

Arctic Shipping and China's Shipping Firms: Strategic Positioning in the Frame of Climate Change?

HUANG Linyan, Frédéric LASSERRE, and Olga ALEXEEVA*

Since about 1995, climate change has begun to mark the Arctic region. The first and strongest signs of global-scale climate change exist in the high latitudes of the planet. The observed warming in the Arctic in the last decades of the 20th century appears to be without precedent since the early Holocene. Also, changes in northern climate are expected to continue throughout the 21st century and persist for many centuries to come, bringing with them major physical, ecological, sociological and economic transformations. The Arctic transformations have aroused increasing international interest. There has been much written in recent years about existing and potential disputes in the Arctic. This interest has predominantly been reflected in extensive media coverage bringing attention to the area's abundant resources, border-related disputes, and the possible opening of new maritime routes.^① Located north of the polar circle, the Arctic comprises eight littoral countries and is centered on the Arctic Ocean that is witnessing dramatic climate changes. Among Arctic countries, five are bordering the Arctic Ocean – Canada, Russia, the United States, Norway, and Denmark (via Greenland).^② The commercial and strategic implication of climate change and the melting of the sea ice in the Arctic have drawn attention not only to Arctic states, but also to some other countries that have no territorial access to the region, such as China, South Korea and Japan. Reasoning on the new climatological conditions that accelerate the summer melting of the sea ice and of multiyear ice, several observers pinpointed promising geostrategic opportunities for countries

* HUANG Linyan is PhD candidate, Geography Department, Laval University, Canada; Frédéric Lasserre is Project Director of ArcticNet, Geography Department, Laval University; Olga Alexeeva is Professor at History Department, Quebec University in Montreal, Canada.

^① Stephanie Holmes, "Breaking the Ice: Emerging Legal Issues in Arctic Sovereignty," *Chicago Journal of International Law*, Vol. 9, No. 1, 2008, pp. 323-352; Arvind Gupta, "Geopolitical Implications of Arctic Meltdown," *Strategic Analysis*, Vol. 22, No. 2, 2009, pp. 174-177; Frédéric Lasserre ed., *Passages et Mers Arctiques: Géopolitique d'une Région en Mutation (Arctic Corridors and Seas: Geopolitics in a Region Undergoing Change)*, Quebec: University of Quebec Press, 2010.

^② Iceland, located in the north of the Atlantic Ocean, is not considered to border the Arctic by member countries of the Arctic Council.

bordering the region^①, anticipating that the creation of a new trade route from north to east could lead to significant commercial profits and increase access to natural resources for economic growth purposes, because such a route would be much shorter between the Atlantic and the Pacific, and would facilitate trade flows compared to existing alternatives via the Suez or Panama Canals.^②

Yet, interest in the region does not stop at circumpolar states. Other countries see a number of geostrategic opportunities and stakes involved in accessing the Arctic. China, which lacks a legal basis to articulate claims over sea zones in the region, has nonetheless been increasingly present on the diplomatic and economic scenes.^③ In recent years, Beijing has succeeded in setting up a vast scientific Arctic research program in the fields of climatology, geology, and biology, among others. Moreover, Beijing has mobilised considerable efforts towards the building of political and economic ties with smaller Arctic countries such as Norway and Iceland, and has brought Arctic-related questions into its diplomatic agenda with Russia and Canada.^④

These efforts on the part of China since 2009 have engendered negative reactions on the part of the Western media, which portray China as ambitious, greedy, and ready to conquer and threaten the territorial sovereignty of countries in the Arctic region. Examples commonly cited of such attempts include the sudden appearance of China's research icebreaker *Xuelong* in Tuktoyaktuk (Northwest Territories,

^① Frédéric Lasserre and Stéphane Roussel and Lin Ting-sheng, "Canada and the Arctic: Sovereignty, Security and Identity," *Global Review* (Chinese), No. 2, 2012, pp. 118-125.

