

# **Why is China Going Polar?**

## **Understanding Engagement and Implications for the Arctic and Antarctica**

**Laura C. Ferreira-Pereira, Paulo Afonso B. Duarte and Natacha Santos**

This is the draft version of Chapter 46 of the book *The Palgrave Handbook of Globalization with Chinese Characteristics* published by Palgrave Macmillan. A later version of this Chapter can be accessed here <https://link.springer.com/book/10.1007/978-981-19-6700-9>

### **1. Introduction**

In recent years, Chinese engagement in Polar Regions has captured unprecedented academic attention. Before the official release of China's Arctic White Paper, in 2018, a distinctive Arctic-related research agenda, much taken by the opportunities raised by the fast melting of polar ice (Bennett et al, 2020; Kossa, 2020), has developed itself. Several studies have investigated the relationship between China and the Arctic countries from a bilateral point of view (Gåsemyr, 2019; Gunnarsson & Nielsson, 2019; Kosonen, 2019; Vargö, 2019), while others have assessed China's relations with the Arctic region as a whole (Liu, 2019; Ushakova, 2021). Scholars have stressed the logistical benefits stemming from a shorter connection between East and West, offered seasonally by the so-called Northern Sea Route (Wang et al, 2020; Kobzeva, 2021). At the same time, some works have underlined the post-2018 Arctic White Paper emergence of a Polar Silk Road (Tillman et al, 2018; Woon, 2020) as an extension and byproduct of the 21st Maritime Silk Road, which has hitherto focused on conventional sea lanes, leaving aside the Polar Regions. Such literature gap has stimulated studies on the geoeconomic and geostrategic relevance of Greenland and Iceland within the Chinese Polar Silk Road (Grydehøj et al, 2020; Xie, Zhu & Grydehøj, 2020).

When it comes to Beijing's interests and strategies in the South Pole, notably with a focus on geopolitics, there is a dearth of works with the exception of those provided by Brady (2010, 2017a, 2019), Duarte (2015) and Liu (2017; 2018; 2019a; 2019b). This chapter will contribute to the literature on China in Polar Regions by offering an analysis of Chinese engagement in the Arctic and Antarctica in a comparative perspective. It argues that China's stance in the Arctic has been largely conditioned by the regional governance dynamics structured around the Arctic Council, whilst in Antarctica it has attempted to explore the absence of a more regulated interstate relations, carving for itself an advantageous position in preparation of the expiration of the Antarctic Treaty System in 2048.

The appraisal of Chinese presence in and strategy for both the Arctic and Antarctica provided by the present chapter will range from 2013 until 2021. The year of 2013 represents a milestone, as it marks the formal launching of One Belt One Road (later renamed Belt and Road Initiative - BRI) and the acceptance of China's observer membership status in the Arctic Council. The importance of the year of 2021 is justified largely by the launching of the 14<sup>th</sup> Five-Year Plan (2021-2025) which called for the advancement of Chinese engagement in the South Pole. The former will be made on the basis of qualitative analysis of secondary, notably scientific articles and book chapters. As for primary sources, this study relies on official sources originated from the State

Council Information Office and the Ministry of Foreign Affairs of People's Republic of China, and news agencies (such as Xinhua and Reuters).

This chapter begins with a contextualization section, outlining the major general and specific drivers for China's interests and presence in Polar Regions. It then focuses on the Arctic to explore the transformation of China's traditional stance in this region which resulted in the assertion of its self-assigned condition as 'near Arctic state'. The last section is devoted to Antarctica where, metaphorically speaking, China has been strategically preparing a 'nest' in anticipation of shifting trends in South Pole governance expected to unfold after the expiration of the Antarctic Treaty System in 2048. The conclusion underlines the main differences between China's interests and approaches in the Arctic and Antarctica, against the backdrop of its unprecedentedly active engagement in polar politics generated by geopolitical competition for vital resources.

## **2. China in the Poles: Motivations and Rationale for Growing Engagement**

Chinese engagement in the Poles can only be accurately understood in connection with the country's domestic needs and foreign policy. Interestingly, this interplay between domestic and external factors has been at the origins of the BRI, a predominantly domestically-driven strategy that has been at the service of an increasingly assertive stance at the foreign policy level. As part of the BRI, the Chinese government has devised a Polar Silk Road (Tillman, Jian & Nielsson, 2018; Woon, 2020), a development which will be outlined in a later section.

Among the main domestic factors that have led China to reconsider its traditional international low-profile founded on the principle of non-interference, one should stress those related to concerns with energy, food, environment, economic growth, overcapacity and overproduction, as well as the rise of labour wage. Taken as mutually interdependent aspects, they have pushed Chinese authorities and non-state actors to embark on a so-called *Going Out Policy* as of the 2000s. Under the latter, national state and private companies have been encouraged to go abroad in search for raw materials, investment opportunities, and competitiveness skills, by learning in the process with other foreign companies (Shen & Mantzopoulos, 2013). As far as energy is concerned, in particular, China has shifted as of 1993 from a position of outstanding oil exporter to a condition of important oil importer. As a latecomer to the international oil market – when compared to the US and other Western powers that got access to the most well-placed oil fields – Beijing started to establish oil exploration contracts in exchange for the construction of infrastructure with the so-called (by the West) rogue states. As a consequence, China managed to diversify its energy sources across the world, something that helped the country to bypass or mitigate the so-called Malacca dilemma<sup>1</sup> (See Duarte, 2018 and Butt, Kharl & Bhatti, 2020), which is omnipresent in China's Foreign Policy.

The end of the One Child Policy (1<sup>st</sup> January 2016), in addition to the fast expansion of the Chinese middle class, whose diet has considerably diversified thus creating a new type of market demand(s), has impelled China to seek producing abroad what its polluted land (only 7% of its land is arable) and waters do not allow to produce domestically. Incidentally, there is clear evidence that China's status as the world's second largest economy and its international recognition as the world's factory, were accompanied by little concern with the environmental sustainability. This explains the

---

<sup>1</sup> This refers to China's fear of a maritime blockade at the Straits of Malacca, although there is no historic memory of such an experience as this has never occurred in the past. Given that most of China's oil imports pass through the Straits of Malacca, a maritime blockade in this area would paralyze China's economy (Duarte, 2018).

disappearance of almost 28,000 rivers in the last two decades (Zhang, 2014). Also, a quarter of the Chinese population drinks contaminated water on a daily basis, while the air is of very poor quality in many parts of China as a result of, among other factors, a substantial dependence on charcoal (Greenstone et al, 2021).

