose of visualizing the actual degree of anthropogenic disturbance in Russia [7]. When different geo-informational layers of landscape landscapes, population density maps, land use and various environmental impacts are compared, certain connections and patterns are revealed to judge the current state of Russian regions that could potentially be involved in the Chinese Silk Road project.

We believe that elaboration of an eco-regional interactive public "no go zones" schematic map, which will reflect the degree of risk to the integrity of the landscape when implementing large investment projects, can be an important tool in carrying out an environmental assessment. In our assessment of the degree of preservation of natural areas, the minimum size of an integral natural site of ≥ 500 square kilometers was adopted. The working scale of all comparisons, as well as our spatial analysis, respectively, was based on 1: 1 000 000 topographic maps of the Digital Chart of the World Data (DCW), which in 2012 were updated by the Russian company 'DATA+'. In addition to topographic maps, various electronic resources [8] of information on infrastructure changes in the territory of the Russian Federation have been used recently. A standard GIS software package was used in our work (ESRI software product, version ARCGIS 10.1).

We have revealed that a special role should be given to the anthropogenic changes in the landscape, which are progressing for the recent centuries. This is the reason for a significant transformation of local ecosystems, causing significant losses of biodiversity, reducing the total biological productivity and quality of ecosystem services, markedly amplified by negative manifestations of global climate change. Monitoring of these processes requires the identification and maintenance of unique "reference points", the extreme poles of which can be recognized as constructs - "wilderness" and its opposite, named as cultural, rural and urbanized areas or all together recognized as "cultural landscapes". Based on such assumptions, and taking ecoregional approach as a basis for the vast territory of Asian Russia, a comprehensive assessment of the degree of anthropogenic disturbance and its differentiation within the boundaries of the previously proposed Natural Economic Areas (NEA) were implemented (figure 1) [9].

3. Results and Discussion

In our theoretical work [10], etc. we underline that a fundamentally important aspect of the development of socioeconomic geography is its constructiveness or focus on solving certain practical

problems. Identification and evaluation of all features of territorial socio-economic systems and their structures existing in the country or region is an important and interesting scientific task. It is important that these systems and their structures already exist, function, and operate. But how effective they are, how they can be changed to become more effective, what are the possible variants and trends of their changes and dynamics, should be explained for the need of identification of territorial socio-economic systems (structures) that provide a more definite picture of the natural and social complementarity and interdependence in the context of understanding the processes of interaction through the system of actions expressed by certain economic activities and use of natural resources.

The economic belt of the Silk Road as a whole opens new opportunities for Russia. However, these opportunities are available only if Russia accepts reasonable, strategically weighed, favorable conditions of participation in this project, which is based on China's serious growing economic opportunities.