^② U. A. Evdokimov, U. M. Batskikh and A. V. Istomin, "Северный морской путь: проблемы, возможности, перспективы возрождения" [The Northern Sea Route: Problems, opportunities, revival prospects], *Экономическая наука современной России* [*Economics of Contemporary Russia*], Vol. 2, 2000, pp. 101-112; V. Peresipkin and A. N. Iakovlev, "Северный морской путь в проблеме международных транспортных коридоров" [The Northern Sea Route in international transport networks], *Транспорт Российской Федерации* [*Russian Federation Transport*], No. 3, 2006, pp. 30-35; Frédéric Lasserre, "Géopolitiques Arctiques: Pétrole et Routes Maritimes au Cœur des Rivalités Régionales?" *Critique Internationale*, Vol. 49, 2010, pp. 131-156; Frédéric Lasserre, "Vers une Autoroute Maritime? Passages Arctiques et Trafic Maritime International," in Lasserre ed., *Passages et Mers Arctiques*, pp. 449-476.

^③ Ministry of Foreign Affairs of the People's Republic of China, "China's View on Arctic Cooperation", July 30, 2010, <http://www.fmprc.gov.cn/eng/wjb/zjzg/tyfls/tfsxw/t812046.htm>.

^④ Ministry of Foreign Affairs of the People's Republic of China, "Director General Huang Huikang Meets with Canadian Assistant Deputy Minister of Foreign Affairs Christie," 2011, www.fmprc.gov.cn/eng/wjb/zygy/g yhd/t858972.htm.

Canada) in 1999, and the attempts by a Chinese businessman to purchase vast tracts of land in Iceland in 2011. Claims that the icebreaker's presence was unexpected served as a pretext to accuse China of suspicious motivations in the area.^① Yet in reality the Chinese government had submitted to the Canadian Embassy in Beijing a formal request to enter the area.^② Chinese rear admiral Yin Zhuo's assertion that Arctic resources are a world heritage^③ are commonly cited by Western analysts as evidence of long-term goals of Chinese government, whose ambitions in the Arctic would threaten the interests of riparian countries bordering the ocean.^④

Discussions over potential natural resource reserves in the area and the opening of new trade routes have led to speculation over the intentions of regional and world powers, increasingly concerned about their economies' dependence on energy security. China is often described as being very interested in both Arctic mineral resources and the opening of Arctic shipping routes, but in this characterization there is a hint of a perceived threat, as commentators are often stressing that China's appetite may lead Beijing into considering the Northwest Passage an international strait and resources as open up for grabs.^⑤

I. Chinese Academics Underline the Potential for Arctic Shipping

Chinese scientific research has long been very active in the Arctic. The China Arctic and Antarctic Administration (CAA) was founded in 1981 as the Office of the National Antarctic Expedition Committee. The Chinese official research program in the Arctic formally began in 1989 when the Polar Research Institute of China was

^①“Who Will Guard Our Gaping Back Door?” *Edmonton Journal*, November 18, 2007.

^② Nancy Teeple, “A Brief History of Intrusions into the Canadian Arctic,” *Canadian Army Journal*, Vol. 12, No. 3, 2010, pp. 45-68.

^③ Gordon Chang, “China's Arctic Play,” *The Diplomat*, March 9, 2010, <http://thediplomat.com/2010/03/09/china%E2%80%99s-arctic-play>.

^④ Curtis David Wright, “The Panda Bear Readies to Meet the Polar Bear: China Debates and Formulates Foreign Policy towards Arctic Affairs and Canada's Arctic Sovereignty,” Working Paper, Canadian Defence & Foreign Affairs Institute, 2011; Curtis David Wright, “The Dragon Eyes the Top of the World: Arctic Policy Debate and Discussion in China”, *China Maritime Studies*, No. 8, August 2011.

^⑤ Suzanne Lalonde, “Legal Aspects of the Opening of the Northwest Passage,” Communication presented at the Naval Officers' Association of Canada Annual Conference, May 30, Quebec City, Canada, 2008; Scott Borgerson, “Arctic Meltdown: The Economic and Security Implications of Global Warming,” *Foreign Affairs*, Vol. 87, No. 2, 2008, pp. 63-77; Joseph Spears, “China and the Arctic: The Awakening Snow Dragon,” *China Brief*, Vol. 9, No. 6, 2009, pp. 1-13.