Among the political factors underlining the shifting stance of Chinese foreign policy from a low-profile to a more assertive and pragmatic posture is the role played by the Chinese Communist Party (CCP). The party cadres have realized that, unless the Party reinvents itself and adds another layer to the cement which historically united peasants and elites around a common ideal, the country risked experiencing a tragic collapse that hit other major actors as the former Soviet Union (Shambaugh, 2008). This relates to the fear of the abrupt fall of the talented tightrope walker who strives to keep the populace united around the Chinese Dream, which is omnipresent among Chinese political elites much like the fear of a blockage in the Malacca straits (Duarte & Leandro, 2020). Such fear has been aggravated since 2019 by the successive Hong Kong protests and the controversial Huawei issue. Interestingly, as reported by Harvard University's Ash Center (2020), the Chinese people's satisfaction with and support for Xi Jinping-led government and the CCP have increased significantly as a result of improvements achieved in the three key area, notably social security, anti-corruption and environment. Equally important, the consolidation of political legitimacy brought with it the rise of trust and optimism among the population about the future of their country, according to The Edelman Trust Barometer's data for the past years (2022).

Another major factor which has contributed to China's move towards a more assertive posture in the global arena, which also helps to explain the 'Going Polar' strategy, is the negative perception of encirclement. This perception has not only derived from the US pressure on the Chinese East flank, where China has been actively building up artificial islands whilst claiming almost the whole of the South China Sea (Hu & Meng, 2020); it is more encompassing as it has also been fostered by the lack of proportional representation and acknowledgement within Western-based multilateral institutions and intergovernmental structures, which have downplayed China and other BRICS at both organizational and functional levels (Callahan, 2008). This applies particularly to the architecture of the Bretton Wood System, which has failed to give China – most populous country in the world and the second largest word economy – a higher recognition within such relevant institutions, like the World Trade Organization and the International Monetary Fund.

Furthermore, China has cultivated its own alternative view of the world order based on a Community of Common Destiny, inspired in the millennial *Tianxia* model, according to which China is an important world power deemed to play an outstanding role abroad. In such a Community, all paths used to lead to the Middle Kingdom, whose emperor ruled the world in a peaceful way (Cha, 2018). Although the Middle Kingdom and its emperor (whose mandate was assigned by heaven) disappeared long ago, Xi Jinping has been attempting to emulate some of these multiseular aspects in the formulation and implementation of both domestic and foreign policies. Indeed, not only has he been governing China with exceptional power, but he also seems to endorse a vision for the rest of the world, as revealed in his book *The Governance of China* (2014, 2017). Thus, the *Tianxia* model has been implicitly alive in mid-2010's (Duarte & Ferreira-Pereira, 2021) as an alternative to the Western-based order, to the extent that according to Chinese thinking: "The problem in international politics today [...] is not "failed states" like Afghanistan, but a "failed world", a disordered world of chaos (Callahan, 2008, p.751).

No longer feeling fully either recognized or represented within the Western-based order, China has endeavoured to meet both domestic and external role expectations, whilst struggling to adapt to an ever demanding role performance, which requires flexibility within its role conception (Duarte & Ferreira-Pereira, 2021). So, China has been identified by Buzan as a “reformist revisionist”, since it “accepts some of the institutions of international society for a mixture of calculated and instrumental reasons. But it resists, and wants to reform others, and possibly also wants to change its status” (2010, p.18). A clear evidence of this revisionist leaning, designed to restore Chinese millennial greatness, was the launching of the BRI and the creation of the Asian Infrastructure Investment Bank (AIIB). Despite Washington’s warnings and urges against, many Western countries have become members of AIIB and showed various forms of receptiveness and participation in BRI-related initiatives. At the same time, the new Chinese multilateralism ‘à la carte’ has also borne fruit in the foundation of successful formats of cooperation, such as the 17+1 in Central and Eastern Europe (Ferreira-Pereira & Duarte, 2021).

The backdrop outlined above is necessary to understand two interesting developments. On the one hand, there was the review that China made in 2015 of its security law to foresee the necessity of protecting national interests with regard to international seabed (Martinson 2019, p.27). On the other hand, there was the release in 2018 of China’s Arctic Policy Paper, in which Beijing detaches itself from a more traditional bystander stance, admitting its interest in the Arctic seabed. Importantly, this Paper depicts China as ‘a near-Arctic state’, even though the country’s northernmost territory – Heilongjiang – is more than 900 miles away from the Arctic (Lanteigne, 2014; State Council Information Office, 2018a; Koh, 2019). Such self-recognition draws upon the idea put forward by the Chinese Rear Admiral, Yin Zhuo, who, in March 2010, observed that “The Arctic belongs to all the people around the world as no nation has sovereignty over it” (The Diplomat 2010, para.1). He also affirmed that “China must play an indispensable role in Arctic exploration as [it has] one-fifth of the world’s population” (Ibid., para.3). Moreover, China’s claim to be a ‘near-Arctic state’ seems to be inspired by the endorsement of a strategic frontier that expand or contract “in accordance with the projection of the power of a nation”, as Ikegami argues (2011, p.93). Ultimately, according to this ‘strategic frontier doctrine’, there are no fixed borders or rigid territorial boundaries.

Along these lines, one can say that although currently the Arctic is not a foreign policy priority for China when compared to South China Sea and Taiwan (Kossa 2020, p.36; The 2019 Defense White Paper), it serves Chinese medium to long-term goals of ensuring access to energy, minerals and food. The same reasoning applies to Antarctica, where, since 1978, China has been building an increasingly dynamic presence, which results from a combination between more human resources and logistical infrastructures, but also more experience and sophisticated technology. Nonetheless, before addressing Chinese Antarctic activities in detail, the following section assesses how China’s traditional stance towards the Arctic has developed under the impetus of China’s Arctic Policy Paper, and finally analyses whether the region may become a new hub for the Polar Silk Road.

### **3. China’s Move from a Bystander to a ‘Near-Arctic’ State**

According to the majority of scientists, the Arctic corresponds to a geographical area encompassing “the Arctic Ocean basin and the northern parts of Scandinavia, Russia, Canada, Greenland, and the U.S. state of Alaska” (Evers, 2016, p.1). Its singularity rests on the fact that it holds up to four million inhabitants (indigenous populations) – who are

extremely dependent on the region's ecosystem and equilibrium (Ibidem; Long, 2018). The Arctic has been under the threat of global warming with all the damaging consequences it entails; and observers note that it might only be a matter of time until the region becomes ice-free (Albert & Vasilache, 2017; Carrington, 2020).

The Arctic has been the object of increasing international attention due to the climate change agenda and the possibility of exploring a sort of hidden treasure. In this regard, the 2008 United States Geological Survey (USGS) published an article which estimated the undiscovered oil and gas potentially lying in the Arctic Circle (USGS, 2008; Urban, 2015). This region is also rich in several mineral resources (Turunen, 2019). Given the unprecedented pace of ice melting, new commercial maritime routes have gradually emerged (Farré et al, 2014; Aksenov et al, 2017; Duarte, 2017).

