

The Eurasian Canal and the New Silk Road

Professor Nuraly Bekturganov is the Vice President of the National Academy of Natural Sciences of the Republic of Kazakhstan. This is an edited transcript of the English translation of his presentation, by video, on Panel IV of the Schiller Institute conference, on July 1, 2018.

I am Nuraly Sultanovich Bekturganov, representing the National Academy of Natural Sciences of the Republic of Kazakhstan. We are a community of scientists in Kazakhstan.

Together with scientists from Russia and China, we have conducted a series of investigations to assist in pushing forward the construction of a canal and hydroelectric station. The completion of the canal was halted in 1941, due to the start of World War II. In total, approximately 396 km of earth was dug, out of the 750 km needed for the entire canal.

The idea of constructing such a canal connecting the Caspian and Black seas has a very long history, which had been largely associated with political and military applications. Originating in the last century, it was called the Manych Waterway and was designed in the second half of the 1930s. The Ust-Manych hydroelectric complex was built in 1936. In 1941, the Veselovsky and Proletarskiy hydro-schemes were developed, which were aligned with the same reservoirs. However, further design and construction work on the canal was abruptly interrupted by the Second World War.

About 15,000 years ago, during the last Ice Age, that is, when the ice caps started to melt, the water level of the Caspian Sea was about 100 meters higher than it is now. By way of this Manych Waterway, water has traditionally flowed from the Caspian into the Black Sea. But after all these years, the situation has changed somewhat dramatically. Now, the water level of the Caspian is much lower than that of the Black Sea, about 27 meters lower. That is, over a distance of about 750 km between the Caspian and the Black Sea, the water level drops



Professor Nuraly Bekturganov

about 27 meters. Only about six locks would be necessary in order for cargo ships to speed through a canal between the two seas.

Nazarbayev and Putin Support the Canal

Such a canal itself would traverse the Kalmykia region of Russia, to the Rostov region of Russia. Construction of such a canal has been discussed numerous times, by both the Presidents of Kazakhstan and Russia. Here's what President Nazarbayev, one of the initiators of the Eurasian canal commission, had to say about it:

We are in need of different routes: Naturally these goods (oil and gas) would go along those routes which prove to be more economically viable for us. A major project along these lines could be the construction of the new—Eurasian—shipping canal which stretches from the Caspian to the Black Sea.

And here's President of the Russian Federation Vladimir Vladimirovich Putin:

The emergence of a new canal will not only give the states in the Caspian region access to the Black and Mediterranean Seas, that is, to the world's oceans, but will also change for the better their geopolitical positions, allowing them to become maritime powers.

Of course, we have seen an initiative coming from the leader of the People's Republic of China, Xi Jinping. Since 2013 he's been actively pushing what the Chinese are calling the One Belt, One Road. The Eurasian Silk Road Canal is also an initiative. The Eurasian Canal is shorthand for the Nurly Zhol project, a Russian strategic transportation project. When combined, these projects will create a multimodal transit corridor run-



ning through the territory of China, Kazakhstan, and Russia, along the routes following the Lianyungang Port (China), Korgan and Dostyk, Aktau Port (Kazakhstan), through the Eurasian Canal and into the Azov-Black Sea Basin (Russia).

The distance along the Chinese portion comes to about 3,300 km; in Kazakhstan, it's about 2,200 km; and in Russia, it's about 1,800 km. These distances compare with other routes along the Eurasian Silk Road Canal from China, Kazakhstan, and Russia. More than one million people live in the local communities in and around the canal corridors in Central Asia and the Far East. All these people, and their families, will benefit through employment and other services brought to the region by way of this project.

Survey Data Supports Construction

The realization of the Eurasian Silk Road Canal project is also oriented to the current delivery of goods for Kazakhstan by way of this transport canal. We reviewed the amount of goods being transported from China to Europe and found that its implementation will entail redirecting a significant part of the ocean trade turnover between Europe and China, which today passes through the Suez Canal. According to calculations provided by the Sinohydro Corporation, a Chinese company, upon implementing the Silk Road via the Eurasian Canal project, by 2030, some 20-25 mil-

lion tons of Chinese exports now delivered via the Suez Canal route could be delivered along the Eurasian Canal route; and by 2050, close to about 34-44 million tons of Chinese goods could be delivered this way.

