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### Singapore on the way to the Arctic



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**Abstract.** Singapore's Arctic interests and needs are analyzed. If China, Japan and South Korea consider the Arctic as a source of oil and gas, Singapore is interested not so much in the mineral resources of the region, but in the use of their technologies for their production. For Singapore, the Arctic is a platform on which its innovation and technology can find a place. Singapore has achieved the status of a permanent observer in the Arctic Council, which for him is a convenient position for careful monitoring of Arctic political changes.

**Keywords:** *Arctic, Singapore, the Arctic Council, an observer country, the Arctic Institute interests and needs*

Singapore is a very young country, which acquired the right to self-government only in 1959 and only in 1965 it got full independence. Since then, it was able to take the path of the rapid development, taking advantage of its geographical position and specializing in providing of financial, transport and logistics services [1; 2]. The "Arctic" Singapore's history is very short, but it has developed rapidly. In December 2011, Singapore applied to the Arctic Council for permanent observer status, and it was granted in 2013. In January 2012, Ambassador Kamal Siddique was appointed as special envoy on the Arctic issues in Singapore Ministry of Foreign Affairs, after that the diplomatic efforts of the country has been intensified to strengthen the relations with the Arctic Council, whose representatives visited Singapore as per invitation of its government in May 2012. He also started to deal with coordination of activity on the Arctic issues of other government departments, business and academic community. Official representatives of Singapore attended the meetings of the Arctic Council during the Swedish Presidency, took part in tour to Svalbard, organized by the Norwegian Government in August 2012 and in the 10th Conference of Parliamentarians of the Arctic region in September 2012.

Officially in Singapore there is no publicly announced Arctic policy, but analysis of its economy, the interests of its largest enterprises and diplomatic activity shows quite clearly its Arctic ambitions, growing interest to the Arctic. Singapore is interested in the development of Arctic energy resources, which primarily related to opening of new possibilities for the use of its existing advanced high technologies in the field of shipbuilding, mechanical engineering, construction of port infrastructure, including the infrastructure of the mining industry offshore.

Representative of the Office of Maritime and Port Administration of Singapore P. Ong already in 2007 noted that Singapore could contribute to the development of the Arctic thanks to the development of technologies in oil and gas extraction on the fields with limited reserves and in the harsh climate conditions of the region (currently Singapore produces about 70% of rigs for drilling oil wells in the world). [3] In this aspect, Singapore is positioning itself as a strong ally for any country seeking to develop the Arctic. This again was announced in August 2014 at the IV International Meeting of representatives of the participating countries of the Arctic Council in Naryan-Mar<sup>1</sup>. Ambassador Extraordinary and Plenipotentiary of the Republic of Singapore in Russia Ms. Kseng Hua Lim explained the interest of her country to the Arctic by the fact that Singapore is interested in the development of the region and can offer to countries engaged in the transportation of goods and mining in the high latitudes, the new technologies in shipbuilding, vessel service, navigation systems. "In addition, our country is interested in the issues of climate change, as this process also affects the countries of the Pacific region, to which Singapore refers. We even created the Institute for the study of climate and the existence of people in low-temperature conditions", — Mrs. Ambassador noted in her speech<sup>2</sup>.

According to experts of the Nordic Institute of Asian Studies (Denmark), Singapore is an influential player in the world's ocean. It positions itself as one of the leading maritime nations of the world. It is part of the International Maritime Organization (IMO) — the world's leading organization of seafarers. In November 2011, its representative was elected to the Board of the organization that can be regarded as a recognition of the country's status as the owner of the important seaports and great sea fleet, affecting on the development of the IMO position on key issues of shipping in the world.

Singapore has a significant economic and political interest in the development of the international maritime policy, including in the Arctic. Singapore stands for freedom of navigation, for strengthening of cooperation between the Arctic and other countries on issues of navigation in the high latitudes. Getting a large amount of information from specific systems, the relevant maritime services monitor changes in navigational conditions that allows to simultaneously track up to 10 thousand vessels. Arctic for Singapore is a good opportunity to confirm its status as global maritime power, to monitor and correct trends in international law of the sea, taking into account its national interests. Due to the structure of its economy and stipulated economic aspirations, it is

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<sup>1</sup> K IV Mezhdunarodnoi vstreche predstavitelei stran-uchastnits Arkticheskogo soveta proiavili aktivnyi interes strany ATR. 7 vgusta 2014 g. URL: <http://nao.er.ru/news/2014/8/7/k-iv-mezhdunarodnoj-vstreche-predstavitelej-stran-uchastnic-arkticheskogo-soveta-proyavili-aktivnyj-interes-strany-atr/> (accessed: 16 June 2016).

