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ANALYSIS OF MORPHOLOGICAL PECULIARITIES OF THE STATE AREA OF THE REPUBLIC OF KAZAKHSTAN

Abstract. In modern conditions, space and location are not only considered to be the second category of public policy and become an important factor in the socio-economic development of the country. The main purpose of this article is to provide a comprehensive geographical analysis of the morphological features of the state territory of Kazakhstan to ensure geopolitical security of the country. Authors calculate the compactness index of the state territory of the country and the functional level of the capital, defines the geographical environment of the Republic of Kazakhstan. The results of the analysis allow to determine the advantages and disadvantages of morphological features of the state territory for the purpose of taking comprehensive measures for its strengthening and development.

Keywords: territory of the state, morphology of the territory, size of the territory, functional rank of the capital, geographical center of the state.

INTRODUCTION
For the whole geopolitical orientation, the basic concepts of "state", "territory", "space", which are the starting point of scientific-oriented analysis, remain constant. Their interaction is the basis of any geopolitical research.

The relevance of this research is related to the question of how successful promotion of geopolitical interests of the country depends on the quality of political organization and state of its geopolitical potential. The focus of the work on geopolitical situation assessment in the Republic of Kazakhstan is focused on the qualitative characteristic of traditional geographical characteristics. In this study, authors used the mathematical methods for the first time with regard to the state territory of the Republic of Kazakhstan that made the new knowledge reliable and undeniable.

Using mathematical methods allows constructive thematic interpretation of the collected facts, connects the recorded data to the appropriate classification categories, allows to restore or supplement missing data and logical structures with missing parts of phenomena or processes. The geo-political situation has been created for cartographic visualization.

Research Materials and Methods. During the research, authors used statistical, mathematical, cartographic and geographic information. The statistical data of the Statistical Committee of the Ministry of National Economy of the Republic of Kazakhstan became the basis of the study (http://stat.gov.kz). 1: 15,000,000 scale maps were used. ArcGIS was used to map the results obtained. The calculations presented in the work are performed in accordance with the methodologies and formulas described in [1].

MAIN PART
The state territory is the natural habitat of the population and the state's functioning. Within the boundaries of the State, it includes a portion of the surface, typical airspace, characteristic of the properties and resources created by natural and human activity overland and territorial waters, surface and water areas. As a special resource, the territory of the state may be the length (area), geographical features, certain types of natural landscapes, the level of economic development, etc. is described. Within the boundaries of the country, all the structures and systems of the country are geographically integrated,

which ensures the integrity of the territorial organization of society, the development of productive forces and cultural development. Space is one of the basic concepts of geopolitics. The spatial position of the country determines the potential or weakness of each state.

The famous Soviet economist Georgiev NN Baransky described this in Kazakhstan as follows: "All the centers here are in the periphery, and in the center there are non-human settlements" [2, p. 246]. Thus, the vulnerability of Kazakhstan within the region occupying ninth place in the world is hidden - all large territorial production facilities of the country are located on a narrow strip of perimeter of its borders.

In his review article, Russian geopolitician V. Tymbursky writes about the Kazakhstani space: "The general political and geographical value of the massive array of Semipalatinsk-Almaty-Aktobe, which has many strategic objects of Russia, rarely inhabited, will be found. The integration of uneven zones in the periphery of these triangles is impeded by the growing political space, and this space is attempting to consolidate this capital by moving the capital to Astana, located in the center of the northern line of the triangle, near the Russian border. "[3] The above two opinions are enough to emphasize the importance of a thorough study of the morphological, quantitative and qualitative characteristics of the territory of Kazakhstan.

At present, there are many typologies in the world. One of the leaders is the largest country with a territory of about 1 million km2 - 3 million km2. The country's territory is 2724,900 km2.

Territory of the state is not the only element of its morphological peculiarities. An important parameter is the configuration and shape of the country. Thus, compactness contributes to the greater integration of the territory, the equal accessibility of individual regions, the prolongation of communications, the creation of a border and checkpoints system. Territories that are fragile or geographically fragmented are more vulnerable and have not developed uniformly.