In this context, China, which has been looking for energy sources worldwide, became more interested in the Arctic (geo) politics, and trade logistics. Despite being only a seasonal route, the Northern Sea Route provides China with a shorter journey (less 40% of the distance, or 15 days less) compared to the conventional sea lanes of communication between Asia and Europe (Duarte, 2017). The Arctic's governance has also become appealing to China. Since 2013, China has been an observer member of the Arctic Council – the main governmental forum to promote cooperation in the Arctic.<sup>2</sup> Such status provides the country with a limited influence on the Arctic issues, meaning that Beijing can only participate in working groups (Brady, 2017b; Moe & Stokke, 2019). At the same time, China has acknowledged the Arctic Circle states' exclusive voting power, territorial sovereignty, and authority to promote and defend their interests in the region (Wegge, 2014; Willis & Depledge, 2013).

The roots of Chinese engagement in the Arctic go back to 1882, when the Chinese scientists participated in the First International Polar Year (Clingendael Report, 2020). By then, however, its budget for polar expeditions was quite limited. Indeed, China only became more active in the Arctic's expeditions the 1990s (Brady, 2012; 2017a; 2017b; Dams, Schaik & Stoetman, 2020) when China began to invest in its presence in the region. To this end, the country started to purchase icebreakers, acquiring its first vessel, *Xue Long*, in 1993 from Ukraine. Later in 2004, China built its first research station in the Arctic more precisely in NyAlesung, Svalbard, Norway, called Yellow River. This contributed to a gradual consolidation of China as an emerging polar state.

China's official rhetoric to justify its presence in the Arctic encompasses two phases. The first period, spanning from 1990 to 2017, is characterised by China's concern with global warming. On this matter, Beijing argued that air currents from the Arctic were jeopardising China in economic, social and climate terms (Aleexeva & Lassere, 2012; Wegge, 2014). The second period of China's rhetoric has begun in 2018, when Beijing published the Arctic Policy; and has been designed to justify Chinese presence in the Arctic. In this key document, Chinese authorities acknowledged their interest in exploring the Arctic's natural resources, including shipping routes, tourism, living and non-living resources, in a "lawful and rational manner" (State Council Information Office, 2018a, p.3). Furthermore, China showed its willingness to participate in the region's governance, through international cooperation, whilst promoting peace and stability (Ibidem). In so doing, China endeavoured to address climate change while benefiting from the economic potential of the region.

Lim (2018) considers that the 2018 Arctic White Paper embodies the assertion of China's interests – rather a fundamental novelty. Incidentally, what is stated in the Arctic White Paper was foreshadowed by many attentive observers (Lanteigne, 2014; Wegge,

---

<sup>2</sup> It is worth noting that this observer status is also afforded to a few more Asian states, namely India, Japan, Singapore, and South Korea.

2014; Brady, 2012; 2017a; 2017b; Duarte, 2017). According to Wright (2011), China always struggled to engage in the Arctic. Yet, while doing this, Beijing has always been extremely cautious. Such cautiousness remained after the release of the Arctic White Paper, with China framing and justifying its polar engagement in the realm of science diplomacy, while advocating the respect for international law (State Council Information Office, 2018b; Su & Mayer, 2018). China has been developing and consolidating ties with the Arctic region in order to achieve three main benefits: gaining Nordic expertise<sup>3</sup>; exploring the extension of the Belt and Road Initiative (BRI) to Northern Europe<sup>4</sup>; and strengthening its presence in the Arctic by fostering diplomatic relations (Sverdrup-Thygeson & Hellström, 2016).

In the Arctic region, Greenland has become a case study for having developed itself as an important hub of China's Polar Silk Road. The former achieved autonomy from Denmark, in 1979, except for foreign policy and defence, and the 2009 Act has introduced the possibility of this territory's independence (Act on Greenland Self-Government, 2009). Despite Greenland's will to declare its total independence from Denmark, Nuuk relies, nonetheless, on yearly subsidies from Copenhagen. Consequently, in order to pursue independence, Greenland needs, firstly, to replace its economic dependence vis-à-vis Denmark by a new foreign investor. This fits well into China's increasingly active strategy in the Arctic. As a matter of fact, from 2008 to 2019, China was involved in five different projects. Four of them are mining projects (i.e. oil, iron, ore, rare earth metals<sup>5</sup>, and uranium); and the fifth aims to build airports in Nuuk, Ilulissat and Qaqortoq (Lanteigne, 2014; Lanteigne & Shi, 2019). Worried with the geo-strategical implications stemming from Chinese dynamism in Greenland – to which one could add Beijing's will to build a satellite station that could be used for the Beidou navigational system – then US President Donald Trump made a declaration in August 2019, on the possibility of “buying Greenland” (The New York Times, 2019). Although this episode was seen as controversial and even anecdotal, it was full of symbolism and political realism, as Trump and his advisers realized that Greenland's strategic location, resources and key role in China's Arctic initiatives, could do harm to US geo-strategic interests. On the other hand, its geo-strategic underpinning cannot be separated from the overall context of the Sino-American rivalry, entailing a bearing of the triangular influence of China-Denmark-US relations upon the economic interactions between China and Greenland (Shi & Lanteigne, 2020).

Another case worth noting is that of Iceland. Besides exhibiting several commonalities with Greenland, it also provides useful insights given its geopolitical and geostrategic importance in China's Arctic moves. This Nordic state has hydrocarbons, minerals and fish, which are of interest to China (Duarte, 2017). As Greenland, it matters to China's Polar Silk Road, as it further serves as “leading hub[s] for container traffic in a transarctic shipping”, at a time when “a new race for the Arctic is already evident in the form of competition over shipping routes and hubs, natural resources, and political

---

<sup>3</sup> For instance, the second Chinese icebreaker – *Xue Long 2* – was designed by the Finnish enterprise Aker Arctic, which developed a unique feature called ‘dual-acting ice breaker’ (Brigham, 2018). In addition, Nordic advances and know-how on the use of geothermal energy have also been applied in Chinese territory. Illustrative of this, it is worth mentioning that “[...] geothermal cooperation has led to reduction of over 5 million tons of CO2 emissions in Chinese cities with 328 heat centrals across 40 cities/counties in China and over 500 wells drilled” (Gunnarson & Niélsson, 2019, p.88).

<sup>4</sup> China had already shown interest in including the Arctic into the BRI, namely by creating a Polar Silk Road (Sverdrup-Thygeson & Hellström, 2016; Xinhua, 2017, para.10; Spears, 2018).