<sup>2</sup> At the same place.

interested in opening of the northern sea routes, in the development of deposits of Arctic oil and gas, as well as in the implementation of shipbuilding orders and construction contracts. In Singapore economy state-private partnership is at very high level, and in this regard, the Government separates the interests of business, since the state owns shares in large Singapore companies, having interests in the maritime sector and maritime engineering.

Singapore is energy dependent on external supplies and is very interested in the supply of energy resources, including hydrocarbons, since it does not have its own fuel and raw materials. Singapore is ranked 9th in the world in oil import. A large company of Singapore, PSA, owns terminals capable of receiving vessels from the Arctic routes. The company is 100% owned by the holding company Temasek, owned by the Ministry of Finance of Singapore [1, p. 100]. Potentially the Arctic for Singapore is one of the sources of oil supplies for domestic consumption and, most importantly, for oil refining, which makes one of the base of the economy.

The Republic has a firm intention to participate in the development of infrastructure of the NSR. Experience in planning and port construction, marine process management, prevention of oil spills and disaster recovery allow to Singapore to be one of the potentially primary participants of route development. As A. Pilyasov noted, Singapore "in recent decades has accumulated a unique experience and expertise in managing of complex infrastructure of a modern port that can be used constructively in the Arctic ports not for competition but for cooperation with it" [4, p. 337]. Singapore is the world's largest container port, and only recently it has given the first place to Shanghai as the world's leading container terminal.

For Singapore, the Arctic is a platform for its innovation and technologies. Using of the NSR will increase the flow of goods between the north-eastern and western European ports, as well as provide Singapore orders in shipbuilding. Singapore also expects to receive the results from the "sale" of its own achievements to participants of the Arctic race. Therefore, Singapore is a profitable ally for many states. According to some experts, the most active state "is Norway, which considers Singapore as ally and supporter in promoting its own interests in the Arctic" [2, p. 59]. If China, Japan and South Korea consider the Arctic as a source of oil and gas, Singapore is interested not so much in mineral resources of the region, but in use of technologies for their production.

Asia's largest state investment company is the National Foundation of Singapore (Temasek Holdings), the only share holder of which is the Ministry of Finance of Singapore. Companies associated with the "Temasek", take the leading positions in various spheres: management of ports and airports, transportation by these means of transport, energy, telecommunications,

media, banking and financial services, real estate, engineering<sup>3</sup>. State holding company Temasek owns by 21% shares of Keppel Corporation and 61% of shares of Sembcorp Marine, leading in the engineering sector of Singapore's maritime cluster [1, p. 101—102]. That's why Singapore is trying to promote their interests in the world, including joining the Arctic Council's activities in the only available form for this state — as a permanent observer.

Many Singapore companies were the first to build icebreakers. The first icebreaker was built in 2008. The company Keppel built two ice-class vessels for the company Lukoil, which are intended for use in the Barents Sea: multifunctional icebreaker "Varandey" and assistance tug of ice class "Toboy" for work in the area of Varandey oil terminal<sup>4</sup>. Keppel together with ConocoPhillips is working on the construction of innovative offshore platform for the Arctic drilling. Keppel and Sembcorp also develop associated types of business: ship supply, logistics, information support using the latest electronic navigation devices in difficult environmental conditions. For these purposes Singapore develops tripartite cooperation between government, industry and the academic community. In order to increase the competence in the offshore oil and gas production, the Center for Research and offshore engineering was established in Singapore in 2004. In addition to the above, Singapore as one of the largest financial centers in Asia, is interested in insuring risks that will be high as it is known during the economic development of the Arctic. Besides considerable interests in maritime and insurance of marine risks, the country is interested in sale expansion of ships and offshore platforms, as it is the large world center for their construction.

The country makes great investments in the development of offshore construction technology, including platforms for oil and gas for offshore oil production on great depths and in harsh environments. The Government of Singapore has set a goal — to transform the country into a global center for offshore technology by 2025. To do this, they develop maritime cluster, which produces about 10% of Singapore's GDP. 5 thousand enterprises function in it, and their activities are connected with sea. One of the main types of activity in this cluster is the offshore construction [1, p. 101].

At the same time Singapore has experience of the most efficient in the world of human resources management (including immigration flows), in the implementation of infrastructure projects, and can also act as an arbiter in resolving any disputes. Singapore - perhaps the only (not

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<sup>3</sup> Osobennosti deiatel'nosti Singapurskogo Natsional'nogo fonda Temasek. Informatsionno-analiticheskii material. M., 2012. URL: <http://www.veb.ru/common/upload/files/veb/analytics/strman/sm201301.pdf> (accessed: 16 June 2016).

<sup>4</sup> Ledokol «Varandei» voshel v sostav Arkticheskogo flota Lukoila. URL: <http://www.lukoil-kmn.com/news/168> (accessed: 16 June 2016).

including Russia) state in the APR, devoid of serious conflicts with all other important players. It should be noted that ships with Singapore flag and with flags of some other countries, were found in the illegal unregulated fishing in the exclusive economic zone of Russia. As stated, the received catch is transferred to foreign vessels or transported to ports of Japan, South Korea, China and other countries.

