



# Problems of Transport Communication Development on the Caspian Sea in the Context of the Discussion on the Construction of the Caspian- Volga Channel in the Early 20th Century

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## Abstract

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The relevance of the study stems from the considerable interest of the academic community in the history of the Caspian region. The aim of the study is to study the development of transport communications on the Caspian Sea in the early twentieth century. Several previously unexamined discussion materials and articles in the Astrakhan economic journals “Report of the Astrakhan Exchange Committee” for 1909-1911 and “Nash Krai” (Eng. Our Region) for 1925-1927 on the problems of the construction of the Caspian-Volga channel made the main source base for this study. The materials of collective works and monographs on the history of Astrakhan Region as well as the works of modern Astrakhan researchers were also used in the article. The methodology of the research is represented by a set of general scientific principles of research (systematicity, objectivity, and historicism), and specific historical methods. Based on the materials studied, the authors conclude that due to bureaucratic red tape and corruption in the early 20th century, the construction of a major infrastructure project, namely the Caspian-Volga shipping channel, which was supposed to ensure the unimpeded flow of commercial goods through the mouth of the Volga to Astrakhan, was abandoned. This failure slowed down further development of the Caspian-Volga transport route, which, among other products, carried important goods such as paraffin and fish products. The inefficiency of the bureaucracy was heavily criticized by the representatives of major oil producing and shipping firms and sparked a lively discussion in the Astrakhan press about the possibilities of resolving the transport problem in the Caspian Sea.

## Keywords

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Caspian Sea; Volga; Astrakhan; Baku; Caspian-Volga Channel; Oil; Trade; Navigation



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# Проблемы развития транспортных коммуникаций на Каспийском море в контексте дискуссии о строительстве Каспийско-Волжского канала в начале XX в.

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## Аннотация

Актуальность исследования обусловлена значительным интересом со стороны научного сообщества к истории Каспийского региона. Целью является изучение развития транспортных коммуникаций на Каспийском море в начале XX в. Основной источниковой базой стали неизученные ранее дискуссионные материалы и статьи в астраханских экономических журналах «Отчет Астраханского биржевого комитета» за 1909–1911 гг. и «Наш край» за 1925–1927 гг. о проблемах строительства Каспийско-Волжского канала. Наиболее яркими участниками дискуссии зарекомендовали себя такие авторы как Боголюбов Н.П., Антонов Н.А., Лактионов С.И. Лактионов С.И., Баланин В.И. и др. В статье использовались материалы коллективных работ и монографий по истории Астраханского края, а также труды современных астраханских исследователей. Методология представлена совокупностью общенаучных принципов научного изыскания (системность, объективность, историзм) и конкретно-исторических методов.

На основе изученных материалов авторы приходят к выводу о том, что из-за чиновничьей волокиты и коррупции в начале XX в. было фактически провалено строительство крупного инфраструктурного проекта: Каспийско-Волжского судоходного канала, который должен был обеспечить беспрепятственное продвижение торговых грузов через устье р. Волги в Астрахань. Этот провал замедлял дальнейшее развитие каспийско-волжского транспортного пути, по которому, в том числе, шли такие важные товары как керосин и рыбные продукты. Неэффективная работа бюрократического аппарата подвергалась острой критике со стороны представителей крупных нефтедобывающих и судоходных фирм, а также породила оживленную дискуссию в астраханской прессе о возможностях разрешения транспортной проблемы на Каспии.

## Ключевые слова

Каспийское море; Волга; Астрахань; Баку; Каспийско-Волжский канал; нефть; торговля; навигация



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## **Introduction**

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Since the second half of the 19th century, due to the rapid development of the all-Russian market and significant progress in the development of maritime and river shipbuilding, the turnover of Astrakhan in domestic and foreign trade has grown considerably. The city was a major transit centre for Russian trade with Central Asia, the Caucasus, and Iran. In addition, the Astrakhan fishing industry became a major supplier of fish and fish products to domestic and foreign markets, the demand for which was steadily growing primarily in the country's large industrial centres.

From the 1880s, Astrakhan became an important transit point for oil and oil products from Baku to the central parts of the country. In the late 19th and early 20th centuries, paraffin was the most valuable product made from oil. Paraffin lamps qualitatively improved the evening leisure time of the wide range of population, first of all of those living in cities. Therefore, the timely delivery of this oil product, most of which was delivered by the Caspian-Volga transit through Astrakhan, became not only an important economic, but also socio-political task, which was controlled at the governmental level (Yergin, 2008, p. 542).

