Современная наука и инновации. 2023. № 2(42). С. 235-242 Modern Science and Innovations. 2023; 2(42):236-242

ПОЛИТИЧЕСКИЕ HAVKИ / POLITICAL SCIENCE

Научная статья / Original article

УДК 332.1

DOI: 10.37493/2307-910X.2023.2.26

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Значение сырьевого фактора в становлении региональной международной системы Черноморско-Каспийского региона

The significance of the raw factor in the formation of the regional international system of the Black Sea-Caspian region

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Аннотация. Статья посвящена вопросам значения сырьевого фактора в становлении региональной международной системы Черноморско-Каспийского региона. Черноморско-Каспийский регион во многие исторические времена являлся зоной повышенного геополитического интереса многих стран. Современный мир уже не одно десятилетие ощущает противоречие во взглядах на позицию в отношении проблем в данном регионе, что связано прежде всего с конфликтными ситуациями, которые определяются проблемами международно-правового статуса Черноморско-Каспийского региона. Это связано с использованием морских путей, добычей и транспортировкой, логистикой по перемещению углеводородных ресурсов, вопросами экологии, а также проблемами эскалации геополитического напряжения в этом регионе.

Ключевые слова: Черноморско-Каспийский регион, мировая политика, сырьевые ресурсы, международно-правовой статус, сырьевой фактор, морской регион, геополитика, морские пути, углеводородные ресурсы, нефтегазоресурсы, нефтегазовый бассейн, Россия, Китай, страны Ближнего Востока

Для цитирования: Абкаиров Абхайир-Челеби Якуб оглы Значение сырьевого фактора в становлении региональной международной системы Черноморско-Каспийского региона //Современная наука и инновации. 2023. №2 (42). С. 236-242. https://doi.org/10.37493/2307-910X.2023.2.26

Abstract The article is devoted to the importance of the raw material factor in the formation of the regional international system of the Black Sea-Caspian region. The Black Sea-Caspian region in many historical times was a zone of increased geopolitical interest of many countries. For more than a decade, the modern world has felt a contradiction in the views on the position regarding problems in this region, which is primarily due to conflict situations that are determined by the problems of the international legal status of the Black Sea-Caspian region. This is due to the use of sea routes, production and transportation, logistics for the movement of hydrocarbon resources, environmental issues, as well as the problems of escalating geopolitical tensions in this region.

Key words: Black Sea-Caspian region, world politics, raw materials, international legal status, raw material factor, maritime region, geopolitics, sea routes, hydrocarbon resources, oil and gas resources, oil and gas basin, Russia, China, countries of the Middle East

For citation: Abkairov Abkhayir-Celebi Yakub oglu The Importance of the Raw Material Factor in the formation of the Regional International System of the Black Sea-Caspian Region // *Modern Science and Innovations.* 2023;2(42):236-242. https://doi.org/10.37493/2307-910X.2023.2.26

Introduction. At the beginning of the 20th century, the Black Sea-Caspian region acquired the status of a region in which the development of oil fields began. The fact that there are rich oil deposits on the shores of the Caspian Sea has been known for a very long time, the mention that the locals knew about the important properties of the oil, which they called naphtha, is known from various historical testimonies of travelers and industrialists of that time.

Even in the mentions of Marco Polo, during his journey through Baku to Persia, there is information that there is oil in those places, which "leaks" to the surface. In Soviet times, the beginning of the development of the Caspian was laid in 1925, along with an offshore oil well. For several decades, research has been carried out on the resources of the Black Sea-Caspian region. Since the 1960s, Azerbaijan, as part of the Soviet Union, has become a prominent region in terms of industrial oil production. In the 1970s, more than 12 million tons of oil were produced at the fields of the Caspian region.

Materials and methods. In Russia, for the last 50 years, the Black Sea-Caspian region has played a huge role in the energy potential, which was part of the Southern Federal District of the Black Sea-Caspian region. Currently, the Black Sea-Caspian region is in the epicenter of attention as one of the most important regions for oil production, around which the attention of many financial players is focused and there is a developed infrastructure. However, the development of new fields, research requires innovations in the study of resources for the presence of oil reserves in this region. In this connection, there is a problem in creating a reliable database of searches, and this is associated with new financial risks and possible losses.