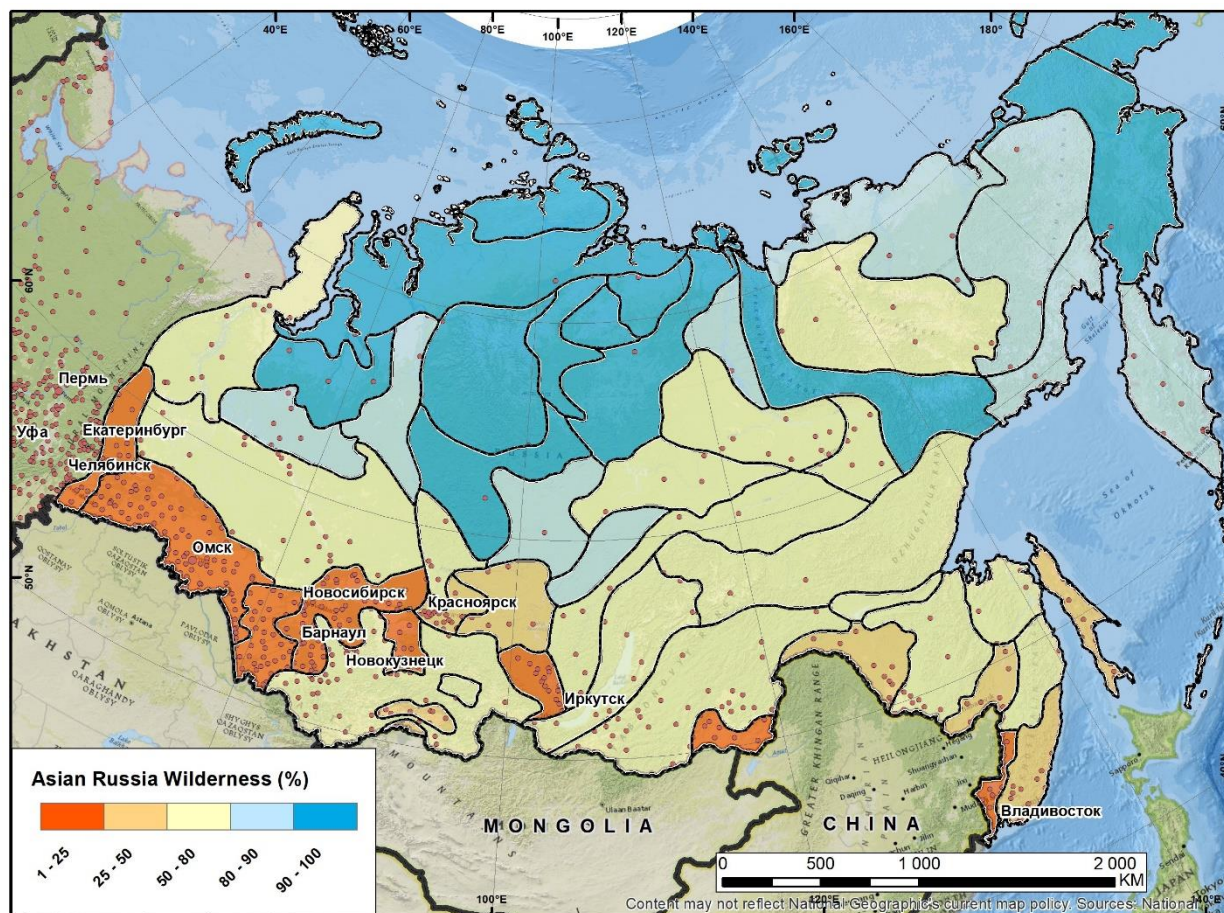


Figure 1. Wilderness in the Natural-Economic Areas (NEA) of Asian Russia.

The "New Silk Road" is regarded as the "Second Eurasian Land Bridge" between the economic poles of this continent. According to Chinese experts, it is the longest land bridge and it can become the most potentially significant on the Earth. Given the very large scale of the economy and foreign trade turnover of China and the European Union, providing high economic density throughout the entire considered geo-space, the high potential significance of this transport corridor is unquestionable. The length of the route from Lianyungang to Rotterdam is 10,900 km and, according to China estimates, the New Silk Road will form an economic zone that covers up to 23 percent of world

exports, involving more than 30 Eurasian countries with large market, huge potential and population of about 3 billion people.

Their formation in the context of globalization and activation of foreign economic relations and, at the same time, increased competition, geopolitical tensions in the modern world, is viewed as a real mechanism for the strategic unification of the Eurasian continental space, creating conditions for the sustainable development of its economy and improving the geopolitical relations between the poles. To date, it is expected that a group of "eastern" transport projects planned within the "PRC-Mongolia-RF" corridor will be limited in the east to the corridors "Primorye-1" and "Primorye-2". If we consider that the capacity of the existing port facilities confined by Primorye-1/-2 is limited even with regard to modernization, by the time of "Mongolian" projects, the issue of finding new ports for these projects is very likely to arise.

At the strategic level, in the medium term, the development of the PRC-Mongolia-RF corridor will lead to high probabilities of: a) reduction of presence and activities of the PRC in the form of large national projects in the south of the RFE. The majority of Chinese investors in the south of the RFE will be regional JVC companies interested in expanding their markets or purchasing raw materials, which at large do not meet the standards of the "green economy"; b) formation of export-oriented resource-producing clusters in the eastern Mongolia and adjacent areas of Inner Mongolia on the basis of existing and new transport corridors and power lines from Transbaikalia. If this scenario of environmental management is being implemented, this will exacerbate existing environmental, primarily water, problems of the Upper Amur, which is very significant for the southern RFE.