The transportation infrastructure of the People's Republic of China is already ready to transport this quantity of cargo via "the Silk Road via the Eurasian Canal," in line with affordable tariffs for EU member states.

After considering these data, as well as data collected by specialists in and around the Caspian regions, we also calculated that upon comple-

tion of the Eurasian Canal, by the year 2050, cargo of about 120 million tons per year could be delivered along this route. This number is already comparable to the amount of goods being delivered via the Panama Canal.

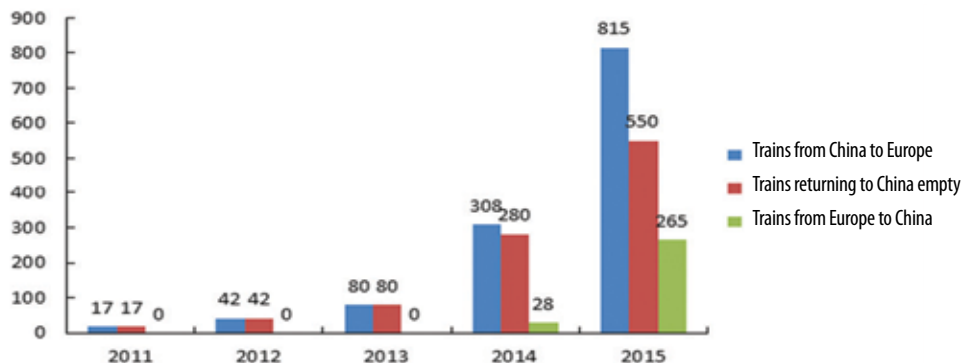
Arguments Against Construction Refuted

In 2008-2010, we conducted a comparative assessment of the technical and economic characteristics of construction projects of a new navigable canal linking the Caspian and Black seas. In the process, we reviewed a few arguments against its building. The main argument we encountered was based on an absence of an economically viable cargo flow, basing their assumptions on a comparison with the Volga-Don2 canal, in which the cargo load was calculated at only 3.5 million tons—10 times less than our calculations! We concluded that this argument could really no longer be used.

We also looked at the number of freight trains travelling between China and Europe and the volume of cargo carried in each direction. To this day, interestingly, no one but us has really ever considered discussing this as applied to the Eurasian Canal!

Up until 2014, that is, prior to the launch of the One Belt, One Road initiative, container cargo from Europe to China was practically nonexistent, but by 2014, 28 trains returned to China, loaded with goods, and in

Return Cargo Flow Through the Eurasia Channel



2015, out of 815 trains sent west from China, 265 returned loaded with cargo, an increase of 10 fold. And if we consider 2016, the amount of cargo coming into China doubled, coming to about 52,000 containers a year. The problem of under-loaded containers coming from Europe to China by land becomes less severe than by sea. According to the latest data, every second container is filled from Europe to China, travelling by land, and every third container is filled, travelling by sea. This is, of course, already a very good reason for building the Eurasian Canal.

We encountered a second argument against building the Eurasian Canal: In April 2015, the leader of the People’s Republic of China, President Xi Jinping, signed an investment agreement in Pakistan, to invest \$46 billion towards the construction of the “Kashgar-Gwadar” transportation corridor. Completion of this project will provide the western and central regions of the People’s Republic of China with a cheap multimodal outlet to the world’s oceans.

Eurasian transit through the territory of Kazakhstan and Russia must be competitive with this K-G corridor, possible only with the construction of the Eurasian Canal. Otherwise, after completion of the Kashgar-Gwadar project, Russia and Kazakhstan lose, even in terms of today’s cargo volume. This is one more reason why it’s necessary to speed up the process of building the Eurasian Canal.

The Canal Benefits All Countries En Route

Question: “How would constructing the Eurasian Canal benefit Kazakhstan?” According to recent fig-

ures, Kazakhstan would gain significant revenues from the transit of goods through its territory. Today, with the transportation of 18 million tons of cargo, Kazakhstan earns more than \$1 billion. Completion of the Eurasian Silk Road Canal, as I already mentioned, will attract another 20-25 million tons of Chinese export cargo by 2030, and another 34-44 mil-

lion tons by 2050, which would provide an additional annual income of \$1.9 billion by 2030, and \$2.4 billion by 2050.

