Russo-Japanese cooperation in the Arctic region

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Japan’s lack of interest to the Arctic region in the past

* The legacy of the Tokugawa period's isolationist policies, when Japan deliberately turned its back on the north and the outside world in general
* The northern direction of expansion in the short period of the existence of the Japanese Empire that proved to be the most disastrous for the country
* In the post-war period, Japan built its policy based on the direct military threat from the north, which affected the mentality of several postwar generations
* Even polar scientific research after the war was launched in Japan not in relation to the Arctic, but in connection with Antarctica

Factors of Japan's Interest to the Arctic region after the cold war (1)

* Pragmatic considerations: political ambitions as global power
* Energy security: the Arctic contains 30% of the world's unconfirmed natural gas reserves and 13% of the world's oil reserves.
* Short transportation route to Europe

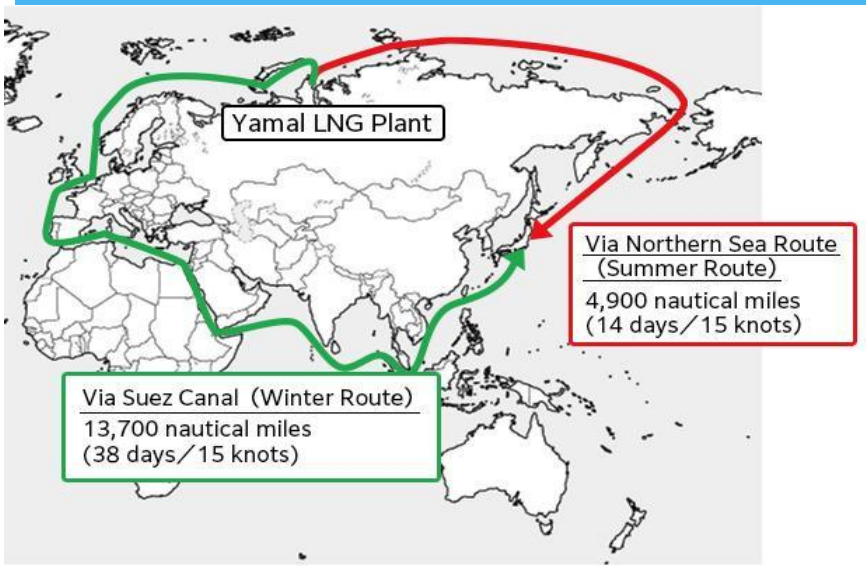
Ecological security

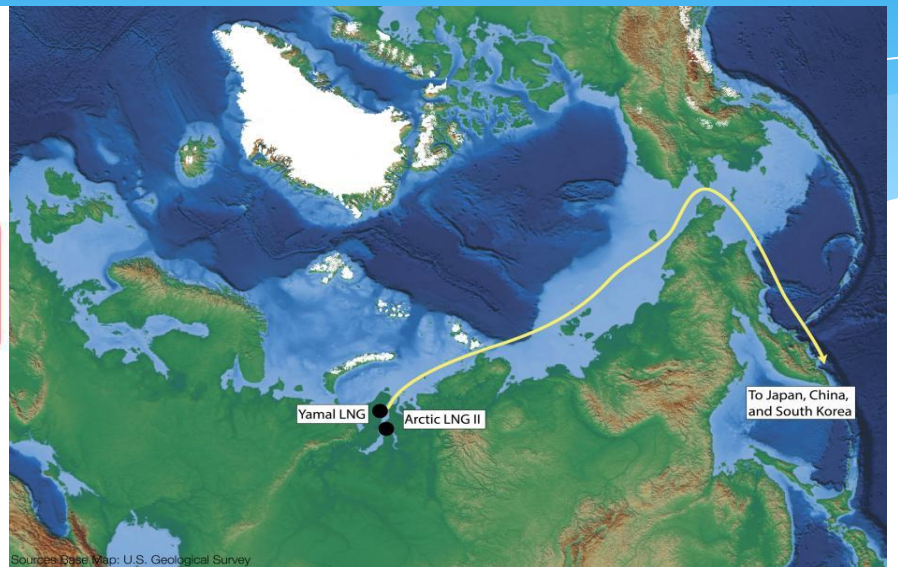
* Natural gas is the most environmentally friendly and promising energy resource after Fukushima
* Participation in Arctic gas development projects is evaluated in Japan both as part of the energy security strategy, and as Japan's contribution to green development and the fight against greenhouse emissions
* Japan as the leader of the movement against global warming. Ice melting in the Arctic where holds the key to many global environmental problems
* Japan as the global leader of environmental studies