<sup>5</sup> Since 2018, the Chinese enterprise Shengue Resources, has been responsible for extracting, buying and selling rare earth metals. China even ships the rare earth metals to the Chinese mainland – an activity that encountered opposition from the Inuit Ataqatigiit party (Lanteigne & Shi, 2019).



influence” (Thorhallsson & Grimsdottir, 2021, p.7). What is more, Iceland, which saw in China a key supporter in the context of its economic collapse in October 2008, has taken advantage of Chinese interests in the Arctic in order to strengthen national economy. Iceland’s relationship with China during hard economic times helps to explain the fact that, despite US opposition, it was the first European country and NATO member to sign a Free Trade Agreement with China, in 2013 (Ibid., p.17). Thus, this Nordic state has been capitalizing on its leeway (greater than that of Greenland) to engage more with China, thereby benefitting from external players competition for its natural resources, as well as geostrategic position. Although Iceland has not formally joined China’s Polar Silk Road, there have been hitherto several initiatives at the bilateral level. For example, China has explored oil and gas in Dreki, between Iceland and Norway (Lanteigne, 2016; Dams, Schaik & Stoetman, 2020). Another example of Sino-Icelandic cooperation links to the implementation of a Sino-Icelandic Geothermal Research and Development Center, following the cooperation agreement, signed in 2015, between Arctic Green Energy Corporation, Sinopec Star Petroleum and the National Energy Authority of Iceland (Thorhallsson and Grimsdottir, 2021). These initiatives have the potential to foster the eventual future inclusion of the Nordic states in the Polar Silk Road (Ministry for Foreign Affairs of Finland; 2019; Gunnarson & Niésson, 2019; Kosonen, 2019). This is so considering that such inclusion might represent an open door to the vast Chinese market (Askary, Sandmark & Aspling 2019).

At this point of discussion, it is worth referring, even if briefly, to Russia: considering that 53% of Russia’s coastline is located in the Arctic Ocean, and around two millions Russians live in the Russian Arctic (Ellyat, 2019). Moreover, against the backdrop of the EU’s and the US’s economic sanctions in the aftermath of the annexation of Crimea, in 2014, and the need for an economically viable partner to explore the Arctic’s hydrocarbons, this country has drawn closer to China and developed a comprehensive energy cooperation at the bilateral level. In turn, China has explored this favourable juncture to strengthen its Arctic strategy (Erkan & Ates, 2019), amidst Trump Administration’s criticism against Chinese activities in the high North. China and Russia have launched two relevant joint projects. One is the Power of Siberia<sup>6</sup>, sponsored by Gazprom (Ellyat, 2019). Another is Yamal LNG, one of the biggest and most complex pipelines in the world, ensuring an uninterrupted gas supply to China (Rosen, 2019). This project, coordinated by Novatek, has been included in the BRI (Tillman, Jian & Nielsson, 2018; Shah, 2020). The next section will be devoted to China’s polar initiatives in the South Pole<sup>7</sup>. This analysis will allow one to undertake a concluding comparative exercise regarding Chinese engagement in the Arctic and Antarctica.

#### **4. China in Antarctica: Preparing the ‘Nest’?**

Antarctica is the fifth largest continent in the world, with around 14,2 million squared kilometres in size. Most of the region (around 95%) is covered by a thick layer of ice (Harrington, 2016). Unlike the Arctic, in Antarctica there are no permanent inhabitants, only scientists originating from various corners of the world (The World Fact Book, 2020). Whilst remote and inhospitable, Antarctica has been subject of evolving

---

<sup>6</sup> The Power of Siberia project is a 4,000 Km-long gas pipeline which transfers natural gas from Eastern Russia to the Far East and China.

<sup>7</sup> Whilst space limitations have determined the exclusive focus ascribed to the Chinese Antarctica’s strategy, authors do not ignore the weight of Brazil’s politics and strategy towards this area derived from its major role in South Atlantic, as a gateway to Antarctica. For a detailed study on the matter, see *The Antarctic Politics of Brazil: Where the Tropic meets the Pole* by Ignacio Cardone (Palgrave Macmillan, 2022).

international regulation. The Antarctic Treaty, signed in 1959 by 12 countries<sup>8</sup>, was the first document regulating activities in the region. Eventually, further agreements were established in 1982 and 1998, and all of these were merged into what is now known as the Antarctic Treaty System (ATS) (Antarctic Treaty, 1959; Wehrmann, 2019). The latter encompasses, among others, the Madrid Protocol (1998), which focuses on the environmental protection of Antarctica. It establishes a period of 50 years (1998-2048) during which no state can exploit the existing resources in the South Pole. The ATS's main purpose is to bring peace to the continent by prohibiting military activity, which has contributed to freezing territorial claims over the region. The ATS encourages, nonetheless, all signatory members to expand their presence in Antarctica for science purposes (Antarctic Treaty, 1959). After the expiration of the Madrid Protocol, in 2048, there is overall uncertainty about when, how and whether states or private actors might find their own ways and strategies to explore mineral, energy and food resources in a context of global scarcity (Teller, 2014; Medeiros & Mattos, 2019).

Chinese dynamism in the South Pole has been framed by Beijing under the so-called 'science diplomacy' (Su & Mayer, 2018). In its turn, the latter is part of the developing debate linked to the so-called 'soft power internationalism', which argues that emerging states may resort to a broad set of tools to achieve their goals, as an alternative to war (Baykurt & de Grazia, 2021). To be sure, science diplomacy presents itself as a means through which states like China have relied on science (and also on technology) contributions to steer and justify their growing presence in the polar regions. But while in the case of the Arctic, Chinese science diplomacy has comprised mostly a cooperation with the Arctic Council states to best justify its activities in this region, in Antarctica the lack of coastal states does not necessarily demand such a cooperative stance. Interestingly, in both cases (the Arctic and Antarctica), science diplomacy has been used by China to claim that its polar initiatives are mainly connected to studying issues related to climate change.

There are four different phases in the evolution of China's presence in Antarctica. During the first one, spanning from 1978 to 1984, China began to learn from the US and other established polar powers' expertise in order to develop its own polar capacities. This was a phase of exploratory activities in Antarctica, with China opting for an 'opening up' posture by trying to learn more about the extreme weather polar conditions. Thus, it developed several scientific research partnerships revolving around fisheries, oceanography and geology. In 1983, China joined the ATS, a development which enabled it to have a say in Antarctica's governance (Brady, 2017a; 2017b; Liu, 2019a). In the second period, which ranges from 1985 to 1989, China founded its first research stations in Antarctica and started to launch scientific expeditions in the region. A third phase, covering the period between 1990 and 2004, was characterized by a focus on development of Chinese scientific research. The fourth phase, which began in 2004, and is still in progress, has been seeing a more pro-active China given its attempts to consolidate itself as a great polar power (Keynuan *apud* Brady, 2010). For instance, on 18<sup>th</sup> January, 2005, a group of Chinese scientists reached the Dome Argus (Dome A), the highest geographical point in Antarctica's extreme conditions, which became a motive of great pride for the Chinese (Brady, 2010). After this, China has continued to develop its know-how on Antarctica. In 2007, it became a member of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); and two years later, China officially began fishing krill with the support of two Chinese vessels, *Fu Rong Hai* and *Long Teng* (Liu, 2019). Importantly, since 2016 China has been operating its first air squadron in the

---

<sup>8</sup>These were Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the United Kingdom, the United States of America and the former Soviet Union.



region (Tiezzi, 2016), while aiming to build its first airport in Antarctica (Airport Technology, 2019; Pham, 2019). It is also worth mentioning that much of China's success in its polar expeditions is due to its two icebreakers: *Xue Long* and *Xue Long 2* (Humpert, 2018) which started to be deployed since 1994 and 2018, respectively.