The growth of Caspian-Volga transit facilitated the formation of powerful shipping companies with flotillas of sea and river vessels serving the growing trade turnover and engaged in passenger traffic. The largest shipping companies of the early twentieth century were "Ocean", "Caucasus and Mercury", and the firm of N.I. Artemyev. The latter cooperated closely with the major Baku oil company, the Nobel Brothers' Oil Production Association (Ushakov, 2000, p. 389).

In 1910, the Astrakhan port's cargo turnover serving trading with eastern countries was comparable to that of Russia's largest seaports, namely Odessa and Saint Petersburg, and continued to grow rapidly (Istomina, 1991, p. 184). However, the prospects for the Caspian-Volga transit route in the second half of the 19th century were significantly hindered due to technical difficulties associated with the impossibility of passing the mouth of the Volga by ships (Trifonov & Lemachko, 2009, pp. 542–548). Creation of the Caspian-Volga navigation channel could be a solution to this problem. This article examines the initial stage of the construction of the channel and analyses public discussions and disputes regarding this project.

## **Materials and methods**

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The previously unexamined discussion materials and articles in Astrakhan economic journals "Report of the Astrakhan Exchange Committee" for 1909-1911 and "Nash Krai" (Eng. Our region) for 1925-1927 on the problems of the Caspian-Volga channel construction made the main source base for this study. Such authors as V.I. Balanin, S.I. Laktionov, S.V. Maksimovskiy and others proved to be the brightest participants of the discussion (Balanin, 1925; Laktionov, 1925; Maksimovsky, 1925).

Valuable informative material concerning cargo transportation along the Caspian-Volga trade route and problems in the organization of the port as well as the sea and river trade fleets are represented by the unpublished documents deposited in the State Archive of the Astrakhan Region, in the collections of the Astrakhan office of the Joint Stock Company of Shipping and Trade “Caucasus and Mercury”, the Board of the Joint Stock Company “Ocean” and the Astrakhan office of the Artemyev shipping company. Of greatest interest are the reports and minutes of the meetings of the offices and boards of directors of the joint-stock companies, plans and reports on the development of the Caspian Sea ports and the improvement of ships, information on the loss of ships and cargo during storms in the Caspian Sea, calculations of the cost of voyages, circulars on administrative and production issues, agreements between the shipping companies on the regulation of ships, and the flow of goods.

Information on the list of oil cargoes and directions of their transportation is reflected in the records of the General Office of the Nobel Brothers’ oil company. This information is also covered in the firm’s correspondence with foreign and Russian shipping companies regarding the transportation of oil products and the lease of steamships, circular orders and instructions to ship captains and machinists, contracts for the volume of distribution, shipment, and sale of oil products and the construction of tanks, logbooks of the steamships “Gilyak”, “Lyubimy”, “Mordvin”, “Anna”, “Bashkir” and others, as well as in the acts of ship accidents, contracts, letters, and telegrams regarding the transportation of oil and other products.

The research methodology is represented by a combination of general scientific research principles (systematicity, objectivity, and historicism) and specific historical methods.

## **Discussion**

The history of the Caspian-Volga transit was partly considered in the scientific monographs of I.A. Shubin, N.A. Antonov, N.P. Bogolyubov, E.G. Istomina, Yu.N. Trifonov et al. (Antonov, 1925; Bogolyubov, 1862; Istomina, 1991; Trifonov & Lemachko, 2009; Shubin, 1927) and theses and dissertation studies by R.A. Tarkova and G.V. Aleksushin (Alexushin, 1995; Tarkova, 2007). Lately, the history of Caspian-Volga navigation was analyzed in a number of academic publications (Aleksushin, 2012; Arsentyev, 2013; Afanasyev, 2016; Klimovsky, 2009; Marasanova, 2016; Obnorskaya, 2018). Famous writers and authors of memoirs (Krylov, 2017; Nemirovich-Danchenko, 1877) touched upon it in their works.

The subject matter of the article has also been partly reflected in collective works and monographs on the history of the Astrakhan Region and in generalizations of contemporary researchers.



## Results

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The mouth of the Volga River has always been difficult to navigate. Below Astrakhan, the delta is divided into many distributaries with a huge number of shoals and rapidly changing bank configurations. Therefore, unlike other large Russian rivers actively used in the 19th century as transport arteries, the Volga delta was a difficult obstacle for trade caravans to overcome (Bogolyubov, 1862, pp. 392-395).