Arctic as a new transportation route

* In the future, the Arctic may become a navigable region as the ice melts. It is already possible to deliver cargo across the Arctic from Asia to Europe
* The Northern Sea Route promises great benefits for Japan. Its length is about 20 thousand km, if it passes the traditional way-through the Pacific Ocean through the Suez Strait. Through the NSR, the route from Yokohama to Rotterdam on the southern route is 20742 km, on the northern-12038 km . Thus, it is 13 thousand (40% shorter) and 10 days less

Maps of NSR





Transportation from the Russian Arctic through the Northern Sea Route contributes to reducing greenhouse gas emissions as the required navigation distance is 65% shorter than that via the Suez Canal. Additionally, energy transportation through the Northern Sea Route enables Asian countries, including Japan who relies on natural energy imports, to develop a new energy supply route.
https://www.mol.co.jp/en/pr/2020/20038.html

Merits of the NSR for Japan (1)

* Reducing greenhouse gas emissions
* The NSR enables LNG produced in the Russian Arctic to be delivered to Asian purchasers in 15 days via the Bering Strait. It cuts the transport time in half from the traditional Suez Canal and decreases transportation costs.

The new LNG carriers are tailored to allow sailing east via the Northern Sea Route year-round. Christophe de Margerie began her voyage on 5 January 2021 at the port of Sabetta. On 7 February, upon reaching the eastern end of the Northern Sea Route, Cape Dezhnev, met the icebreaker 50 Let Pobedy, which then escorted her back to Sabetta. The LNG carrier safely completed her passage eastward along the Northern Sea Route in 11 days, while navigating the entire length of the NSR without icebreaker assistance.

The first time call of an Ice-Breaking LNG Carrier from Yamal to Japan

* The Ice-Breaking LNG Carrier "Vladimir Rusanov", which is jointly owned and operated by MOL and China COSCO Shipping Corporation Limited for the Yamal LNG project, made its first call at the LNG Terminal in Ohgishima, located inside Tokyo Bay in Japan, on 23rd July 2020. This is historically the first time an Ice-Breaking LNG Carrier has called at Japan.

Merits of the NSR for Japan (2)

* The NSR is safer than the southern route. Vessels do not need to pass through waters subject to the threats of piracy and terrorism, including the Strait of Malacca or the East coast of Somalia
* Japan acknowledges that Russia has sufficient technology to ensure navigation almost all year round. Russia has enough icebreakers, search and rescue, repair and other support vessels.
* Sufficient risk-avoiding infrastructure (including fuel leakage etc.)
* Japan also highly appreciates the pilotage services for the NSR available in Russia compared to other Northern countries

NSR: doubts (1)

* Most decisions on the development of the Arctic have been only in 2018-2019. Russian Government approved in December 21, 2019, the plan of the NSR infrastructure development up to 2035. As part of the development of the Northern Sea Route, Rosatom State Corporation has become its single infrastructure operator.
* Russia is yet to fully implement improvements to the infrastructure of the Northern Sea Route, the construction of icebreaking, rescue and auxiliary fleets, the creation of ground vehicles and aircraft to work in the climatic conditions of the Arctic.
* In 2018, only 100 vessels passed through the NSR per year, and 1,800 passed through the Suez Strait.