founded and the CAA adopted its present name. Most articles that were published in a dozen Chinese journals between 1988 and 2008 focused on the Arctic glaciology, climatology, oceanographic science, upper atmospheric physics, as well as on the Arctic biological and environmental studies, confirming the above-mentioned statement by Chinese officials that China's interest in the region was at first largely motivated by scientific concerns. A quick survey of the China's largest database search engine in August 2012, Wanfang Data (万方数据库)^①, retrieved 680 articles that included the word "Arctic" (北极) in their title and that were published before 2008. Most of these articles (49% of the total number) are related to all kinds of climatologic issues, others treat biodiversity (23%), environment (10%), technology (10%), linguistics and history of Arctic's indigenous peoples (8%). No major Chinese scientific paper ever considered political issues in the Arctic before 2007. However, between 2007 and 2012 appeared several publications related to Arctic politics, legal issues and strategic interests, including shipping.^②

Among the recent articles, thus, has emerged the idea, often repeated among Western and Chinese analyses, that the shorter Arctic sea routes are strategic and will witness the development of a strong traffic. Let us quote work by scholars like Guo^③, Guo and Guan^④, Li^⑤, Li and Tian^⑥, Liu and Lin^⑦, that flourish the year following China's application as an observer at the Arctic Council; but also Ge and Jiang^⑧, Shi^①, Li and Sun^②, Xu et al^③ or Xiao^④. This list is certainly not complete,

^① *Wanfang Data* is China's first database, created in the 1950s by the Institute of Scientific & Technological Information of China (ISTIC). It originally served the purpose of digitalising information about companies and their products. It was later transformed into a vast electronic database of multidisciplinary information, and provides access to many collections of periodicals, theses, and other types of archives. See www.wanfangdata.com.cn.

^② Olga Alexeeva and Frédéric Lasserre, "China and the Arctic," *Arctic Yearbook 2012*, Island: University of Akureyri, 2012, pp. 80-90.

^③ Guo Peiqing (dir), *Research of International Affairs on Arctic Routes* (Chinese), Beijing: Ocean Press, 2009.

^④ Guo Peiqing and Guan Qinglei, "An Analysis of Political and Legal Problems of the Northern Sea Route," *Journal of the Ocean University of China (Social Sciences)* (Chinese), No. 4, 2009, p. 2.

^⑤ Li Zhenfu, "Analysing China's strategy with Respect to the Northern Sea Route," *China Soft Science* (Chinese), No. 1, 2009, pp. 1-7.

^⑥ Li Zhenfu and Tian Yanyu, "Research on Arctic Route Issue Basin based on KJ Method," *World Regional Studies* (Chinese), No. 3, 2009, pp. 97-102.

^⑦ Liu Huirong and Lin Hui, "On Russia's Legal Control of the Northern Sea Route," *Journal of the Ocean University of China (Social Sciences)* (Chinese), No. 4, 2009, pp. 6-10.

^⑧ Ge Yameng and Jiang Nanchun, "The Attractive Future of the Container Ship Route in the

as many articles now appear on the topic of Arctic resources or Arctic shipping. A striking feature, however, of these articles is that while discussing China's interests in potential Arctic routes and policy implications of the development of Arctic seaways for China, no critical analysis of the feasibility or economic profitability of such routes is considered: it is as if most researchers assumed Arctic routes, because they are shorter, are necessarily much more interesting for shipping.

A different view began to emerge in 2013, with articles from Zhang et al^⑤, Wang and Shou^⑥ or Xu^⑦, echoing the research project launched by Zhang and the Polar Research Institute of China in 2012 on the development of Arctic shipping^⑧: these papers underline the need to assess the feasibility of Arctic shipping and to undertake empiric research to develop Arctic transport.

However, in the Chinese literature, most articles still focus on the potential of the route, underlining its being much shorter than classical routes is in itself a decisive advantage. With the exception of Xu et al^⑤ or Wang and Shou^⑥, no article or project up to 2013 deals with the idea that Arctic shipping remains difficult, costly and not necessarily profitable, depending on the cost structure and the market, an idea now

Arctic," *China Maritime Safety* (Chinese), No. 11, 2010, pp. 21-22.

① Shi Chunlin, "The Use and Role of Arctic Sea Routes for the Economic Development of China," *Inquiry Into Economic Issues* (Chinese), No. 8, 2010, pp. 47-52.

② Li Zhenfu and Sun Jianping, "Analysis of Game Mechanism of Arctic Route Geopolitics," *World Regional Studies* (Chinese), Vol. 20, No. 1, 2011, pp. 56-62.