Shoals on the Caspian Sea, annually washed up by strong river courses – the so called Bar – did not allow maritime caravans with a heel of 12 feet (3.65 m) to approach closer than 60 km from the coastline (Antonov, 1925, pp. 6-8). In this regard, the roadstead practice of cargo passage through the Volga mouth gradually developed. The practice was as follows. On the high seas, 60-70 km from the shore, goods were reloaded from large sea-going vessels to small coastal ones with small heel, which transported them to the port of Astrakhan. The place of such exchange of goods was called the 12-foot roadstead (“On the results of participation of the Exchange Society’s commissioners...,” 1899, p. 56).

The concentration of sea and roadster ships on the high seas, whose crews were engaged in reloading goods, made a huge flotilla of several hundred ships, and the members of their crews – loaders, attendants, administrators and government officials – were the population of this “city at sea”, numbering several thousand people. Food shops, hairdressers, hospital, telegraph, customs, and police posts (“On questions about the needs of local shipping,” 1914, pp. 24-26) served them. According to the recollections of the contemporaries, in clear weather, when the sea was relatively calm and there were no big waves, the reloading activity on the 12-foot roadstead was bustling. At that time, all the institutions necessary for its needs were functioning “in the city”. However, since the roadstead was in the open sea, high winds accompanied by heavy waves were rather common, which interrupted the boisterous activity of reloading goods for an indefinite period of time (“Brief sketch of Astrakhan trade and industry,” 1904, p. 111). At such times, communication between the ships anchored off the coast was complicated and often ceased altogether, as did all administrative offices (police, customs, etc.) and the telegraph, which was particularly needed, as in such a congestion, even a slight increase in wind, not to mention a storm or gale, resulted in the loss of boats and small vessels with cargo. It was not possible to report accidents or the need for help to Astrakhan in a timely manner due to such poor communication. Thus, not only were the vast shoals in the Caspian Sea an obstacle to shipping goods from the Caspian Sea to Astrakhan, but also the winds, which caused storms at sea and led to shipwrecks and loss of some of the cargo.

As a rule, the 12-foot roadstead operated more or less normally for seven and a half months of the year (from April to mid-November), although work often continued until early December, with frequent storms and the risk of rapid glacia-

tion (Laktionov, 1925, p. 32). For example, in 1911 the stevedores and ships' crews handled around 5,733,000 tonnes of cargo, or 24,540 tonnes a day, with occasional downtime due to bad weather. (For comparison, 3,276,000 tonnes of cargo passed through the port of Odessa in the same year (Guzhenko, 1984, p. 203). However, as storms were very frequent in the roadstead area and could last for several days, the forced downtime of several days had to be compensated for by intensive and almost non-stop work in calm weather. This regime exhausted people and led to frequent injuries and accidents. In fact, unlike other major Russian sea and river ports, the huge cargo flow from the Caspian Sea to Astrakhan (and vice versa) had to be reloaded twice through the 12-foot roadstead due to natural obstacles. Many goods, which were classified at that time as low-value, i.e. raw materials, such as oil, timber, salt and others, were hardly kept in the zone of profitability given the costs of double reloading (Ausbrink, 2014, p. 56). The cessation of their supply for one reason or another (for example, oil products from Baku) could already cause serious social problems in the country.

Another serious problem with the roadstead practice of transporting goods was the so-called ice storms. The end of navigation in the Caspian roadstead at the beginning of November coincided with a period of increased winds in the area. The southeasterly wind blowing from the sea pushed water onto the coast, filling numerous estuarine Volga distributaries, backwaters and lakes with it. Then, when the wind changed to the northeast, this water, together with young ice which formed faster in the small bodies of water than in the large, rolled back into the sea and contributed to the rapid glaciation of the shallow northern part of the Caspian Sea (Аполлов, 1956, p. 94). Vessels in this situation were unable to break free from the ice trap and found themselves helpless and were destroyed. Aware of this threat, the majority of those involved in the roadstead overloading stopped all work before the end of October and left the roadstead ("On the question of organization of public assistance to ship caravans...", 1909, pp. 49–50). However, commercial interests were stronger than fear from time to time, and ships were delayed in the roads until mid-November. Moreover, ice storms did not happen every year. Nevertheless, on November 13, 1910, nature punished the daredevils ("On questions about the needs of local shipping," 1914, p. 29).