NSR: doubts (2)

* Russian monopoly in setting shipping conditions for the NSR: fear of high escort tariffs, restrictions for national flag of tankers transporting LNG from the Yamal fields etc. Only at the beginning of December 2020 the Russian side stated that 'if appropriate appeals are sent from transport companies, this restriction will be lifted'
* Relatively shallow Bering Strait (the lowest depth of the fairway is 36 m), which significantly limits the navigation capabilities of large-capacity vessels
* Due to the large volume of emissions and the risk of serious accidents, large-sized vessels may cause irreparable damage to the fragile ecology of the Arctic
* Difficult assessment of investment and insurance risks and insurance payments. As a result, insurance companies refuse to sign insurance contracts with investors, which deters the latter even from economically attractive projects in the Arctic.

Energy security

* Rich natural resources (hydrocarbons) About 20% of the world's gas reserves are concentrated in the Yamal region (Yamal and Gydan deposits)

Leonid Mikhelson, President of Novatek: " I think that altogether with Gazprom's reserves and undistributed license areas in the region, Russia is able to produce 130–140 million tons of LNG per annum. This is as much as one and a half of Qatar". https://www.novatek.ru/common/upload/press/Kommersant_LVM.pdf

* For Japan this region is **part of the diversification strategy within the framework of the Energy Security Policy.** Energy raw materials account for **about 70 percent of Japan's total imports from Russia.** Japan pursues a strategy of balanced distribution of sources of LNG supplies from various regions of the world – the United States, Russia, Southeast Asia and the Middle East
* Currently, LNG volumes from Australia, Malaysia and Qatar account for about 60 percent of Japanese imports. Thus, **participation in the Arctic projects will contribute to the diversification of Japan's energy sector away from traditional sources**
* Russian LNG is at present around 7.5% of Japan's LNG market and can be expanded

Competitive Landscape

Japan's LNG Import (2019)	(tons)	(thousand yen)
Australia	30,116,008	1,756,177,031
Malaysia	9,330,527	492,022,088
Qatar	8,734,971	510,420,743
Russia	6,398,638	337,528,306
Brunei	4,320,630	248,174,455
Indonesia	4,153,037	243,067,415
Papua New Guinea	3,741,745	216,672,924
U.S.A.	3,695,647	196,835,711
Oman	2,894,035	144,333,845
United Arab Emirates	2,168,486	123,767,579
Nigeria	833,291	32,436,813
Peru	677,128	36,467,369
China	70,560	2,250,297
Equatorial Guinea	68,819	3,623,685
Egypt	62,119	3,495,559
Algeria	61,438	2,505,334
	77,327,079	4,349,779,154

Evolution of Japan's involvement to the Arctic LNG projects

* In December 2016, Marubeni signed a memorandum on participation in the second major project in Yamal – Arctic 2.
* In November 2017 Marubeni and Mitsui signed a memorandum with the Russian side on participation in the construction of an LNG transshipment hub in Kamchatka.
* In 2018 Japan National Oil, Gas and Metals Corporation (JOGMEC) has signed a memorandum of understanding and cooperation opportunities for the projects on the Yamal Peninsula, including the Arctic – 2 projects on the Gydan Peninsula. The memorandum also provided for the exchange of information and knowledge on the transportation and marketing of LNG for Japan and the Asia-Pacific market along the Arctic Sea Route.
* Shortly thereafter, Seibu Gas (Fukuoka Prefecture), a **Japanese gas distribution company that supplies urban gas to the northern Kyushu region**, signed a memorandum of understanding with Novatek to enter the end-user market and optimize LNG supplies to the Asia-Pacific region using LNG, including **the construction of the Hibiki terminal in Kitakyushu**

The Arctic LNG 2 project outline

* As of 31 December 2018, the Utrenneye field's 2P reserves under PRMS totaled 1,138 billion cubic meters of natural gas and 57 million tons of liquids. Under the Russian classification reserves totaled 1,978 billion cubic meters of natural gas and 105 million tons of liquids. Arctic LNG 2 owns an LNG export license.
* **Arctic LNG 2** envisages constructing three LNG trains at 6.6 million tons per annum each, using gravity-based structure (GBS) platforms. The Project is based on the hydrocarbon resources of the Utrenneye field. The total capacity of the Arctic-2 three trains will be 19.8 million tons of LNG per year.
* The launch of the first line is planned for 2023, with a phased commissioning of the facility in 2023-2025. In contrast to the previously established LNG trading model focused on long-term contracts, **the company expects to sell LNG on the basis of spot transactions. The key to this is the smooth operation of the Arctic Sea Route. If all goes well, Arctic Ocean LNG could lead the new LNG spot market.**