Studies of the geological structure of the Black Sea-Caspian region of Russia testify to the long history and geological features of its formation. In this space there is a junction of dissimilar tectonic formations: the southern marginal part of the East European ancient platform (EEP), the Scythian and Turan plates, the younger Central Eurasian platform (CEAP) and the Alpine Mediterranean belt (a platform with plates of inland seas and emerging shields - folded areas) [11, p.10].

Such structural features revealed the features of natural oil and gas reserves in this region. The Black Sea-Caspian region has always been the center of close attention of scientists and researchers to observe and search for useful resources in this region, especially in oil and gas production.

At the end of the 20th - beginning of the 21st centuries, due to the financial, economic and industrial interest in the region, the Black Sea-Caspian oil and gas basin became the center of attention and international cooperation. First of all, this concerns intra-regional players: Turkey, Georgia, Ukraine in the Black and Azov Seas, Kazakhstan, Azerbaijan, Turkmenistan and Iran in the Caspian Sea.

In the study and scientific forecasting of the resources of this region, there are data from the US Energy Information Administration, and there is also data from the Ministry of Natural Resources of the Russian Federation. There are significant discrepancies in these data, according to US estimates, the forecast data is much more optimistic than domestic ones, and almost twice as much.

In total, the Caspian Sea includes three oil and gas basins. These are the North Caspian, Middle Caspian and South Caspian. The Russian sector includes the North Caspian and Middle Caspian regions. There are huge prospects in the offshore part of the Caspian Basin, since oil and gas deposits began to form there as early as the Paleozoic, there are also unique fields: Astrakhan Serogas-condensate, Tengiz and Korolev oil, Tabakovskoye and Yelenovskoye gas condensate [11, p. 12].

It should be noted the prospects for oil and gas reserves on the shelves of the Black and Azov Seas, in the area of the East Black Sea depression and the Tuapse trough. Thus, all scientific and industrial studies of the Black Sea-Caspian region speak of rich resources of oil and gas products and increased attention and interest in this region.

In the last decade of the twentieth century, an independent policy of Azerbaijan,

Kazakhstan, Turkmenistan was formed, since in the 90s. active steps of these states for independent development began.

After the collapse of the USSR, this territory became the object of economic and political attention of many Western countries, which proposed a number of joint projects to build new logistics - new pipelines, which were supposed to be carried out, excluding Russian territory.

This opened up great prospects for mutual cooperation, as it opened up opportunities for independence in choosing new strategic decisions that were aimed at increasing hydrocarbon production in the Black Sea-Caspian region. In the context of foreign policy, which is associated with the development of an export-oriented industry and the development of the extraction of energy raw materials, the foreign policy of the new Caspian states was formed. The balance of geopolitical forces in this region and the development of economic and political relations are, at times, in a state of instability.

Results and Discussions. After the collapse of the Soviet Union, the new Caspian states became objects of close interest of many Western investors, as this opened up new prospects for expanding the production of hydrocarbon resources, and, consequently, for increasing the supply of raw materials to foreign markets.

According to experts, data on the reserves of raw materials in the Black Sea-Caspian region are of great interest, and therefore the interest of Western investors in the development of new oil and gas fields is growing [1, p.30]. Interest in this, for obvious reasons, is shown by both Western partners and neighboring countries of the region, which also indicated their interests in research and exploration of deposits in this region. Since the Central Asian and Black Sea-Caspian regions are of strategic interest in international cooperation [10, p. 145].

Due to the already available data and geo-prospecting, the interest of many countries in this area was revealed, and this determined the intensification of geopolitical and economic competition between a number of regional and extra-regional players [11, p. 27-33]. Future prospects were "drawn" as attractive for many regional and extra-regional geopolitical players in the Black Sea-Caspian direction.

Encouraging expertise of leading experts in the field of geo-exploration has brought the Caspian to a good position among the leading oil-producing regions of the world. This formed a steady interest and optimism among many Western partners who were interested in cooperation with the Caspian countries in the development of the oil and gas industry for the extraction of hydrocarbons, as this promised a tempting opportunity to reduce dependence on oil exporting countries [14, p. 303-315].