On that day, strong stormy winds brought a significant amount of water into the area where the ships had congregated. The water depth in these areas immediately increased from 3.5 metres to 8 metres or more, contributing to the formation of large waves that sank several dozen roadster and offshore vessels. Then the wind changed and blew backwards from the shore. A rapid glaciation set in, which finished off the remaining ships and boats. Some 300 people perished (the exact number could not be ascertained) and a huge amount of goods were lost in the process. For example, the major shipping company "Caucasus and Mercury" lost seventeen ships during the storm, most of which were still full of goods. Any help from other vessels could not be expected, as most of the roadster ships



were on their way to Astrakhan and it was impossible to reach the wrecked ships from the shore during the ice storm (Laktionov, 1925, pp. 31–34).

The catastrophe of November 1910 prompted representatives of the Astrakhan business community involved in Caspian-Volga transit, through the Astrakhan Exchange Committee, to come down hard on the Government for failing to build the Volga-Caspian channel, which would have significantly reduced the costs and risks of ships passing from the Caspian Sea to Astrakhan.

Already as early as 1845, the government commissioned the Kazan railway district to study the problem and design a project to create a channel between Astrakhan and the Caspian Sea. The first construction project was to create a channel along the Staraya Volga tributary and, according to the designers' calculations, this option would be limited to clearing the bottom and water-regulating structures. It was supposed to save money on excavation work. However, experts in the government were quick to point out the alleged savings of the proposed construction, since the shortest route from the Caspian Sea to Astrakhan was not chosen. The project was dismissed due to its high cost (Maksimovskiy, 1925, pp. 27–30).

After that, the Kamyzyak tributary of the Volga River became the most promising for the future channel. In 1856–1857, construction works costing 1,622,000 roubles were carried out there. They consisted in construction of water-regulating structures and dredging. However, it soon became clear that the average depth of the channel was 2–2.5 metres, which meant significantly more dredging than originally anticipated and, accordingly, increased the cost of the project considerably. Construction was soon halted, although a considerable amount of money had already been spent on preliminary works (Balanin, 1925, pp. 27–28).

After this failure, the Bakhtemir tributary of the Volga, along which the main trade flow of goods between the Caspian Sea and Astrakhan passed, finally attracted the attention of the researchers. Since 1873, dredging started on the Bakhtemir tributary. In 1884–1887, the Volga Research Expedition led by Professor Boguslavsky worked there. Since 1893, a special commission under the Ministry of Railways, headed by engineer Gersevanov, was created, which dealt with the development of navigable ways in the mouth of the Volga. In 1895–1898, a research expedition of engineer Golubev worked on Bakhtemir and Kamyzyak tributaries (Maksimovskiy, 1925, pp. 24–27).

The lack of any meaningful results at ever-increasing costs began to raise suspicions of the business community. In their appeals and complaints to the government in connection with the tragedy on the Caspian Sea in November 1910, Astrakhan entrepreneurs drew the attention of the government to the fact that the difficulty of controlling the efficiency of expenditures and the remoteness of the construction site made possible various corruption schemes during its construction (“On questions about the needs of local shipping,” 1914, p. 37). Even the exact route of the channel had not been determined by the outbreak of

the First World War. Despite the existence of a well-trodden path along the Bakhtemir River, the Kamyzyak project kept popping up, and throughout the 1890s and 1900s, costly dredging started there occasionally, scattering funds and leading nowhere. However, officials in Saint Petersburg and Astrakhan were interested in their implementation (Maksimovskiy, 1925, p. 20).

The report of the Astrakhan Exchange Committee “On the needs of modern navigation” prepared in 1911, which summed up some results and made preliminary conclusions about the damage caused by the ice storm in November 1910, stated that the Caspian Sea, which was then fully controlled by the Russian Empire and had no serious claims to it from other powers, in fact, no longer received due attention from the state apparatus. According to the authors of the report, nothing has been done in recent decades to study the Caspian Sea, maps of the sea drawn as early as the 18th century were outdated, there was a shortage of lighthouses on the coast, of developed ports, etc. Yet the most important thing, according to the authors of the report, causing maximum damage to shipping and transit trade, was the absence of the Volga-Caspian channel, which would have made it possible to abandon the 12-foot roadstead and safely deliver cargoes to Astrakhan without overloading at sea (“On questions about the needs of local shipping,” 1914, p. 72).

The merchant marine fleet in the Caspian Sea in the 1880s-1900s was constantly expanding with massive oil tankers and dry cargo vessels with low flotation, which could not use the 12-foot roadstead. Therefore, small roadster vessels had to go farther and farther from the shore to reload goods and the risk of working in the roadstead was constantly increasing (Antonov, 1925, pp. 6-8).