③ Xu Hua, Z. Yin, D. Jia, F. Jin, & H. Ouyang, "The Potential Seasonal Alternative of Asia-Europe Container Service via Northern Sea Route under the Arctic Sea Ice Retreat," *Maritime Policy & Management*, Vol. 38, No. 5, 2011, pp. 541-560.

④ Xiao Yang, "Game Theory of the National Interest in the Arctic Navigation: China Position and Policy," *Peace and Development* (Chinese), No. 3, 2012, pp. 42-47.

⑤ Zhang Xia, Shou Jianmin and Zhou Haojie, "Studies on North Pole Maritime Shipping Commodity Types and Related Economy Scale," *Chinese Journal of Polar Research* (Chinese), No. 2, 2013, pp. 66-74.

⑥ Wang Yuqiang and Shou Jianmin, "Economic Analysis and Navigation Feasibility Probe into Sino-Europe Maritime Transport Route of Northeast Navigation Route," *Marine Technology* (Chinese), No. 2, 2013, pp. 21-24.

⑦ Xu Hua, "How Should Chinese Enterprises Take a Share of North Pole Shipping," *Journal of China Transport* (Chinese), September 24, 2013, p. 7.

⑧ Zhang Xia, "The Future of China Utilizing North Pole Navigation Routes," *Research Project* (Chinese), Polar Research Institute of China, Shanghai, 2013.

⑨ Xu, Yin, Jia, Jin, & Ouyang, "The Potential Seasonal Alternative of Asia-Europe Container Service via Northern Sea Route under the Arctic Sea Ice Retreat".

⑩ Wang and Shou, "Economic Analysis and Navigation Feasibility Probe into Sino-Europe Maritime Transport Route of Northeast Navigation Route".

largely present in the scientific debate among Western scholars. Chinese publications barely deal with an analysis of costs or difficulties linked with Arctic shipping, whereas this analytical approach is already common in the scientific literature.^①

II. From Research to Action: Agreements and Developments

To what extent is this scholar interested in Arctic shipping shared by the Chinese government and business circles?

2.1. Government actions and thinking

In 1992 China started its first five-year scientific research program in the Arctic Ocean in cooperation with German universities in Kiel and Bremen. In ten years from a country that had no Arctic research whatsoever, China became a country that has established, in 2004, its own research station, *Yellow River*, in the Arctic (in Ny-Alesund, on the island of Spitsbergen, Norway) and has conducted four independent Arctic missions (1999, 2003, 2008 and 2010). For these purposes, in 1993, Beijing purchased a Russian-made icebreaker from Ukraine, the *Xuelong* [雪龙] - *Snow Dragon*. The 167-meter-long vessel has an icebreaking capacity of 1.2 meter and is equipped with advanced systems of self-contained navigation and weather observation. There are a data processing center and seven laboratories as well as three operating boats and a helicopter. In 2010, the *Xuelong* helped a Chinese research team build a floating ice station in order to conduct a 15-days research

^① See for instance Emmanuel Guy, "Evaluating the Viability of Commercial Shipping in the Northwest Passage," *Journal of Ocean Technology*, Vol. 1, No. 1, 2006, pp. 9-18; Saran Somanathan, Peter Flynn, and Jozef Szymanski, "The Northwest Passage: A Simulation," *Transportation Research Part A: Policy and Practice*, Vol. 43, No. 2, 2009, pp. 127-135; Jerome Verny and Christophe Grigentin, "Container Shipping on the Northern Sea Route," *International Journal of Production Economics*, Vol. 122, No. 1, 2009, pp. 107-117; Liu Miaojia and Jacob Kronbak, "The Potential Economic Viability of Using the Northern Sea Route (NSR) as An Alternative Route between Asia and Europe," *Journal of Transport Geography*, Vol. 18, No. 3, 2010, pp. 434-444; Frédéric Lasserre, "Géopolitiques Arctiques: Pétrole et Routes Maritimes au Cœur des Rivalités Régionales?" *Critique Internationale*, Vol. 49, 2010, pp. 131-156; Frederic Lasserre and Sébastien Pelletier, "Polar Super Seaways? Maritime Transport in the Arctic: An Analysis of Shipowners' Intentions," *Journal of Transport Geography*, No. 19, 2011, pp. 1465-1473; Xu, Yin, Jia, Jin, & Ouyang, "The Potential Seasonal Alternative of Asia-Europe Container Service via Northern Sea Route under the Arctic Sea Ice Retreat," pp. 541-560; Halvor Schøyen and Svein Bråthen, "The Northern Sea Route versus the Suez Canal: Cases from Bulk Shipping," *Journal of Transport Geography*, Vol. 19, No. 4, 2011, pp. 977-983.