However, a number of forecasts turned out to be premature due to insufficient data on the study of the Caspian fields and the initiatives of some Western countries faced a number of difficulties that were associated with a list of intra-regional contradictions and issues of obtaining consent from international consortiums that were related to the development of fields [6].

The data on the study of the first drilling wells have already shown that the real energy potential for oil and gas is lower than the calculated one (for oil - six times, for gas - three times), but this did not stop the expansion of the strategic interests of large non-regional players for the designated strategic goals.

Already after the collapse of the Soviet Union in the Black Sea-Caspian region, this promising oil and gas region was actively developed. Several pipelines were built: the Baku-Ceyhan oil pipeline, the Baku-Erzurum gas pipeline, and cooperation on hydrocarbon raw materials with China and Iran was also actively carried out [5, p. 31-69]. China has taken an expansionist stance on these issues. At first, it was about expanding trade and economic cooperation with the Caspian countries, but the interest to reduce their dependence on the hydrocarbons of the Middle East also began to be present in the designation of China's geopolitical interests, especially in cooperation with Kazakhstan and Turkmenistan. China has managed to intensify its foreign economic activity in this region for the oil and gas sector [3, p. 33].

China indicated interest in its participation by starting with work on old deposits that had already passed the peak of their development and extraction of raw materials from them, gradually buying out already old deposits.

In addition, China turned out to be the partner that offered cheap loans and was ready to take responsibility for additional spending on infrastructure development in the Black Sea-Caspian region. China has proved to be a skilled player among a number of major competitors and has managed to secure the rights to develop new, rich oil and gas fields.

Initially, it was planned to obtain high efficiency through the Turkmenistan-China gas pipeline, which runs through the territory of Kazakhstan, this opened up prospects for the supply of raw materials from the eastern coast of the Caspian Sea, even reducing the possibility of a wider participation of Western countries. However, the calculations did not quite justify themselves. And the loading of the Turkmenistan-China pipeline did not become one hundred percent. China is pursuing a balanced policy in choosing priority areas for cooperation in the supply of hydrocarbons. The geopolitical situation in the Black Sea-Caspian region contributes to the choice of such a policy [15, p. 69-80].

Cooperation with the Black Sea-Caspian region helps China pursue a policy of diversifying hydrocarbon sources. To solve these issues of geopolitical cooperation, China has a powerful tool for unlocking the multi-vector potential of this cooperation - the Shanghai Cooperation Organization (SCO).

China has chosen its own path and geopolitical doctrine of participation in the regions of special world attention in terms of the use of energy resources. This concerns the understanding that China is ready to cooperate, including on issues of wider use of regional cooperation and issues of reducing the threat of international terrorism. China indicates its interests in the energy sector of the countries of Asia and the Black-Caspian region. However, China's cooperation with the SCO means competition between China and Russia in the energy sector [8, p. 40].

Given the current geopolitical situation, it is too early to talk about expanding cooperation in the field of energy between Russia and China, which the Kremlin considered as an alternative to the European vector of cooperation in these matters.

Beijing currently has options in choosing priority areas for energy cooperation, Kazakhstan also benefits from cooperation with the Russian side, so today it is difficult to talk about establishing a permanent direction in choosing cooperation between Russia and China.

China was able to achieve lower prices for imports of hydrocarbon resources. This meant that a strong player appeared in this region in matters of its own geopolitics - China. At the same time, China opens up opportunities for long-term cooperation with Russia and the solution of energy cooperation issues. The initiative put forward by China to designate its geopolitical position - "one belt - one road" is widely known [2, p. 8-19].

However, China's choice of yet another instrument - the SCO - in the creation of a "green street" for the import of oil and gas products at reduced prices indicated that the competition between Russia and China is growing in these issues of cooperation.

Beijing chooses reasonable maneuverability in matters of economic and geopolitical cooperation. Thus, Beijing proposed the creation of Free Trade Zones on the basis of the SCO [4, p . 119-135]. But the initiative was rejected by the Russian side [9, p. 18-19].

In the United States, issues of domestic and foreign policy are conducted on the basis of respect for the interests of the two-party system and business circles. At the same time, the United States is lobbying the interests of Western countries and Europe in determining the strategy for developing the potential of the Caspian states in the field of energy in the direction of choosing the Western vector of development of relations [13].