China has four research stations in Antarctica, which evinces the dynamism inherent to Chinese activities and presence in Antarctica. The Great Wall, located in King George, and *Zhongshan* built in Larsemann Hill, have been operating all-around the year since the 1980s. In 2009, China built its third station Kunlun, in the Dome A, only for the purpose of seasonal operations. The fourth station, Taishan, was built in 2014, in Princess Elizabeth Land, also for seasonal use only. China is currently building its fifth research station, which is expected to be concluded by 2022 (Liu, 2018; Xinhua, 2018). Its location in the Inexpressible Island, in the Ross Sea, is particularly important, given the close proximity to the US research stations: McMurdo Ross Sea MPA (Brady, 2017a; 2017b). Approximately 18 Km from the *Zhongshan* station, China plans to build its first permanent airport at the South Pole. According to Zhang Xia, based at Polar Research Institute of China, the new airport will allow medium and large transport aircraft, like Boeing planes, which take off and land in the South Pole, decreasing transport time and improving their efficiency (In Silk Road Briefing, 2018, para.3).

Although there is evidence that China has endeavoured to consolidate its presence in Antarctica, no White Paper for the South Pole has been published yet. That being said, a quasi-White Paper was presented by Chinese representatives at the Antarctic Treaty Consultative Meeting, held in 2017 (Pham, 2019). This document (not available for consultation) was issued by the State Oceanic Administration and outlines relevant aspects, like the goal of increasing the budget for scientific research in Antarctica, as well as the legislation on the regulation of commercial activities; the objective of cooperating with the international community while maintaining the respect for the ATS; and the aim of enhancing krill fisheries (Tiantian, 2017). Regarding the latter issue, China considers that given that it holds one fifth of the world's population, it should be entitled to fish proportionally in the South Pole (Ibidem). Furthermore, based on Xi Jinping's speech in 2014, in Hobart, Australia, the Chinese official slogan regarding Antarctica is: "Understand, protect and use" (Ministry of Foreign Affairs of PRC, 2017, para.3). Additional guidelines for China's engagement in the South Pole were conveyed in the 13<sup>th</sup> Five-Year Plan 2016-20, released on 15<sup>th</sup> March 2016, which points to China's willingness to consolidate its polar capabilities (The 13<sup>th</sup> Five-Year Plan, 2016-20; Liu & Brooks, 2018). By the same token, the 14<sup>th</sup> Five-Year Plan issued in March 2021 for the 2021-2025 has called for a further engagement in the South Pole, by means of "enhancing [China's] ability to participate in the Antarctic conservation and utilization" (Part IX, Chapter 33).

Besides the domain of science, Chinese interests in Antarctica have also been motivated by military purposes. In this regard, the location of Dome A is of particular relevance as this is one of the best geographical points on the planet to observe and study Space (Gothe-Snape, 2019; Chinese Academy of Sciences Headquarters, 2020). Also, China is the only polar state actor to have a research station in this privileged location. For the Chinese authorities, the relevance of Dome A stems from two main aspects. On the one hand, it fits within the national Space programme. On the other hand, it is critical for the development of the BeiDou navigation system<sup>9</sup> - a valuable tool which enables China to be independent from the American GPS. This is an advantage in the event of war (Brady, 2012; 2017a; 2017b; 2019; Duarte, 2017). In an ATS meeting held in 2013,

---

<sup>9</sup> There are only four satellite navigation systems in the world. These are managed by Russia (Glonass), the USA (GPS), the European Union (Galileo) and China (BeiDou).

the Chinese representatives suggested this area to be considered as a protected sanctuary. Yet, this proposal was rejected by the other ATS members, as they do not want to see China having overall control over such an important location (Fishman, 2019; Gothe-Snape, 2019).

## **5. Conclusion**

Drawing on a comparative perspective, this chapter has examined the interests, strategies and implications of Chinese activities in the North and South Poles. Its analysis points to China's rising engagement in polar politics in the light of a geopolitical competition for natural resources and geostrategic influence. It also stressed Beijing's conception of borders as flexible, in that they can expand to reflect a state's economic growth. Hence China's claim as a 'near-Arctic state'; although its borders are considerably far away from the North Pole. This study has attempted to demonstrate that China's stance in the Arctic has been largely conditioned by the regional governance structured around the Arctic Council, whilst, in Antarctica, this country has endeavoured to explore the absence of both coastal states and more regulated interstate relations, to carve for itself an advantageous position with the expiration of the Antarctic Treaty System in view. Indeed, in the Arctic China has been coping with less room for manoeuvre due to the active governance exerted by the Arctic Council members. But, in Antarctica, it has endeavoured to gradually fill in some prevailing institutional and governance voids.

In the South Pole, since 2016, China has been operating its first air squadron and its second icebreaker in the region, while it is currently building its fifth Antarctic research station. The country is the only state with a research station located in Antarctica's Dome A, something which endows Beijing with a sort of advantage in the study of Outer Space. Therefore, science diplomacy has been instrumental in the strategy skilfully used by China to geopolitically consolidate its presence in Antarctica, making it easier to claim its part of the South Pole in the post-2048 landscape. By then, China might have already gained an unprecedented capacity to carry out scientific missions in Antarctica, in addition to revolutionizing its toponymy by assigning names to places discovered by Chinese scientists in the region. That being said, as this work has underlined, science diplomacy is not exclusive to the South Pole. In the North Pole, moved by concerns with the climate change and global warming, China has been conducting polar expeditions and building research stations.

As the ice melts at an unprecedented speed in the Polar Regions, so does the geopolitical competition for natural resources and geostrategic influence which has been exacerbated by globalisation trends. This chapter has evinced that there are new and promising prospects for China as a 'near-Arctic state'. At the same time, although being at a far geographical distance, Antarctica has also become near to the heart of China's global ambitions. Here, a 'nest' is being prepared with decades in advance, so as to ensure the best arrangements possible after 2048. Ultimately, North and South Poles have complemented each other in China's rising engagement in polar politics, which will tend to be moulded by its characteristic view of globalization dissected in this volume.