The best argument for the construction, or the completion, of the Eurasian Canal, I believe, is this: transport of offshore oil from the Caspian Sea. Over the last four years, the largest oil deposits in the world have been discovered in what’s called the offshore Kashagan oil deposit, located in the north end of the Caspian Sea, an area which belongs to Kazakhstan. Over the last 13 years, some of the world’s biggest oil corporations have been actively investing—companies such as Total, ENI, ExxonMobil, Chinese national oil companies, Kazakh national oil companies. After a colossal amount of money spent on the opening of this offshore site, it is now ready to start production.

But there’s the question of how to deliver the crude to consumers. Of course, the idea of using pipelines is very attractive. However, if the Eurasian Canal is com-



Kashagan off-shore oil field.



the Chinese route from Lianyungang to Khorgos.

All of this has been prepared in order to assist in speeding up the re-starting of construction. Over the last three years, many scientists in Kazakhstan, Russia and China have conducted a lot of additional scientific investigations into the construction of the Eurasian Canal. In addition, numerous analyses were conducted on the cargo that would be transported through it, for example oil, as well as all the Chinese goods. By 2050, calculations show, the cargo load could amount to 120 million

pleted, ships could deliver the crude to consumers by way of the ocean. The production of crude oil from Kashagan would bring a huge benefit, especially when you consider that the greatest peak of oil extraction from this offshore site could amount to about 75 million tons of oil in the near future. That is, in addition to the 25 million tons of goods flowing through the Eurasian Canal, we would also have cargo of an initial 75 million tons of oil extracted through the Kashagan offshore facility. So this is a very serious argument in favor of the construction of the Eurasian Canal.

In order to start up the canal project again, we conducted a few investigations on the integrated technical and economic indicators surrounding its construction and operation. In accordance with Russian standards, we studied the geographical conditions, the terrain surrounding the canal that would go through Russian territory. We also studied the route it would take in Kazakhstan, gathering reliable data on the physiographical, engineering-geological, and seismic-tectonic conditions. We produced a collection of maps, covering the main aspects of the natural environment (terrain, geotechnical conditions, climate, water resources, soils, vegetation) in ArcGIS 10. We compiled maps over the buffer zone, defined by increments of 25 km. Numerical models of the terrain along the routes have also been constructed. All these various factors we published in our book, which I'll be glad to present you at the end of my presentation.

Traffic and Cargo Analysis

Chinese specialists from the Sinohydro company also conducted a number of experiments on a complex number of physical factors surrounding the canal, along

tons, and with the Kashagan oil, that could bring the load up to 200 million tons a year. This means that the cargo that would flow through the canal would be massive.

It was suggested to us to dig a parallel canal alongside the 1941 hydro-station canal, which is only about 5-6 meters deep, and basically considered to be able to handle no more than 10,000 tons of cargo. We suggested deepening the canal to about 11.5 meters. If built to a depth of about 8 meters, the amount of cargo that would be able to flow through would be more 50,000 tons. But if we deepen to about 10-11 meters, then the ships would be able to carry more than 100,000 tons.

Our most important suggestion, however, was to line the canal with concrete. This would make it easier to control the water through the canal, as well as resolve any issues surrounding the local eco-system, as the 1941 canal has caused. The new technology we have today could be used to monitor and minimize water usage, therefore answering another criticism of the canal by some ecologists who say that the canal would degrade and disrupt the local eco-system.

Construction of the Eurasian Canal would elevate the standing of the regions of the Caspian where approximately 1 million people live, and would allow them to take part in the world's waterway transportation systems.

Conclusion

To conclude, "the Silk Road via the Eurasian Canal" is well-timed, of immediate interest to the global community, and has tremendous prospect of practical implementation in the near future.

All of our recent findings are published in a book

written about the Eurasian Silk Road Canal project, under the general editorship of the President of the National Academy of Sciences, Nurtai Abykayevich Abykayev. All of our findings are printed in that publication.

Allow me to thank, of course, Dean Andromidas, who, in his [article](#) on the Eurasian Canal, was the only one who finally made note of our [article](#) titled, “The

Eurasian Canal As a Factor of Economic Prosperity for the Caspian Region.” This is one of ten different publications that we have on the Eurasian Canal. Thanks to Dean, we also met Michael and Meghan, and Jason and Alicia, all of whom enabled us to voice the findings we gathered with the assistance of the scientific communities in Kazakhstan, Russia and China.

Thank you very much for your attention.