We believe that the Transsiberian railway (or 'Transsib') was considered for a long time as the first Eurasian transcontinental transport corridor [11]. Within its borders, the whole previous period was a significant opportunity to successfully implement integration functions in the relations of Russia and other countries (Japan, Republic Korea, DPRK, northeast provinces of China) of the Far East with Europe through development of the economic space along it, but for many objective and subjective reasons this route cannot yet provide this sufficiently.

The change in the vector of the strategic development of the PRC from the eastern (Northeast Asia) to the western one, which is stated in the package of documents "The Belt and the Way", is significant for the entire space of Northern Eurasia, including its eastern margin (Eastern Mongolia, RFE, NEA); however, it provokes a problem of modernization of transcontinental transport corridors and the formation of economic "West-East" axes along them, as well as foundation of a high-speed transport corridor and economic axis "North-South" along the Pacific coast of China and Russia. Significant potential opportunities are open for possible inclusion of the Arctic Ocean Route in the Maritime Silk Road of the 21st century. Still, the issues of ecological safety and sufficient level of conservation of the natural environment in Russia are sharply emerging.

Quite a lot has been done in our country earlier in the context of anthropogenic impact, but in the face of new global challenges and megaprojects, new geographical assessments and studies are required. In modern conditions, based on the calculation and application of the wilderness index, a specific work was carried out to preserve the natural geosystems within a "grid" of the natural and economic regions of Russia [7]. Previously, the existence of 106 natural and economic regions was substantiated for the territory of Russia [9]. Therefore, it can be argued that considering the potential impact of the implementation of the "Chinese Silk Road" project in the European part of Russia, more concern should be paid to the development of innovative green economy programs than preserving "impact-free" natural landscapes. Such landscapes most likely have the status of protected natural areas or areas with a special regime for nature management.

For centuries, the vast expanses of Russia from the Baltic to the Pacific Ocean have been a symbol of the greatness of the country. But if we map out and allocate very large areas of wildlife, huge foci of the economic development consequences are particularly noticeable in the Southern Siberia, South of the Far East, Central Siberia, and the Northeast. It is well known that Russia has strong disparities in regional development, and it is very likely that the development of the Chinese megaproject of the Chinese silk road will lead to new changes in the economic and social life of our country. According

to our calculations, it should be noted that wilderness was preserved only within 79 out of 106 total allocated NEA. In addition, five NEAs in the European part of Russia contain less than 1% of the wilderness, and in other 10 the share of wildlife does not exceed 10%; in general, 28% of NEAs in Russia contain less than a quarter of the wilderness.

A completely different picture is emerging in the Asian part of Russia, where more than half of the NEA is presented. The zoning of the territory according to the degree of conservation of wilderness displays that the maximum level of transformation of geosystems is registered in the Southern Siberia and in the south of the Russian Far East (Figure 1), noting that all these areas have a well-developed infrastructure within their boundaries, with main transport corridors and economic belts. More than half of the territory of Siberia and the Far East still contain half to four fifths of the remaining large areas of wilderness. The maximum level of preservation of the natural environment is recorded for the Arctic and mountainous regions of the Asian part of Russia.

4. Conclusion

Russia is not like the other, even the largest, states: it is characterized by vast territory, different models and economic structures, significant differences in the economic-geographic, geo-economic situation and the availability of mineral resources-all these and other reasons determined the dichotomy of the Russian space, but they also allow to find our way in the 21st century. It is obvious that the completed zoning is only the most general and preliminary assessment, more detailed surveys and calculations are needed. The search for solutions to major environmental problems requires new ways of thinking, and most importantly, the historically evolved heterogeneity of Russia's economic space reflects an exceptional variety of natural, geopolitical, socio-economic, and national cultural conditions in various parts of the country. Nevertheless, it can be noted that, in an ecological respect, the territory of Russia is still a unique phenomenon that provides environmental balance and considerably underestimated natural capital [12].

Many Russian regions actively support the Chinese initiative to include Russia's economic and social space in the megaproject of the Chinese Silk Road. This is facilitated by growing uncertainty in the development of the world economy and the global energy sector, unfavorable demographic and migration trends, along with the development of new technologies, reducing the number of working employment, while increasing the requirements for the educational level, and the unknown consequences of large-scale application of bio-, nano-, and cognitive technologies. We believe that at the state level it is necessary to introduce new standards for assessing large infrastructure objects such as strategic environmental assessment (SEA) in government programs and documents, and most importantly, joint active international work on the topic under consideration.

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