If climate change causes melting of glaciers in the north, and the Arctic states make the necessary investments in infrastructure, services sector and logistics, as Singapore did before, then the central position of this equatorial city-state in the world system of cargo transportation will be in danger. Singapore is aware of this potential threat for the economic well-being of the country in view of a possible reorientation of the traffic to bypass the Singapore logistics hub. With opening of the regular shipping along the NSR Singapore can lose part of Chinese goods, which now go through the Malacca Strait, and in the case of opening of the northern route, they will bypass the Singapore ports. The Singapore government cannot but respond to such prospect, even if it very remote. Executive Director of the Maritime and Port Authority (MPA) of Singapore acknowledged that the NSR could ruin the Singapore's status as a global transportation center. Singapore government invests a lot of money in the modernization of port infrastructure just to keep this status. MPA is going to increase the efficiency and volume of cargo handling by automating of processes, for example, by means of the introduction of the system of automated handling of containers, which is already being tested in one of the Singapore port terminals<sup>5</sup>. In August 2015 MPA announced a cooperation with the IT-giant IBM. In the framework of the partnership agreement, signed two years ago, IBM will create a single platform providing data integration in real time and complete view of the MPA information system for port operators could be able to better coordinate the work of the vessels<sup>6</sup>. All this goes in parallel with plans of MPA to increase the volume of processed goods from the current 33.9 million TEUs per year to 65 million<sup>7</sup>.

Singapore continues to fix the status of very important world port, and the development of Arctic shipping will hardly prevent this in the near future. Singapore specializes in container fleet, accepting the world's largest container ships at its port terminals. Today, the passage of ships with such draft is not possible along the NSR, and the passage of smaller ships along the NSR reduces its

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<sup>5</sup> MPA: Arctic Shipping Lanes Won't Challenge Singapore's Status as a Global Shipping Hub "Any Time Soon" // Ship and Bunker. URL: <http://shipandbunker.com/news/apac/564935-mpa-arctic-shipping-lanes-wont-challenge-singapore-status-as-a-global-shipping-hub-any-time-soon> (accessed: 14 February 2016).

<sup>6</sup> Port Singapura vnedriaet analitiku IBM dlia upravleniia sudami // Tadviser. URL: <http://goo.gl/OZ22VM> (accessed: 14 February 2016).

<sup>7</sup> Boost in Singapore's port capacity and efficiency to compete with new trade routes // Straitstimes. URL: <http://www.straitstimes.com/singapore/boost-in-singapores-port-capacity-and-efficiency-to-compete-with-new-trade-routes> (accessed: 14 February 2016).

economic benefit to nothing, in terms of the expenses for 1 transported container. In addition, container transportations of goods are carried out in accordance with strict time limits, which may not be observed in the Arctic due to the deterioration of ice and weather conditions. Today, navigation along the NSR is possible only during summer months, and for the passage in other period need, the assistance of the Russian icebreakers is needed. There is practically no infrastructure necessary for the organization of the safe navigation of ships along the NSR, while navigating through the Malacca Strait has been regulated and well managed for a long time already. Thus, we can say with confidence that the NSR in the near future will not be able to compete with the southern route via port of Singapore.

Another important reason for the interest of Singapore to Arctic development is climate change [2]. Further melting of Arctic glaciers can cause the rise of the global sea level, faster than previously predicted by scientists of Singapore. To prevent flooding, Singapore government has built bank protection walls and concrete embankments for about 75% of the coastline. In the process of realization of land reclamation, Singapore area can be increased more than 200 km<sup>2</sup> by 2030, and the rise in sea level could disrupt these plans. Singapore also faces with abnormal climatic changes that have become unpredictable. Heavy rains have been increased in recent years, leading to flooding in various parts of the country. On the other hand, the monthly drought in January 2014 was the strongest for the last 50 years. Abnormal climatic changes not only lead to floods, droughts, emergence of new tropical diseases, but also affect the Government ability to manage water resources and to keep biodiversity. Just for the sake to understand better the ongoing climate change and confidently implement suitable protective measures, Singapore wanted to take the place in the Arctic Council<sup>8</sup>.

