

## EDITORIAL

# National-political priorities for the development of oil and gas resources in the Russian sector of the Caspian Sea

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## ABSTRACT

The trends in the development of hydrocarbons of the Caspian shelf in the water area of the Russian Federation by domestic and foreign companies are analyzed. In accordance with these trends, the national-political priorities for the formation of an oil and gas chemical cluster in the national subjects of the Russian zone of the Pre-Caspian are substantiated.

**Keywords:** Caspian Sea; Russian Pre-Caspian Zone; Kalmykia; Dagestan; Oil and Gas Field; Oil and Gas–Chemical Cluster

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## ARTICLE INFO

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Received: 14 June, 2023  
Available online: 20 June, 2023

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## 1. Introduction & observation

Oil, as you know, is expensive, and if its primary processing doubles income, then petrochemistry triples this income. Approximately, the same thing happens in the chemical processing of natural gas<sup>[1]</sup>. Therefore, both in Russia and abroad, there is a huge interest of industrialists in the problems of forming oil and gas chemical clusters. Such clusters include full cycles of oil and gas production from the extraction and transportation of hydrocarbon raw materials to the manufacture of various products of the chemical industry from it.

In recent decades, offshore areas have become the main objects of development for the oil and gas industry in the country, in particular, the Russian zone of the Caspian Sea, which belongs to one of the six key regions for the development of oil and gas in Russia<sup>[2]</sup>. The Russian zone of the Caspian Sea includes the Astrakhan region (the territory of the predominantly Russian population), Kalmykia (the national territory of the Kalmyks) and Dagestan (the territory of the predominantly Dagestanis)<sup>[3]</sup>.

Although Dagestan has both onshore and offshore hydrocarbon deposits, this republic still does not have its own petrochemical cluster. Meanwhile, according to leading economists and geographers, cluster processes in the oil and gas industry are able to solve the key problems of the Dagestan economy: (1) increasing the share of profits from extracted natural resources due to their deep processing based on innovative technologies to overcome the currently dominant resource-oriented economy of the region; (2) reduction of outbound migration due to unemployment and low living standards of the population of the region; (3) creation of a sustainable settlement system in the coastal zone with a high level of social and domestic living comfort<sup>[4]</sup>.

The estimated reserves of Caspian hydrocarbon raw materials, according to various estimates, are up to 15–20 billion tons of standard fuel, including in the Russian register—from 2 to 6.5 billion tons<sup>[5]</sup>. According to official estimates, the initial total hydrocarbon resources of the Russian shelf in the Caspian Sea are approximately 6.6/4.2 (geological resources/recoverable resources) billion tons of fuel equivalent. In the calculation, free gas is 2.8 trillion m<sup>3</sup>, condensate is 384.8/260.9 million tons (geol./recov.), oil is 3.2/1.0 billion tons (geol./recov.), and dissolved gas is 185.2/72.5 billion m<sup>3</sup> (geol./recov.)<sup>[6,7]</sup>.

Currently, the exploration and production of hydrocarbons in the Russian sector of the Caspian Sea is carried out at 5 license areas owned by various companies<sup>[8]</sup>. But there are no national companies of Kalmykia and Dagestan among them. According to the existing international law, the claims of the leadership of the national republics of Kalmykia and Dagestan on the offshore hydrocarbon deposits that are part of the coastal waters of these state entities of the Russian Federation are quite fair. The minimum share of a subject of the Federation in such an interest, theoretically, should be at least 50% of the total volume extracted in the waters of this subject. However, the factor of multidimensionality (volume) of international and interregional borders, which simultaneously divide the water, shelf and underground resources of the Caspian Sea, does its job: hydrocarbon production today is carried out by federal monopolies in violation of the elementary international rights of the peoples inhabiting the Russian Pre-Caspian zone<sup>[9,10]</sup>.

The main dividends from oil and gas production in the Kalmyk and Dagestan parts of the Caspian shelf are currently received by the economic systems of the Stavropol Territory and the Astrakhan region. These predominantly Russian-ethnic regions are home to large enterprises for the chemical processing of hydrocarbons extracted in the Caspian Sea. So, not far from the north-western border of the Republic of Dagestan, in the city of Budenovsk, Stavropol region, the largest chemical industry enterprise in

the country, “Stavrolen” LLC, operates, which produces more than 30 grades of polyethylene. This enterprise makes a significant contribution to the economy of the North Caucasus Federal District: 20% of the current GDP of this district. As for the economy of the Stavropol Territory, where “Stavrolen” operates, the contribution of this chemical giant is estimated at 50% of the total regional GDP<sup>[11]</sup>.

This practice of subsurface use in the Russian sector of the Caspian Sea is quite controversial from the point of view of the national interests of Kalmykia and Dagestan. Therefore, scientists and politicians of these two Caspian republics have been looking for ways to overcome this problem for more than two decades<sup>[12–14]</sup>. Currently, only the companies of the federal center own licenses for independent exploration and production of oil on almost the entire area of the Russian shelf in the Caspian Sea. For this and other reasons, the project of turning the Caspian shelf into a springboard for the development of business in Dagestan and Kalmykia has not yet taken place<sup>[15]</sup>.

When strategically analyzing and predicting the consequences of creating stationary and, especially, floating platforms in the Caspian Sea for the extraction of hydrocarbons, as well as bottom pipelines, it is necessary to take into account many dangerous geoecological factors<sup>[16–18]</sup>. Thus, according to numerous glaciological studies, the seabed of the Northern Caspian Sea is regularly plowed by ice hummocks. The current downward trend in the Caspian Sea level seriously increases the risk of ice attacks on oil production facilities and the bottom pipeline network<sup>[19,20]</sup>. The prospects for a significant increase in the scale of oil and gas production in the Caspian Sea should also be very strictly coordinated with projects for a significant strengthening of the tourist, recreational and environmental functions of the coastal areas of this sea<sup>[21,22]</sup>.

## Conflict of interest

The authors declare no conflict of interest.

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