## Acknowledgments

The authors acknowledge that this study was conducted at the Research Center in Political Science (UIDB/CPO/00758/ 2020), University of Minho/University of Évora, and that it was supported by the Portuguese Foundation for Science and Technology and the Portuguese Ministry of Education and Science, through national funds. The authors would like to thank Li Xing, Sabrina Evangelista Medeiros and Sérgio Ribeiro for their valuable comments on earlier drafts.

## Disclosure statement

No potential conflict of interest was reported by the authors

## References

- Act on Greenland Self-Government. 2009. International Relations and Security Network: Primary Resources in International Affairs (PRIA), 1-7. [https://www.files.ethz.ch/isn/125366/3708\\_Greenland\\_Independence.pdf](https://www.files.ethz.ch/isn/125366/3708_Greenland_Independence.pdf)
- Albert, M. & Vasilache, A. 2017. Governmentality of the Arctic as an international region. *SAGE Cooperation and Conflict*, 53(1): 1-20. doi: 10.1177/0010836717703674
- Aleem, Z. 2017. “Trump pulling out of the Paris climate agreement is great news...for China”. *Vox*, <https://www.vox.com/world/2017/6/3/15729424/trump-paris-climate-china>
- Airport Technology. 2019. “Polar air: a look at China’s first permanent airport in Antarctica”. *Airport Technology*, <https://www.airport-technology.com/features/chinas-airport-in-antarctica/>
- Aksenov, Y; Popova, E.; Yool, A; Nurser, A.; Williams, T.; Bertino, L. 2017. On the future navigability of Arctic sea routes: High-resolution projections of the Arctic Ocean and sea ice. *Maritime Policy*, 75: 300-317. doi: 10.1016/j.marpol.2015.12.027
- Antarctic Treaty.1959. [https://documents.ats.aq/keydocs/vol\\_1/vol1\\_2\\_AT\\_Antarctic\\_Treaty\\_e.pdf](https://documents.ats.aq/keydocs/vol_1/vol1_2_AT_Antarctic_Treaty_e.pdf)
- Askary, H.; Sandmark, U. & Aspling, L. 2019. The Belt and Road Initiative: Opens great opportunities for Sweden and Scandinavia. *BRIX*. <https://www.brixsweden.org/wp-content/uploads/2019/12/BRI-Report-Sweden-Final.pdf>
- Bennett, M. et al. 2020. “The opening of the Transpolar Sea Route: Logistical, geopolitical, environmental, and socioeconomic impacts”. *Marine Policy*, 121. doi: 10.1016/j.marpol.2020.104178.
- Brady, A.-M. 2010. China’s Rise in Antarctica?. *University of California Press*, 50 (4): 759-785. doi: 10.1525/as.2010.50.4.759
- Brady, A.-M. 2012. Polar Stakes: China’s Polar Activities as a Benchmark for Intentions. *The Jamestown Foundation*, 12(14). <https://jamestown.org/program/polar-stakes-chinas-polar-activities-as-a-benchmark-for-intentions/>
- Brady, A.-M. 2017a. *China as a Polar Great Power*. Woodrow Wilson Central Press and Cambridge University Press.
- Brady, A.-M. 2017b. Special Report: China’s Expanding Antarctic Interests: Implications for Australia. *Australian Strategic Policy Institute*, 1-30. [https://s3-ap-southeast-2.amazonaws.com/ad-aspi/2017-08/SR109%20Chinas%20expanding%20interests%20in%20Antarctica.pdf?L\\_qDGafveA4ogNHB6K08cq86VoEzKQc](https://s3-ap-southeast-2.amazonaws.com/ad-aspi/2017-08/SR109%20Chinas%20expanding%20interests%20in%20Antarctica.pdf?L_qDGafveA4ogNHB6K08cq86VoEzKQc).

- Brady, A.-M. 2019. "Facing up to China's Military Interests in the Arctic". *China Brief*, 19(21): 21-28. <https://jamestown.org/wp-content/uploads/2019/12/Read-the-12-10-2019-CB-Issue-in-PDF.pdf?x76488>
- Baykurt, B. and de Grazia, V. 2021. *Soft-Power Internationalism: Competing for Cultural Influence in the 21st-Century Global Order*. United States: Columbia University Press.
- Butt, K., Kharl, S. and Bhatti, K. 2020. "String of Pearls: Politics of Ports in Indian Ocean". *South Asian Studies*, 35(1): 73-86.
- Buzan, B. 2010. China in International Society: Is 'Peaceful Rise' Possible? *The Chinese Journal of International Politics*, 3 (1):5-36. doi: 10.1093/cjip/pop014
- Callahan, W. 2008. "Chinese Visions of World Order: Post-hegemonic or a New Hegemony?". *International Studies Review*, 10(4): 749-761.
- Carrington, D. 2020. "Ice-free Arctic summers now very likely even with climate action". *The Guardian*. <https://www.theguardian.com/world/2020/apr/21/ice-free-arctic-summer-now-very-likely-even-with-climate-action>
- Cha, T. 2018. "Competing visions of a postmodern world order: the Philadelphian system versus the Tianxia system". *Cambridge Review of International Affairs*, 31(5): 392-414. doi: 10.1080/09557571.2018.1536113
- China's Arctic White Paper. 2018. [http://english.www.gov.cn/archive/white\\_paper/2018/01/26/content\\_281476026660336.htm](http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm)
- Chinese Academy of Sciences Headquarters. 2020. "Dome A in Antarctica is the best site for optical astronomical observation on Earth". *EurekaAlert*. [https://www.eurekaalert.org/pub\\_releases/2020-08/caos-dai080220.php](https://www.eurekaalert.org/pub_releases/2020-08/caos-dai080220.php)
- Clingendael Report. 2020. <https://www.clingendael.org/pub/2020/presence-before-power/2-presence-before-power-why-china-became-a-near-arctic-state/>
- Cohen, A. 2019. "U.S. Withdraws from Paris Accord, Ceding Leadership to China". *Forbes*, <https://www.forbes.com/sites/arielcohen/2019/11/07/us-withdraws-from-paris-accord-ceding-leadership-to-china/?sh=7c7ec52f73c1>
- Dams, T.; Schaik, L. & Stoetman, A. 2020. Presence before power: China's Arctic strategy in Iceland and Greenland. *Netherlands Institute of International Relations*. <https://www.clingendael.org/sites/default/files/2020-06/presence-before-power.pdf>
- Duarte, P. 2015. "The Dragon Spits Fire on Ice: The Arctic and Antarctica Within China's New Silk Road". *Revista da Coleção Meira Mattos*, Rio de Janeiro, 9(35): 471-483.
- Duarte, P. 2017. *Pax Sinica*. Lisbon: Chiado Editora.
- Duarte, P. 2018. "Whose Silk Road? The Chinese, US, European Union and Russian strategic projects for regional integration in Central Asia", pp. 38-49. In Mendes, C. (ed.). *China's New Silk Road: An Emerging World Order*. London: Routledge. doi: 10.4324/9781351134354
- Duarte, P. and Ferreira-Pereira, L. C. 2021. "The Soft Power of China and the European Union in the context of the Belt and Road Initiative and Global Strategy". *Journal of Contemporary European Studies*, 1-15. doi: 10.1080/14782804.2021.1916740
- Duarte, P. and Leandro, F (eds). 2020. *The Belt and Road Initiative An Old Archetype of a New Development Model*. Singapore: Palgrave.
- Erkan, A. & Ates, A. 2019. "Will Russia be a Threat to China? Sino-Russian Energy Relations via Energy Weapon Model". *International Journal of Eurasia Social Sciences*, 10 (36): 431-445. doi: 10.35826/ijoes.2499
- European Parliament. 2018. "China's Arctic policy: How China aligns rights and interests". *European Parliament*, 1-8.