mission in the Arctic Ocean^①, in the frame of its long-term research interest in the sea ice evolution, in particular in the Beaufort and Chukchi Seas, north of the Bering Strait. But China also boasts three permanent research stations in Antarctica, and from 1985 to 2013, the Chinese Arctic and Antarctic Administration organized 5 Arctic and 30 Antarctic science missions: in China, it is the Antarctic, not the Arctic that gets the lion's share in polar research budgets. Indeed, the Antarctic is more accessible to China than the Arctic, because, under the terms of the Antarctic Treaty (1959), China does not need any country's permission or specific authorisation to build up stations, launch expeditions and do polar research there.^② So, in a way, the Antarctic was and still is a test-platform for the Chinese research activities in the Arctic because of similar environmental conditions. However, it would be delusive to think China, as of 1981, thought of the Antarctic with a view to developing Arctic research: nothing in the literature attest to this idea.

Despite this strong polar science involvement, until now China has not yet published any official Arctic strategy. On the contrary, the Chinese government has always stipulated that it has no official strategy or any particular agenda in the Arctic region.^③ The Chinese government has long refrained from specifying what goals China was pursuing in the Arctic, an attitude that helped fuel fear from Western and Russian analysts.^④ Beijing adopted a very cautious approach and vigorously denied having any aggressive ambition and strategic intention toward Arctic shipping or natural resources opportunities. For instance, Qu Tanzhou, Director of the Chinese Arctic and Antarctic Administration, said that "China did not prospect for oil and gas resources in the Arctic area nor has the capability or capacity to mine oil and gas there".^⑤

^① J. Zhang, "Chinese Expedition Team to Build Fixed Ice Station in Arctic Ocean," *People's Daily*, August 8, 2012, <http://english.people.com.cn/90001/90781/90879/7097332.html>.

^② For more information on the China's Antarctic activities and strategies, see A.-M. Brady, "China's Rise in Antarctica?" *Asian Survey*, Vol. 50, No. 4, 2010, pp. 759-785; K. Zou, "China's Antarctic Policy and the Antarctic Treaty System," *Ocean Development & International Law*, Vol. 24, No. 3, 1993, pp. 237-255.

^③ Joseph Spears, "The Snow Dragon Moves into the Arctic Ocean Basin," *China Brief*, Vol. 11, No. 2, 2011, pp. 12-15.

^④ Olga Alexeeva and Frédéric Lasserre, "The Snow Dragon: China's Strategies in the Arctic", *Perspectives chinoises/China Perspectives*, No. 3, 2012, pp. 61-68; Alexeeva and Lasserre, "China and the Arctic," pp. 80-90.

^⑤ Robert Sullivan, "Unmasking China's Arctic Ambitions," *Interfax China*, March 15, 2012. <http://interfaxenergy.com/natural-gas-news-analysis/asia-pacific/unmasking-chinas-arctic-gas-ambitions/>.

The Chinese government explains its growing interest and presence in the Arctic mainly by the necessity of doing research on the climate changes in the region.^① The air stream of the Arctic seems to be a major cause of the occurrence of extreme weathers in China. Therefore, this region in fact concerns China's economic, social development and security directly.^②

China's vice-minister of Foreign Affairs, Hu Zhengyue, underlined that "China [did] not have an Arctic strategy" during a conference held in Svalbard in November 2009.^③ The Chinese government also let uncertainty grow about its objectives regarding Arctic natural resources: "Since there is no proven data on oil and gas deposits in the Arctic, China is only interested in climate change in this region. Before formulating a policy on this topic, we first need to gather information on mineral and hydrocarbon potential" declared Xu Shijie, Director of the Chinese Arctic and Antarctic Administration Policy division.^④ It is only in May 2013, after China's admission as a permanent observer in the Arctic Council, that any uncertainty has been dispelled, when Hong Lei, spokesperson for the Ministry of Foreign Affairs, asserted that "China recognizes Arctic countries' sovereignty, sovereign rights and jurisdiction in the Arctic region".^⑤

However, long before this Chinese diplomatic success, several gestures and actions had underlined that, if an official Chinese Arctic policy had not been published, China was indeed interested in the Arctic, and not merely for scientific reasons – the Arctic program displaying a significant growth during the past ten years.^⑥

^① Zhang Yunlong and Ren Qinqin, "China Defends Arctic Research," *Xinhua*, January 31, 2012, http://news.xinhuanet.com/english/china/2012-01/31/c_122637030.htm.