By the end of the 90s. the policy of the EU countries indicated their interest in the Black Sea-Caspian region when data appeared on the potential of oil and gas reserves in this region. However, the choice of logistics and routing required the development of additional infrastructure, and the fact that the Caspian states did not have additional volumes did not contribute to the development of these areas.

The Caspian countries were looking for their own ways and tried to implement their projects, thus their own pipeline projects were launched. This is how the Trans-Anatolian gas pipeline (TANAP) project appeared, the task of which was to ensure gas supplies from Azerbaijan to the western borders of Turkey [12].

The issues of diversifying gas supplies from Azerbaijan showed that not everything was thought out in expert assessments of the logistics of these supplies in relation to which countries are most profitable and expedient to supply energy resources [16]. That is, the issues of coordination and deliveries have shown that the process of mass withdrawal of gas from the Black Sea-Caspian region to Europe is premature.

Initially, Russia positioned itself as a leader in determining the direction of the flow of energy resources in the Caspian region, in this direction cooperation with the countries of the Black Sea-Caspian region was promoted [7, p. 28].

Russia was the initiator of many agreements on the preservation of the principle of "common water" and advocated for the ecological integrity of the water system of the Caspian region, for the preservation of its biological resources, for example, with regard to sturgeon species.

However, the Caspian countries did not follow this path, giving "carte blanche" to Western countries, which began to influence the economic policy of the countries of the Caspian region, which began to influence Russia's zone of influence in this region. Russia has identified key approaches to ensuring the international legal status of the Caspian. Russia began to implement the processes of forming its influence in the Black Sea-Caspian region thanks to the approaches of trilateral cooperation (Azerbaijan, Kazakhstan).

The basis of international cooperation is documents on such cooperation and the development of an international legal framework for long-term cooperation in this area.

The globalization of the economy and the crises that have been observed in the last decade of the 21st century have determined the speed of the processes of economic participation of regional and non-regional countries in the Caspian region. Russia has failed to maintain leadership in the development of new oil and gas fields in the Caspian region.

The lack of efficiency in understanding that the expert opinion on the presence of gas and oil reserves indicates the possibility of long-term development of this sector in the Black Sea-Caspian region, led to the fact that Russia lost its positions in this direction. 8 deposits were discovered, the largest of which are Khvalynskoye, im. Yuri Korchagin, Rakushechnoe, them. Yuri Kuvykin and them. Vladimir Filanovsky.

The issue of the international legal status of the Caspian region and adjacent territories is still important and relevant, as this determines the activities of the Caspian countries in the region. Russia's policy is aimed at limiting or preventing other players from entering the Black Sea-Caspian region - extra-regional ones, we are talking about the United States and EU countries [11, p. 89].

At the same time, more accurate data on the state of already developed fields and plans do not yet allow us to talk about long-term prospects for the development of infrastructure in this region, and this affects the processes of regulating relations between a number of non-regional players.

The current international situation and the geopolitical situation indicate an increase in interest in the Caspian region, there has been an expectation and interest on the part of a number of Western countries to increase their economic influence in this region, this also applies to logistics and transportation issues.

Conclusion. The Black Sea-Caspian region today is one of the centers of geopolitical attention of major world players in the field of energy resources. Pipelines play an important role in geopolitics today.

The Caspian cannot compete with the Persian Gulf, despite the fact that a significant hydrocarbon reserve has been discovered there, but the issues of infrastructure, logistics, pipelines, the cost of production and supplies play a huge role.

The oil market is one of the most important markets in the world, many countries of the Black Sea-Caspian region are trying to indicate their participation in the development of their own countries thanks to energy resources, while realizing that the Black Sea-Caspian region is still not an alternative source compared to the resources of the Persian countries. Gulf, but at the same time, deposits of Caspian hydrocarbons affect the regional energy situation. Global politics and the current situation have determined the fierce competition of many strong players in the Black Sea-Caspian region.

At present, Russia is actively fighting for positions in determining the directions for the export of resources from the Black Sea-Caspian region. First of all, with Western countries (USA, EU countries), as well as China. To date, there is a strong rivalry between them in the field of control of the Caspian deposits and the definition of logistics, export routes.