Singapore conducts academic projects of Arctic research mainly in the following areas: 1) applied technologies of new generation in shipbuilding, mechanical engineering and construction of port infrastructure and infrastructure of the mining sector in regions with severe climatic conditions (Singapore currently produces about 70% of rigs for drilling oil wells in the world); 2) the study of Arctic ice melting effect on global climate change (NCCS — National Committee on Climate Change also deals with it); 3) the problem of the indigenous peoples of the Arctic ( preservation of their culture and traditional way of life, the problem of providing of drinking water and its treatment, the problem of healthcare — the so-called "polar medicine", urban development problems in the regions with dominating low temperatures). The Government of Singapore pays the attention to the

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<sup>8</sup> MFA Press Statement: Visit of Minister of State in The Prime Minister's Office and Ministry of Culture, Community and Youth, Sam Tan to Norway, 18 to 22 January 2015. URL: [http://www.iarc.uaf.edu/sites/default/files/node/4484/singapore\\_speech\\_state\\_of\\_the\\_arctic\\_singapor\\_15861.pdf](http://www.iarc.uaf.edu/sites/default/files/node/4484/singapore_speech_state_of_the_arctic_singapor_15861.pdf) (accessed: 14 February 2016).

revitalization of cultural exchanges with the representatives of the indigenous peoples of the North, as well as encourage of the youth volunteer projects in this area [5, p. 44—45].

One of the features of interest of Singapore in the Arctic policy is the support of the indigenous peoples of the North, as the representatives of Singapore repeatedly told. The first steps in this regard were made in June 2012. The country has a special extraordinary ambassador who visits indigenous communities to understand better their requirements and needs. In this regard, Singapore has recently received several delegations from the Arctic region. They included representatives of the Aleut International Association, Arctic Athabaskan Council, Russian Association of Indigenous Peoples of the North, Siberia and Far East of the Russian Federation, the Saami Council and the Secretariat of the indigenous peoples of the Arctic Council. In addition, in conjunction with the permanent members of the Arctic Council (representing the indigenous peoples' organizations), the scholarship program of postgraduate training has been established in Singapore, allowing for students-representatives of the indigenous peoples of the Arctic to study state policy in Singapore, public administration and conduct marine research. According to Singapore's diplomats, such programs are a new form of knowledge exchange, which can happen due to the activities of the Asian countries in the Arctic Council. These efforts may also allow representatives of indigenous peoples to return home with skills that will help them to better use the income from the production and transportation of mineral resources and manage them, instead of relying on foreign experts<sup>9</sup>. One of the Singapore companies, using modern technology, has developed a special mobile application to support indigenous languages and cultures<sup>10</sup>.

### *Conclusion*

Arctic interests of Singapore are a logical extension of its more common interests and important events in the international maritime policy, including through the International Maritime Organization, the United Nations Convention of Law of the Sea and regional cooperation in the sea. In this regard, Singapore with its international status and technological potential in the sphere of shipbuilding, management experience and the development of marine and coastal infrastructure is desirable and profitable ally for many countries, conducting more active Arctic policy. Formation of Singapore's Arctic strategy, as the other countries of South-East Asia, is still in

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<sup>9</sup> Bennet Miiia. Singapur i Arktika: vzgliad s ekvatora // Pro-Arctic. URL: <http://pro-arctic.ru/08/10/2015/press/> 184 85 (accessed: 14 February 2016).

<sup>10</sup> Iz vystupleniia Chrezvychainogo i Polnomochnogo posla Respubliki Singapur v Rossiiskoi Federatsii Kkheng Khua Lim na mezhdunarodnoi konferentsii v g. Nar'ian-Mare 5-7 avgusta 2014 g. // Mezhdunarodnaia konferentsiia predstavitelei gosudarstv-chlenov Arkticheskogo soveta, stran-nabludatelei Arkticheskogo soveta i zarubezhnoi nauchnoi obshchestvennosti «Aktual'nye problemy ustoiчивого razvitiia i obespecheniia bezopasnosti v Arktike». M., 2014. p. 31.

the process of development. Singapore has the opportunity to take its worthy place in use of the latest technology for the Arctic in infrastructure, shipbuilding and other industries, the financing of the Arctic investment projects, scientific and technical expertise, study of the effect of the Arctic sea melting on climate change.

In general, the involvement of Singapore in the Arctic Council's work, has rather positive meaning for Russia. Moreover, Russia and Singapore cooperation in the Arctic could be developed with new force due to the fact that a number of Western countries has imposed economic sanctions against Russian oil and gas sector and has directly limited supply of modern oil and gas equipment to Russian companies. Singapore has not imposed such sanctions, and therefore remains one of the few countries that can create and deliver such equipment in Russia. The country has a strong globally competitive sector of offshore engineering for the oil production facilities, including in extreme arctic conditions. Furthermore, Singapore has a technology for offshore drilling in tough environment, that can be advantageously used in the Arctic.

Singapore has achieved the status of a permanent observer in the Arctic Council, which is a convenient position for careful monitoring of the political changes taking place in the Arctic. [2] However, it is not clear yet if Singapore's efforts in the Arctic carry long-term goals and political context, or it will use the potential of the Arctic as an emerging market, where Singapore considers itself as a technology leader.

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