^② Q. Qin and Y. Chen, "The Post-Cold War International Cooperation in the Arctic Region," *International Studies* (Chinese), No. 4, 2011, pp. 138-155.

^③ Quoted from Linda Jakobson, "China Prepares for an Ice-Free Arctic," *SIPRI Insights on Peace and Security*, Vol. 2, 2010, p. 16.

^④ Xu Shijie, "Chinese Arctic and Antarctic Administration – China's Activities and Prospecting in the Arctic," Communication presented at the international conference China and the Arctic, Centre d'études des politiques étrangères et de sécurité (CEPES), April 30, 2012, Montreal, Canada.

^⑤ Ministry of Foreign Affairs of the People's Republic of China, "Foreign Ministry Spokesperson Hong Lei's Remarks on China Being Accepted as an Observer of the Arctic Council", May 15, 2013, <http://www.fmprc.gov.cn/eng/xwfw/s2510/t1040943.shtml>.

^⑥ Alexeeva and Lasserre, "The Snow Dragon," pp. 61-68; Alexeeva and Lasserre, "China and the Arctic," pp. 80-90.

China was reportedly interested in the Icelandic government's project to develop a transarctic shipping route^① as Chinese delegates participated in the founding seminar organized by the Icelandic government. This early interest, not necessarily the result of a specific policy, helped nurture suspicion about the land purchase project above mentioned, but also fueled speculation regarding the involvement of the Chinese government in shipping projects.^② The Polar Research Institute, as mentioned above, initiated a research that involves Cosco, the largest Chinese shipping company.^③ In 2013, the Ministry of Commerce, echoing the August transit between China and Rotterdam along the NSR of the *Yongsheng*, a Cosco-owned multipurpose ship, and taking note of some challenges posed by Arctic shipping, published a short analysis calling for more research on Arctic shipping research.^④

2.2. Chinese shipping companies and Arctic routes: what reasoning?

An increase in maritime activity will no doubt be one of the most important consequences of climate change in the Arctic region thanks to the unprecedented melting of sea ice. The development of commercial shipping through newly-accessible routes will, however, raise a number of difficult issues: establishing an effective response capability in the event of accidents; monitoring the exploitation of natural resources; and curbing illegal trafficking in all of its forms. An increase in maritime traffic will also bring to the fore disagreements about the legal status of the new sea lanes and the right to exercise authority over them. While all of these questions warrant careful analysis and consideration, this contribution will focus on the present situation of commercial shipping through Arctic waters, specifically the Northwest Passage (NWP) and the Northern Sea Route (NSR) through the Northeast Passage, and the potential for an increase in such activity.

^① Icelandic Government, *Breaking the Ice: Arctic Development and Maritime Transportation, Prospects of the Transarctic Route – Impact and Opportunities*, Akureyri, 2001.

^② Atle Staalesen, "Iceland Invites China to Arctic Shipping," *Barents Observer*, September 22, 2010, <http://barentsobserver.com/en/sections/business/iceland-invites-china-arctic-shipping>.

^③ Frédéric Lasserre, Linyan Huang, Olga Alexeeva, "Science et Politique Arctiques en Chine. Éclairages de la Série de Séminaires Sino-Canadiens," *Monde Chinois, Nouvelle Asie*, No. 34, 2013, pp. 157-158. Zhang Xia, personal communication during the Canada-China Arctic 2013 seminars; Cosco Marketing Department, personal communication, Sept. 3, 2013.

^④ Ministry of Commerce of the People's Republic of China, *Commercial Operation Outlook of North Pole Navigation Routes*, Note, September 11, 2013. www.mofcom.gov.cn/article/i/dxfw/jlyd/201309/20130900299022.shtml.