ЛИТЕРАТУРА

- 1. Болекбаева Д., Селиванова И. Ф. Основные направления внешней политики Казахстана (1991-2015 гг.) // Внешняя политика новых независимых государств: сборник / отв. ред. Б.А. Шмелев. М.: ИЭ РАН, 2019. С. 30.
- 2. Глянц М. Китайская инициатива «Один пояс один путь»: что может сделать брэнд» // Проблемы постсоветского пространства. 2017. Т. 4, № 1. С. 8-19.
- 3. Дадабаева 3. А., Кузьмина Е. М. Процессы регионализации в Центральной Азии: проблемы и противоречия. М.: Институт экономики РАН, 2021. С. 33.
- 4. Лу Шаньбин, Хуан Мэнфан, Лу Наси. Сопряжение строительства ЭПШП и ЕАЭС: проблемы углубления экономического сотрудничества между Китаем, Россией и государствами Центральной Азии. М.: РИСИ, 2021. С. 119-135.
- 5. Михеев С. А., Чеботарев А. Е., Ковалев Г. С. Проблемы региона накануне IV Каспийского саммита // Проблемы постсоветского пространства. 2020. № 2. С. 31-69.
- 6. Рожков И. С. Ретроспектива каспийских саммитов: от стабильности к прогрессу // Проблемы постсоветского пространства. 2017. Т. 4. № 3. С. 210-220. https://doi.org/10.24975/2313-8920-2017-4-3-210-220
- 7. Старченков Г. И. Нефть Каспия и пути ее транспортировки // Мусульманские страны у границ СНГ. М.: Институт Востоковедения РАН, Крафт+, 2018. С. 28.
- 8. Страны СНГ и Балтии в глобальной политике Китая / под ред. Т. С. Гузенковой, Н. В. Карпова, Д. А. Александрова и др. М.: РИСИ, 2022. С. 40.
- 9. Сяосин Д. Евразийский союз и ШОС // Регион Центральной Азии: состояние, проблемы и перспективы российско-китайского взаимодействия: сб. докл. под ред. Е. В. Супониной, Б.М. Волхонского. М.: РИСИ, 2019. С. 18-19.
- 10. Тяньлэ Е. Роль Центральной Азии в энергетической стратегии Китая // Центральная Азия: проблемы и перспективы (взгляд из России и Китая): сб. ст. / под ред. К. А. Кокарева, Д. А. Александрова, И. Ю. Фроловой. Российский институт стратегических исследований; Китайская академия современных международных отношений. М.: РИСИ, 2018. С. 145.
- 11. Центральная Азия и Каспийский регион: риски, вызовы, угрозы / под ред. Б. К. Султанова. Алматы: Казахстанский институт стратегических исследований РК. 2016. С. 10-89.
- 12. Cohen A. Caspian Gas, TANAP and TAP in Europe's Energy Security // Istituto Affari Internazionali. IAI Working papers. 2020. 14 April. URL: https://www.jstor.org/stable/resrep09676
- 13. Energy and Security from the Caspian to Europe (Report) // Committee on Foreign Relations United States Senate. 2019. Dec. 12.
- 14. Schreiner B. Europe and the Development of Energy Resources in the Caspian Sea Region // Working Papers, 2018 Ordinary Session (first Part), Documents 9519, 9568 and 9576-9639 Council of Europe: Parliamentary Assembly. 2018. Vol. 1. P. 303-315.
- 15. Sokolsky R., Charlick-Paley T. Caspian Oil and Energy Security. In NATO and Caspian Security: A Mission Too Far? // RAND Corporation. 2019. P. 69-80.
- 16. Umbach F., Raszewsk S. Strategic Perspectives for Bilateral Energy Cooperation between the EU and Kazakhstan Geo-Economic and Geopolitical Dimensions in Competition with Russia and China's Central Asia Policies. Konrad-Adenauer-Stiftung. 2016. 70 p.

REFERENCES

1. Bolekbaeva D., Selivanova I. F. Osnovnye napravleniya vneshnei politiki Kazakhstana (1991-2015 gg.). V kn.: Vneshnyaya politika novykh nezavisimykh gosudarstv: sbornik / otv. red. B. A. Shmelev. M.: IEH RAN, 2019. P. 30.