Arctic LNG 2

Ресурсная база проекта — Утреннее месторождение

Новая концепция СПГ-линий на основаниях гравитационного типа (ОГТ)

СПГ-линии будут построены в Центре строительства крупнотоннажных морских сооружений (ЦСКМС)

3 линии по 6,6 млн т СПГ в год

Sales and Purchase Agreement to purchase a 10% in the Arctic LNG 2

* During the G20 summit in Osaka **in June 2019, Mitsui & Co and the Japan National Oil, Gas and Metals Corporation (JOGMEC) have signed the Sales and Purchase Agreement to purchase** a 10% participation interest in the Arctic LNG 2 project. The participation in the Project also provides for the long-term LNG offtake of approximately **two million tons per annum** by the Japanese partners.
* "We welcome the consortium of Mitsui and JOGMEC as partners in our Arctic LNG 2 project," noted Leonid Mikhelson, NOVATEK's Chairman of the Management Board. "Japan has 50 years of experience with importing LNG and is one of the largest LNG consuming countries. Moreover, Japanese companies have extensive experience in implementing LNG projects as well as marketing LNG around the world.
* President Vladimir Putin told a news conference on Saturday after a G20 summit in Osaka that **the Japanese investments in the project would reach almost $3 billion**.
* Japanese Prime Minister Shinzo Abe praised the signing of the agreement, stressing that the deal "facilitates Russia's efforts to develop the Arctic and provides a stable energy supply to our country."

Japanese investors' doubts

* Reluctance to invest in the project which can be under Washington's sanctions. Most large Japanese companies traditionally invest in the U.S. and do not want to lose the U.S. market
* Unpredictable situation with Russia as projects in the energy sector take decades
* Unattractive investment climate in Russia: problems with customs clearance, legal regulations and administrative authorities

Why only Mitsui survived?

* Mitsui agreed only after the Japanese state-controlled JOGMEC offered to finance 75% of the deal, thus violating its self-imposed 50% limit
* Mitsubishi Corp. refused to participate as doubts were raised about its profitability, the lack of guarantees that in the future it would not be on the US sanctions list etc. In addition, Mitsubishi remembered what happened to the Sakhalin-2 project in 2006, when along with Shell and Mitsui it had to reduce its stake in the project by 50% when Gazprom needed a controlling stake.
* Since the Soviet period Mitsui has special relations with Russian authorities and fulfils certain political instructions from the Japanese government not necessarily linked to the economic expedience

JOGMEC motivation

* By entering into the deal, the Japanese companies won in competition with several international national oil companies (NOC), including Saudi Aramco and KOGAS.
* Notably, the government-affiliated JOGMEC is deeply committed to this task. The project is positioned as **important for the national interests of Japan**. Following the revision of the JOGMEC Law of 2016, it may move towards **acquiring Novatek's capital in the same way as Total in the future.** It is France that shows a presence in Europe at the same level as China. French major Total owns a 16% stake in Novatek, as well as a 20% stake in the Yamal LNG project and a 10% stake in the Arctic-2 project. China National Petroleum Corporation (CNPC) and China National Offshore Petroleum Corporation (CNOOC) have each acquired a 10 percent stake in Arctic-2.

Merits for Japan

* Diversification of Japan's energy sector away from traditional sources
* Operating costs of LNG production in the polar regions are lower than in the Middle East. In particular, this is due to the fact that it is cheaper to cool gas to a temperature below zero in polar latitudes than at 30 Celsius degrees, as in the Middle East.