- [https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/620231/EPRS\\_BRI\(2018\)620231\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/620231/EPRS_BRI(2018)620231_EN.pdf)
- Evers, J. 2016. "Arctic". *Resource Library/Encyclopedic Entry, National Geographic*, <https://www.nationalgeographic.org/encyclopedia/arctic/>
- Farré, A. et al [...] Stephenson, S.; Chen, L.; Czub, M.; Dai, Y., Demchev, D.; ... (2014). "Commercial Arctic shipping through the Northeast Passage: routes, resources, governance, technology, and infrastructure". *Polar Geography*, 37(4): 298-324. doi: 10.1080/1088937X.2014.965769
- Ferreira-Pereira, L.C. and Duarte, P. 2021. "China and the Belt and Road Initiative in Europe: The case of Portugal", 218-234, In Ntousas and Minas (eds). *The European Union and China's Belt and Road*. London: Routledge.
- Fishman, D. 2019. "China's Advance into the Antarctic". *Lawfare*, <https://www.lawfareblog.com/chinas-advance-antarctic>
- Gåsemyr, H. 2019. "A Norwegian perspective" In Andreas Bøje Forsby (ed), *Nordic-China Cooperation: challenges and opportunities*. Nordic Institute of Asian Studies, Copenhagen: NIAS Press, 95-100.
- Gothe-Snape, J. 2019. "Australia declares China's plan for Antarctic conduct has 'no formal standing'". *ABC News*, <https://www.abc.net.au/news/2019-07-30/antarctica-china-code-of-conduct-dome-a/11318646?nw=0>
- Greenstone, M.; He, G.; Li, S. and Zou, E. 2021. "China's War on Pollution: Evidence from the First Five Years". National Bureau of Economic Research. Working Paper No. 28467, [https://www.nber.org/system/files/working\\_papers/w28467/w28467.pdf](https://www.nber.org/system/files/working_papers/w28467/w28467.pdf)
- Grydehøj, A. et al. 2020. "Silk Road Archipelagos: Islands in the Belt and Road Initiative." *Island Studies Journal*. 15(2): 3-12. doi:10.24043/isj.137.
- Gunnarsson, P. and Nielsson, E. 2019. "An Icelandic perspective". In Andreas Bøje Forsby (ed), *Nordic-China Cooperation: challenges and opportunities*. Nordic Institute of Asian Studies, Copenhagen: NIAS Press, 87-94.
- Harrington, J. 2016. "China, Global Ecopolitics and Antarctic Governance: Converging Paths?". *Journal of Chinese Political Science/Association of Chinese Political Studies*, 22, 37-56: 1-20. doi: 10.1007/s11366-016-9430-2
- Harvard University's Ash Center. 2020. "Taking China's pulse". <https://news.harvard.edu/gazette/story/2020/07/long-term-survey-reveals-chinese-government-satisfaction/>
- Hu, W. and Meng, W. 2020. "The US Indo-Pacific Strategy and China's Response". *China Review*, 20(3): 143-176.
- Humpert, M. 2018. "China Launches Domestically-Built 'Xue Long 2' Icebreaker". *High North News*, <https://www.highnorthnews.com/en/china-launches-domestically-built-xue-long-2-icebreaker>
- Ikegami, M. 2011. "Neo-Imperialism: China's Quasi- Manchukuo Policy toward North Korea, Mongolia, and Myanmar". *Tamkang Journal of International Affairs*, 14(4): 61-98.
- Kobzeva, M. 2021. "Cooperation between Russia and China in Arctic Shipping: Current State and Prospects". *Арктика и Север*, 43(43): 75-91. doi: 10.37482/issn2221-2698.2021.43.89.
- Koh, C. 2019. "China's strategic interest in the Arctic goes beyond economics". *Defense News*, <https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/>
- Kosonen, R. 2019. "A Finnish perspective". In Andreas Bøje Forsby (ed), *Nordic-China Cooperation: challenges and opportunities*. Nordic Institute of Asian Studies, Copenhagen: NIAS Press, 81-86.