- 2. Glyants M. Kitaiskaya initsiativa «Odin poyas odin put'»: chto mozhet sdelat' brehnD» // Problemy postsovetskogo prostranstva. 2017. T. 4, No. 1. P. 8-19.
- 3. Dadabaeva Z. A., Kuz'mina E. M. Protsessy regionalizatsii v Tsentral'noi Azii: problemy i protivorechiya. M.: Institut ehkonomiki RAN, 2021. P. 33.
- 4. Lu Shan'bin, Khuan Mehnfan, Lu Nasi. Sopryazhenie stroitel'stva EHPSHP i EAEHS: problemy uglubleniya ehkonomicheskogo sotrudnichestva mezhdu Kitaem, Rossiei i gosudarstvami Tsentral'noi Azii. M.: RISI, 2021. P. 119-135.
- 5. Mikheev S. A., Chebotarev A. E., Kovalev G. S. Problemy regiona nakanune IV Kaspiiskogo sammita // Problemy postsovetskogo prostranstva. 2020. No. 2. P. 31-69.
- 6. Rozhkov I. S. Retrospektiva kaspiiskikh sammitov: ot stabil'nosti k progressu // Problemy postsovetskogo prostranstva. 2017. T. 4. No. 3. P. 210-220. https://doi.org/10.24975/2313-8920-2017-4-3-210-220
- 7. Starchenkov G. I. Neft' Kaspiya i puti ee transportirovki // Musul'manskie strany u granits SNG. M.: Institut Vostokovedeniya RAN, Kraft+, 2018. P. 28.
- 8. Strany SNG i Baltii v global'noi politike Kitaya / pod red. T. S. Guzenkovoi, N. V. Karpova, D. A. Aleksandrova i dr. M.: RISI, 2022. P. 40.
- 9. Syaosin D. Evraziiskii soyuz i SHOS // Region Tsentral'noi Azii: sostoyanie, problemy i perspektivy rossiisko-kitaiskogo vzaimodeistviya: sb. dokl. pod red. E. V. Suponinoi, B. M. Volkhonskogo. M.: RISI, 2019. P. 18-19.
- 10. Tyan'leh E. Rol' Tsentral'noi Azii v ehnergeticheskoi strategii Kitaya // Tsentral'naya Aziya: problemy i perspektivy (vzglyad iz Rossii i Kitaya): sb. st. / pod red. K. A. Kokareva, D. A. Aleksandrova, I. YU. Frolovoi. Rossiiskii institut strategicheskikh issledovanii; Kitaiskaya akademiya sovremennykh mezhdunarodnykh otnoshenii. M.: RISI, 2018. P. 145.
- 11. Tsentral'naya Aziya i Kaspiiskii region: riski, vyzovy, ugrozy / pod red. B.K. Sultanova. Almaty: Kazakhstanskii institut strategicheskikh issledovanii RK. 2016. P. 10-89.
- 12. Cohen A. Caspian Gas, TANAP and TAP in Europe's Energy Security // Istituto Affari Internazionali. IAI Working papers. 2020. 14 April. URL: https://www.jstor.org/stable/resrep09676
- 13. Energy and Security from the Caspian to Europe (Report) // Committee on Foreign Relations United States Senate. 2019. Dec. 12.
- 14. Schreiner B. Europe and the Development of Energy Resources in the Caspian Sea Region // Working Papers, 2018 Ordinary Session (first Part), Documents 9519, 9568 and 9576-9639 Council of Europe: Parliamentary Assembly. 2018. Vol. 1. P. 303-315.
- 15. Sokolsky R., Charlick-Paley T. Caspian Oil and Energy Security. In NATO and Caspian Security: A Mission Too Far? // RAND Corporation. 2019. P. 69-80.
- 16. Umbach F., Raszewsk S. Strategic Perspectives for Bilateral Energy Cooperation between the EU and Kazakhstan Geo-Economic and Geopolitical Dimensions in Competition with Russia and Shina's Sentral Asia Policies. Konrad-Adenauer-Stiftung. 2016. 70 p.

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Дата поступления в редакцию:12.04.2023 После рецензирования:23.05.2023 Дата принятия к публикации:13.106.2023