In addition to the lack of a solution to the main problem – namely, the construction of the channel – the report lamented the many other problems that have persisted for decades, adding to the dangers of operating the roadster vessels. There were not enough buoys and semaphores marking the waterway on the Bakhtemir, neither other regulating signs, and those that were installed were quickly demolished during ice drifts and floods, and no one monitored their maintenance. Cleaning and dredging of the main waterway on the Bakhtemir River was ineffective. The dredging that did take place, according to the authors of the report, was just a feeble attempt by the authorities to show their interest in the construction of the channel so as not to finally break up with the strong business community interested in the Caspian-Volga transit (Ausbrink, 2014, p. 57).

Since 1901, a special unit of the Ministry of Railways worked in the mouth of the Volga River using the new dredging machine “Duvolant”. However, its results over a 10-year period have been modest, limited to clearing the Bakhtemir waterway and facilitating the safer movement of riverboats. The “Duvolant” never made it to the sea. Ministry officials promoted the “miracle machine” in every possible way, calling it a panacea for solving the problems of channel construction. Yet in business circles, soberly assessing the results of 10 years of work, there were doubts about it: “Technically brilliant work of this dredging machine is practically





not able to carry out that grandiose task which is caused by the pressing needs of sea and river navigation in connection with other branches of regional industry and trade” (“On the results of participation of the Exchange Society’s...,” 1899, pp. 82–93). Already in the Soviet time, in 1925, engineer S. Maksimovsky, one of the long-term participants of dredging works in the mouth of the Volga River, in his article “Volga-Caspian channel” published in the regional economic magazine “Nash Krai” confirmed the suspicions of previous years about the efficiency of the “Duvolant”. According to his sources, when this dredging machine was ordered from the Votkinsk factory, a more powerful unit designed by M. Lisovsky already existed and worked successfully on the Dnieper estuary. For some reason, however, a less powerful machine was ordered for the Volga-Caspian channel, although the Votkinsk machine was already well mastered in production, together with its service ships – a dredging caravan. Then, between 1911 and 1914, three more caravans were purchased from the same factory. The author claims that, to the detriment of the business, the Votkinsk factory was “sacrificed” when ordering caravans for the channel by purchasing exactly obsolete “Duvolants” (Maksimovskiy, 1925). The author did not go into further detail, but it is clear from the context of the article that he is negative about capitalist methods of governance.

## Conclusion

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The subject of this article leads to a number of interesting conclusions, both local and general.

First, the studied material allows us to judge about the scale of cargo turnover passing through the Caspian-Volga trade route in the early twentieth century, which was comparable with the cargo turnover of Russia’s largest port in Odessa. The Caspian-Volga route was the main route for the delivery of such economically and socially important goods as paraffin and fish products from Baku to the central regions of the country, which were in dire need among the growing population of industrial cities.

Secondly, the impossibility of passing through the Volga mouth gave rise to such an interesting phenomenon peculiar only to this trade route, i.e., the 12-foot roadstead – a place for reloading goods from large sea ships to smaller roadstead ships – for their further delivery to Astrakhan. The roadstead functioned annually from April to November, giving rise, according to contemporary accounts, to a special floating city with its own administration and infrastructure.

Third, the business community saw the operation of the 12-foot roadstead as a temporary compromise solution to the problem. Due to natural disasters, the roadstead overloading led to loss of cargo, shipwrecks, and loss of lives. Therefore, participants of the Caspian-Volga shipping market, i.e. major oil producing and shipping companies including the Nobel Brothers’ Oil Production Association,

in the first decade of the 20th century insisted that the Government build the Caspian-Volga shipping channel.

Fourth, the state apparatus, – officials in the Government and in Astrakhan province, proved incapable of implementing a major infrastructure project, such as the Caspian-Volga channel. For 70 years, there were numerous attempts to start the construction, money was successfully spent, but there were no results. Even the final construction plan could not be determined after such a long period. After 1917, the Soviet press published articles by former participants of the construction works carried out in 1900-1914, which exposed some corrupt schemes of the government and Astrakhan officials to steal the funds invested in the construction of the channel.

### Authors' contributions

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The article has been written by a team of authors, all authors have taken equal part in the theoretical analysis of the problem and in carrying out the research. S.V. Vinogradov is the author of the idea, who carried out the scientific management of the study. E.V. Savelyeva summarized the data and wrote the text of the article. O.V. Likholet finalized the text and structured the material, prepared conclusions. O.N. Khotinetskiy collected and analyzed source materials, and prepared conclusions.

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