Results and discussion. Depending on the forms and forms of the state, several types of states are divided into: states with inaccurate or defective forms, compact states, fragmented states, enclaves.

Typology is also important for the population. According to this, at the beginning of 2018 there are 18,157,337 people (according to the RK Statistics Committee data) Kazakhstan is the category of middle-sized countries (10 million to 50 million people). The population density of 1 km2 is 6.6 gallons, which in turn affirms that the country is a rarely inhabited state.

In political geography, various quantitative parameters are used to describe the compactness and other morphological features of the state.

The compactness of the area can be determined using the Ik1 index, which compares the length of borders and the area of the state territory:

$$I_{k1} = \sqrt{\frac{S}{0,282L}},$$

Where S is the area of the territory, L is the length of the state border.

The length of Kazakhstan's borders is 13394 km on the land and 600 km in the Caspian Sea (source: the Committee on Statistics of the Republic of Kazakhstan). The total area of the country is 2724900 km2. Thus, Ik1 = 26.2. For France (including the coastline), it is 17.52 and the Spanish (with the coastline) is 16.12. Thus, the smaller the index, the smaller the country.

The compactness of the territory can also be expressed by the value of the State Border Index (Ik2) per 100 km2.

$$I_{k2} = \frac{L}{S}(100 \text{ км}^2)$$

According to this formula for Kazakhstan this index is 0.51. For France - 1,15, for Spain - 1,37, for Belarus - 1,39, for Luxembourg - 13,88, and for Australia - 0,33. The following patterns of legality are observed - the more index is bigger, the more compact territory is. However, the significant disadvantage of this method is the dependence of the index on the size of the area, relief, and rigidity.

Compactness of the area can be determined by comparing its shape with perfect figures (circle, square). For this purpose, the Haghete-Horton (Ik3) index can be used:

$$I_{k3} = \frac{1,27S}{L^2_{max}},$$

Here S is the longest line (the diameter of the outlined circle) passing through the area of the state territory (km2), the center of the measured area Lmax - km. Ik3 varies from 0 to 1, its value is equal to 064, for a triangle is 0.42, hexagonal is 0.83.

As noted above, the territory of Kazakhstan territory is 2724,900 km2, the longest line passing through the center is 3000 km [4]. Ik3 is 0.38 and is approximate to approximately the triangle, which in turn affirms the idea of the triangle [3].

The offered indexes allow to quantitatively evaluate the compactness of the state territory. Kazakhstan is one of the long-lasting and negative states of the world. The low-efficiency Kazakhstan territory is low, as the length of the borders is high, communications are low and the connection of separate regions is weak. And in this case, if the capital of the country is not in the center, it will be difficult to control the "gloomy political space". Therefore, the capital of the country should be moved closer to the center.

The geographical position of the capital, its place in the system of population settlement, political and economic functions determine the effectiveness of control and control of the whole state.

The functional level of the capital is determined on the basis of its place of residence in the urban population of the country. The numerical functionality of Astana can be determined by the proportionality index

$$(D_f = \frac{P1s}{P2}),$$

where P1s is the population of the capital, P2 is the largest city population after the capital. If Df <1.5, the capital of the capital in the states where the capital is not the largest city in the country is "advantageous" (irregularity); The functional rank of the main city is defined as 1.5 <Df <2.5, and Df> 2.5 - is recognized as the dominant. According to the method [1], Nur-Sultan belongs to the capital assigned to all the signs.

According to the Committee on Statistics of the Republic of Kazakhstan, by the beginning of 2018 the population of Nur-Sultan was equal to 1030577 people, and in Almaty - 1801993 people. Thus, the Nur-Sultan's proportionality index was 0.57, which indicates its "advantageous" position.