Political motivation (Kantei)

* Hopes that joint projects in the Arctic will advance negotiations on the peace treaty (Abe's strategy of settling the border dispute with Russia)
* China factor: not to cede Arctic to China and not to let Russia move too closely to China
* To become, in cooperation with China, the main "link" connecting the Arctic Sea Route and the Indo-Pacific region, in particular Southeast Asia and India, where the demand for natural gas will increase in the future (Japan's vision of Free and Open Indo-Pacific)

China factor

* In January 2018, China announced that it would build an “Ice Silk Road" in the Arctic as part of the "One Belt, One Road" initiative.
* Japan's accession to Arctic LNG-2 will lead to an unprecedented level of cooperation between Japanese and Chinese energy companies
* It is consistent with Abe's willingness to move from competition to cooperation and «lift Japan-China relations to a new era“, where Tokyo and Beijing are "neighbors and partners“
* In Japan's perspective, in cooperation with China, it can play the role of the "link" connecting the Arctic Sea Route and the Indo-Pacific region, in particular Southeast Asia and India, where the demand for natural gas will increase in the future.
* Japan's participation in the Arctic 2 is also important for Russia in terms of balancing against China, and of the prospect of expanding sales channels to Southeast Asia and India through Japan.

Other possible spheres of cooperation in the Arctic

* Improving people's quality of life: advanced technologies of wooden house construction in the extreme climate conditions
* Construction of new transport infrastructure facilities , in particular, seaports along the NSR.
* The construction of diagnostics and rehabilitation centers (Vladivostok experience)
* Construction of wind power plants, development of conditions for power generation in extreme climatic conditions in Sakha (Yakutia).
* Construction of greenhouses for growing vegetable products.

Wind power plant in Sakha (Yakutia)

* The project initially kicked-off in September 2017 at the Eastern Economic Forum in Vladivostok. In February 2018, RusHydro, the government of Sakha (Yakutia) Republic and NEDO signed an agreement to build a wind-diesel complex in Tiski after which the feasibility studies and preparation of construction site began.
* On December 22, 2020, RusHydro announced inauguration of 3,900 kW unique wind-diesel power plant
* The wind-diesel complex consists of 900 kW wind power plant, 3,000 kW diesel power plant and 1,000 kW electricity storage system. All components jointly function via automated system controlling and distributing electricity.
* Three unique wind turbines are engineered to operate in temperatures up to -50 °C and can withstand 70 m/s winds. Each wind turbine is 41.5 meters high with blade span diameter of 33 meters. Three diesel units are engineered to use crude oil, which is considerably cheaper than diesel fuel
* With annual output of 12 GWh, the facility will ensure reliable electricity supply to the 5,000 inhabitants of Tiksi.

Wind turbines in Tiksi

Military security

* An arms race is beginning in the Arctic, and many powers are seeking to establish their military presence there. This is the region where Russia, the United States, and Europe share borders, and in this sense **it becomes a testing ground where the interests of the main global centers of power collide**. For Japan the Arctic region is treated as the arena of China's containment policy.

The blog of Kobayashi Takayuki, the LDP MP in the Lower House

* China's activity in Arctic " raises concerns that the influence of the Chinese navy will increase in the Arctic Ocean, the Bering Sea and the Sea of Okhotsk in the North Pacific.
* "If Chinese nuclear submarines sail in these areas, the US deterrence against China will fall sharply, and the balance of power in East Asia will be seriously disturbed.“
* From this perspective, looking at the future of the Arctic Sea Route will further enhance the strategic value of the Soya and Tsugaru Straits, as well as the Kuril Islands.

Global dimension of Russo-Japanese cooperation in the Arctic

* . The development of Arctic projects with the participation of Japan, primarily gas projects, and the introduction of the Northern Sea Route into the global transport and communication turnover, make it possible to create **a new logistics link that will connect Russia and Japan with other countries of the Indo-Pacific region.**
* This maritime trade and transport route will connect **Russian gas, Japanese finance and technology, labor resources and industrial capacities of the ASEAN and South Asian countries into a single whole**.
* The sea lanes encircle Eurasia from the north, east and south that can become the logistics basis for economic growth in the 21st century. **In this sense, Russian-Japanese cooperation in the Arctic is gaining not only a regional, but also a global dimension .**
* These projects can also be integrated into the Japanese concept of a free and open Indo-Pacific region.

Thank you for attention