For several years, media stories have prophesied an Arctic maritime traffic boom. With no concrete economic analysis in support, such predictions have been little more than speculation.^① Some commentators have expressed the view that the Northwest Passage, toll free, will witness an expansion in traffic greater than the NSR.^② However, it now appears that the NSR is developing faster. Taking advantage of accelerating ice decline along the Siberian coast, the first attempt at transporting hydrocarbons from Russia to China using the NSR was undertaken in August 2010. The *Baltica*, escorted by a Russian icebreaker, took 27 days to deliver natural gas condensate from Murmansk to Ningbo (Zhejiang, China). This first trial was followed by a commercial agreement on long-term cooperation on Arctic shipping along the NSR between the Russian sea shipping company *Sovcomflot* and the China National Petroleum Corporation (CNPC), in November 2010. This agreement, declared to be part of the Russia-China energy cooperation strategy, was signed in the presence of Russian Vice-prime minister Igor Setchin, President of the Board of the oil company *Rosneft*, the second largest oil producer in Russia, and of Wang Qishan, Vice Premier of the People's Republic of China.^③

In 2011 and 2012, several bulk ships transported iron ore loaded in Murmansk or in Kirkenes (Norway) to Chinese ports along the NSR, and several tankers and LNG carriers also delivered oil or gas between Vitino and China.^④

Thus, efforts from Russian authorities to develop traffic along the NSR appear to begin to bear fruits. There were 4 transits in 2010, but then 34 in 2011, 46 in 2012, and about 71 in 2013, according to estimates from January 2014. These figures are far from those of the Suez or Panama Canals, but they point to a definite growth,

^① Frédéric ed., *Passages et Mers Arctiques*.

^② Rob Huebert, "Climate Change and Canadian Sovereignty in the Northwest Passage," *ISUMA Canadian Journal of Policy Research*, Vol. 2, No. 4, 2001, pp. 86-94; Michael Byers, "Defending the North: Who's Responsibility?" Conference The United States, Climate Change, and the Arctic, Renewed American Interest in a Changing North, Raoul-Dandurand Chair, UQÀM, Montreal, April 19-20, 2007.

^③ Hong Nong, "The Melting Arctic and Its Impact on China's Maritime Transport," *Research in Transportation Economics*, Vol. 35, No. 1, 2012, pp. 50-57; Alexeeva and Lasserre, "The Snow Dragon," pp. 61-68.

^④ Northern Sea Route Administration, "NSR Traffic Figures," Statistics transmitted by Tschudi Arctic Shipping, Kirkenes; Also available with the Center for High North Logistics (CHNL), www.chnl.no/, 2012.

fueled by the export of natural resources from the Arctic to Asian markets (China, Japan, South Korea). The major driver of the current rapid development of NSR traffic is the export of resources from the Norwegian and Russian Arctic regions and not transit shipping. The NSR appears to be a market niche that provides an opportunity for a market share increase in the bulk and tanker business, but only for innovators and risk-takers such as shipping firms partnering with big energy companies with close connections to the Russian State.^①

However, Chinese shipping companies do not appear to rush to this new Arctic market: the traffic is in the hands of Russian or European shipping firms, a fact that seems to confirm a first assessment of the interest of Asian shipping companies, from China in particular.^②

Table 1. Overview of Responses According to Company's Main Sector of Activity, China

	Container and bulk	Container	Bulk	Multipurpose	Charterer/forwarder/broker	Total
Yes	1		1			2
No	1	1	6	7	5	20

Question: "Are you considering developing operations in the Arctic?"

Survey conducted September-December 2013 with 25 companies/22 answers.

During a series of direct interviews conducted from September until December 2013 with 25 Chinese shipping and forwarding companies, it appeared few expressed a real interest in Arctic shipping (see Table 1).^③ Only two, including Cosco, answered they considered developing Arctic shipping. Cosco, a major shipping group, reckoned the profitability of Arctic routes was questionable, and the

^① Schøyen and Bråthen, "The Northern Sea Route versus the Suez Canal," pp. 977-983.

^② Lee Sung-Woo, "Potential Arctic Shipping – Change, Benefit, Risk, and Cooperation," Proceedings of the 2012 North Pacific Arctic Conference, Honolulu, August 8-10, 2012.