The perfect state of the capital is its location in the center of the country. The numerical value of its actual state can be determined by the eccentricity formula (Es):

$$E_s = \frac{CS}{R},$$

where CS is the arithmetic mean of the four diagonals ranging from central to state center (geodesic, geometric or demographic potential), R through the center of the state to 45 ° across the state border. If Es = 1, the condition of the capital is central, in the range 0 <Es <50 - center, 50 <Es <100, and if Es> 100 is peripheral.

There are several ways to determine the geographic location. In this study, the central parallel between the far north and south points and the central meridian intersection between the western and eastern points are recognized as a geographical center. The remote points of the Republic of Kazakhstan are: 55 ° 26 'in the north; in the south - 40 ° 56 'N; in the west - 45 ° 22 '. east - 87 ° 18 'in the east.

Baikonur village of Zhangeldinskiy rural district of Ulytau district of Karaganda region was defined as the center. Its coordinates are 47 ° 34 'Nm. and 66 ° 10 '. R is 29 cm or 4350 km. CS is 10.7 cm or 1605 km long. The scale of the reports was 1: 150000 maps. The city of Nur-Sultan, with a Es value of 0.36, has a central place.

CONCLUSION

The study has allowed to define the following situation: the relatively low state of the state territory of Kazakhstan is relatively low and the peripheral regions of the country are highly active, with no "preference", geographically located in the center, even though the situation of the capital city is relatively low. This, in turn, reflects the differentiation of the regions. The current situation is likely to cause a degree of vulnerability to emergence and resistance to geopolitical risks.

Given these factors, in the future, it is necessary to formulate the basis of the territory, develop growth poles and suggestions for the creation of a unified human settlements system for the effective development of the state.

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АНАЛИЗ МОРФОЛОГИЧЕСКИХ ОСОБЕННОСТЕЙ ГОСУДАРСТВЕННОЙ ОБЛАСТИ РЕСПУБЛИКИ КАЗАХСТАН

Аннотация. В современных условиях пространство и местоположение не только считаются второй категорией государственной политики и становятся важным фактором социально-экономического развития страны. Основной целью данной статьи является предоставление комплексного географического анализа морфологических особенностей территории государства Казахстан для обеспечения геополитической безопасности страны. Авторы рассчитывают индекс компактности территории государства страны и функционального уровня столицы, определяют географическую среду Республики Казахстан. Результаты анализа позволяют определить достоинства и недостатки морфологических особенностей территории государства с целью принятия комплексных мер по ее укреплению и развитию.

Ключевые слова: территория государства, морфология территории, размер территории, функциональный ранг столицы, географический центр государства.

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ҚАЗАҚСТАН РЕСПУБЛИКАСЫ МЕМЛЕКЕТТІК АУМАҒЫНЫҢ МОРФОЛОГИЯЛЫҚ ЕРЕКШЕЛІКТЕРІН ТАЛДАУ

Аннотация. Қазіргі жағдайда кеңістік пен орналасу мемлекеттік саясаттың екінші санаттағы категориясы ретінде ғана қарастырылмай, елдің әлеуметтік-экономикалық дамуындағы маңызды факторға айналады. Бұл мақаланың негізгі мақсаты - елдің геосаяси қауіпсіздігін қамтамасыз ету үшін Қазақстанның мемлекеттік аумағының морфологиялық ерекшеліктеріне жан-жақты географиялық талдау жүргізу. Авторлар елдің мемлекеттік аумағының ықшамдық индексін және елорданың функционалдық дәрежесін есептейді, Қазақстан Республикасының географиялық ортасын анықтайды. Талдау нәтижелері оны нығайту және дамыту бойынша кешенді шаралар қабылдау үшін мемлекет аумағының морфологиялық ерекшеліктерінің артықшылықтары мен кемшіліктерін анықтауға мүмкіндік береді.

Түйін сөздер: мемлекет аумағы, аумақтың морфологиясы, аумақтың ықшамдылығы, астананың функционалды рангі, мемлекеттің географиялық орталығы.

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