^③ The survey was conducted in September 2013. Interviews were conducted with the following firms: COSCO, CSCL, Chipolbrok, Winland Shipping, Tongli Shipping, Suns Shipping, West Line, Dandong Shipping Group, Lufeng Shipping, Shangdong Mou Ping Ocean Shipping, Shandong Ocean Shipping, Tianjin Harvest Shipping Co, Zhongchang Marine Shipping Co, Ningbo Silver Star, Maritime Shipping Co, Ningbo Jun Hao Ocean Shipping, Nanjing Henglong Shipping Co, Uniwill Shipping Co, King Far East Shipping, Evertop Intel Shipping, Harmony Maritime Inc, Pacific Glory Shipping, Liao Yuan Shipping Co, SITC Shipping.

other firm displaying an interest rather in destination traffic (transporting Arctic natural resources from Siberia to China).

Several firms said they thought there was a real potential for Arctic shipping since the Arctic routes were indeed shorter, both for bulk transportation of natural resources as well as for liner shipping. However, analyses remain sketchy as no firm declared to have done an extensive cost/benefit or SWOT analysis. Among the elements of explanation answering companies gave to justify their lack of interest or involvement, figured prominently the following factors:

- High investment cost required for the purchase of ice-strengthened ships
- Market constraints like just-in-time and ship size that limit economies of scale
- Arctic market too small for profitable routes that enable quick return on investment on ice-strengthened ships
- Physical risks and insurance costs

The Chinese government multiplied declarations regarding Arctic resources rather than Arctic shipping, even recently.^① The government and Chinese shipping firms thus seem more interested in access to Arctic natural resources, an access the Arctic shipping routes may provide, rather than transit shipping. From this point of view, Chinese shipping and chartering firms reason on a very similar way as other globalized shipping firms from Europe, North America or Asia, as attested to by Lasserre and Pelletier.^② This survey, focusing on shipping firms, showed that transit did not appear attractive to the vast majority of companies because of associated costs, risks, uncertainties regarding on-time delivery. Destination traffic lured a larger share of shipping companies operating in the bulk and tanker segment, as well as companies in the general cargo segment for the servicing of local communities in Canada, Alaska and Greenland.

^① Alexeeva and Lasserre, “The Snow Dragon,” pp. 61-68.

^② Lasserre and Pelletier, “Polar Super Seaways? Maritime Transport in the Arctic,” pp. 1465-1473.

**Table 2. Overview of Responses According to Shipping
Company's Main Sector of Activity**

	Sector of Activity						Total
	Container	RoRo	Container and Bulk	Bulk	General Cargo	Special Project	
Yes			2	9	5	1	17
No	35	2	5	25	4		71
Maybe	3		1	6			10
Total	38	2	8	40	9	1	98

Question: "Are you considering developing operations in the Arctic?"

Survey conducted Feb. 2008-March 2010 with 142 companies/98 answers.

**Table 3. Overview of Responses According to Shipping
Company's Home Region**

	Home Region			Total
	Europe	Asia	North America	
Yes	10		7	17
No	32	25	14	71
Maybe	5	3	2	10
Total	47	28	23	98

Source: Lasserre and Pelletier, "Polar Super Seaways? Maritime Transport in the Arctic," pp. 1465-1473.

However, the Chinese media recently gave news of a September 2012 agreement between Cosco and Russian authorities so as to study the potential profitability of commercial transit routes along the NSR.^① The first ship Cosco sent along for trials, the *Yong Sheng*, left Dalian on August 8, 2013 to reach Rotterdam, and was not a container carrier by a heavy lift multipurpose carrier. Was this the sign of an increasing number of commercial transits by Chinese shipping firms, or a government-sponsored experiment, Cosco being a State-owned corporation?

^① Zhong Nan, "Arctic Trade Route Opens," *China Daily*, August 10, 2013.

III. Conclusion

It remains to be seen to what extent Cosco's experiment is going to be assessed as fruitful and to what extent other Chinese shipping companies will develop the view that Arctic shipping can bring them interesting market opportunities. For now, it seems this potential is barely considered as most surveyed transport firms appear not to be interested in Arctic shipping. Arctic shipping is viewed as potential, because of shorter distances and fuel savings; but when it comes to developing actual service, most Chinese shipping firms presently balk at the risks and required investment. It thus seems that either there is a wide discrepancy in analysis between shipping firms (business circles) and government circles regarding the interest of Arctic shipping; or that Arctic shipping is not at the core of the interest the Chinese government nurtures towards the Arctic: natural resources and voicing its views in diplomatic institutions like the Arctic Council would then appear to be Beijing's priorities.