- Kossa, M. 2020. "China's Arctic engagement: domestic actors and foreign policy". *Global Change, Peace & Security*, 32 (1): 19-38. doi: 10.1080/14781158.2019.1648406
- Lanteigne, M. & Shi, M. 2019. "China steps up its mining interests in Greenland". *The Diplomat*, <https://thediplomat.com/2019/02/china-steps-up-its-mining-interests-in-greenland/>
- Lanteigne, M. 2014. "China's emerging Arctic Strategies: Economics and Institutions". *Institute of International Affairs: Centre for Arctic Policy Studies*, 1-42.
- Lanteigne, M. 2016. "Small is Beautiful': Iceland's Economic Diplomacy with China". In Sverdrup-Thygeson, B. (ed). *Dragon in the North: The Nordic Countries' Relations with China*. Norwegian Institute of International Affairs, 34-44.
- Lim, K. 2018. "China's Arctic Policy & the Polar Silk Road". *Arctic Yearbook*, 1-17.
- Liu, N. 2017. "China and the Future of Antarctica". *China Dialogue*, <https://www.chinadialogue.net/blog/9858-China-and-the-future-of-Antarctica/en>
- Liu, N. 2018. "What Does China's Fifth Research Station Mean for Antarctic Governance?". *The Diplomat*, <https://thediplomat.com/2018/06/what-does-chinas-fifth-research-station-mean-for-antarctic-governance/>
- Liu, N. & Brooks, C. 2018. "China's changing position towards marine protected areas in the Southern Ocean: Implications for future Antarctic governance". *Elsevier Marine Policy*, 94: 189-195. doi: 10.1016/j.marpol.2018.05.011
- Liu, C. 2019. "A Chinese perspective". In Andreas Bøje Forsby (ed). *Nordic-China Cooperation: challenges and opportunities*. Nordic Institute of Asian Studies, 67-73.
- Liu, N. 2019a. "Defining the "Rise" of China in Antarctica". *Australian Institute of International Affairs*. <https://www.internationalaffairs.org.au/australianoutlook/defining-rise-china-antarctica/>
- Liu, N. (2019b). "What Are China's Intentions in Antarctica?", *The Diplomat*, 14 June, <https://thediplomat.com/2019/06/what-are-chinas-intentions-in-antarctica/>
- Lobosco, K. 2018. "Trump pulled out of a massive trade deal: Now 11 countries are going ahead without the US". *CNN Politics*, <https://edition.cnn.com/2018/12/29/politics/tpp-trade-trump/index.html>
- Long, Z. 2018. Arctic Governance: Challenges and Opportunities. *Council on Foreign Relations*, <https://www.cfr.org/report/arctic-governance>
- MacDonald, A. 2019. "Precarious existence or staying the course? The foundations and future of Arctic Stability". In Heininen, L. (ed.) *Arctic Yearbook*, 1-29.
- Martinson, R. 2019. "China as an Atlantic Naval Power". *The RUSI Journal*, 164(7): 18-31. doi: 10.1080/03071847.2019.1700684
- Medeiros, S. and Mattos, L. 2019. "Antarctica as a South Atlantic Maritime Security Issue". pp.105-127. In Duarte, É. & de Barros, M. (eds.) *Maritime Security*. doi: 10.1007/978-3-030-05273-7\_5
- Ministry for Foreign Affairs of Finland. 2019. Joint Action Plan on bilateral partnership between China and Finland. [https://um.fi/current-affairs/-/asset\\_publisher/gc654PySnjTX/content/suomen-ja-kiinan-kahdenvalisen-kumppanuuden-toimeenpanosuunnitelma-julkaistu](https://um.fi/current-affairs/-/asset_publisher/gc654PySnjTX/content/suomen-ja-kiinan-kahdenvalisen-kumppanuuden-toimeenpanosuunnitelma-julkaistu)
- Ministry of Foreign Affairs of People's Republic of China. 2017. [https://www.fmprc.gov.cn/mfa\\_eng/zxxx\\_662805/t1465158.shtml](https://www.fmprc.gov.cn/mfa_eng/zxxx_662805/t1465158.shtml)
- Moe, A. & Stokke, Olav S. 2019. "Asian Countries and Arctic Shipping: Policies, Interests and Footprints on Governance". *Arctic Review on law and Politics*, 10: 24-52. doi: 10.23865/arctic.v10.1374

- Pham, C. 2019. "China's Activities in the Polar Regions Cannot Go Unchecked". *U.S. Naval Institute*. <https://www.usni.org/magazines/proceedings/2019/march/chinas-activities-polar-regions-cannot-go-unchecked>
- Reuters. 2021. "G7 rivals China with grand infrastructure plan". <https://www.reuters.com/world/g7-counter-chinas-belt-road-with-infrastructure-project-senior-us-official-2021-06-12/>
- Rosen, M. 2019. "Will China Freeze America Out of the Arctic?". *The National Interest*, <https://nationalinterest.org/feature/will-china-freeze-america-out-arctic-73511>
- Shah, A. 2020. "Russia Loosens Its Belt". *FP*. <https://foreignpolicy.com/2020/07/16/russia-china-belt-and-road-initiative/>
- Shambaugh, D. 2008. *China's Communist Party: Atrophy and Adaptation*. Washington DC & Berkeley: Woodrow Wilson Center Press & University of California Press
- Shen, R., & Mantzopoulos, V. 2013. "China's Going Out Policy: Inception, Evolution, Implication". *Journal of Business & Behavioral Sciences*, 25(2): 121–136.
- Silk Road Briefing (2018). "Belt and Road and Airport Antarctica". <https://www.silkroadbriefing.com/news/2018/10/31/belt-road-airport-antarctica/>
- Shi, M. & Lanteigne, M. 2020. "Greenland in the Middle: the Latest Front in a Great Power Rivalry". Polar Research and Policy Initiative. <https://polarconnection.org/greenland-in-the-middle/>
- Spears, K. Joseph 2018. "China's Arctic Rising". *Canadian Sailings*, 24-27. <https://canadiansailings.ca/chinas-arctic-rising/>
- State Council Information Office of People's Republic of China. 2018a. "China's Arctic Policy". [http://www.xinhuanet.com/english/2018-01/26/c\\_136926498.htm](http://www.xinhuanet.com/english/2018-01/26/c_136926498.htm)
- State Council Information Office of People's Republic of China. 2018b. "China Enters 'Unmanned Era' in Arctic" China.org, [http://www.china.org.cn/china/2018-08/24/content\\_59998746.htm](http://www.china.org.cn/china/2018-08/24/content_59998746.htm)
- Su, P. & Mayer, M. 2018. "Science Diplomacy and Trust Building: 'Science China' in the Arctic". *Global Policy*, 1-6. doi: 10.1111/1758-5899.12576
- Sverdrup-Thygeson, B. & Hellström, J. 2016. "Introduction: Quintet Out of Tune? China's Bilateral Relations with the Nordic States". In Sverdrup-Thygeson, B. (ed). *Dragon in the North: The Nordic Countries' Relations with China*. Norwegian Institute of International Affairs.
- Taylor, A. 2018. "A timeline of Trump's complicated relationship with the TPP". *The Washington Post*. <https://www.washingtonpost.com/news/worldviews/wp/2018/04/13/a-timeline-of-trumps-complicated-relationship-with-the-tpp/>
- Teller, M. 2014. "Why do so many nations want a piece of Antarctica?". *BBC News*, <https://www.bbc.com/news/magazine-27910375>
- The Diplomat. 2010. "China's Arctic Play". <https://thediplomat.com/2010/03/chinas-arctic-play/>
- The Edelman Trust Barometer. 2022. "Trust in China". <https://www.edelman.com/trust/2022-trust-barometer/trust-china>
- The 13th Five-Year Plan. 2016. "The 13<sup>th</sup> five-year plan for economic and social development of the People's Republic of China 2016-2020". *Compilation and Translation Bureau, Central committee of the Communist Party of China*, Beijing, China. <https://en.ndrc.gov.cn/policies/202105/P020210527785800103339.pdf>
- The 14th Five-Year Plan. 2021. Outline of the 14th Five-Year Plan (2021-2025) for National Economic and Social Development and Vision 2035 of the People's Republic of China. [https://www.fujian.gov.cn/english/news/202108/t20210809\\_5665713.htm](https://www.fujian.gov.cn/english/news/202108/t20210809_5665713.htm)

- The 2019 Defence White Paper. “China’s National Defense in the New Era”.  
[http://www.xinhuanet.com/english/2019-07/24/c\\_138253389.htm](http://www.xinhuanet.com/english/2019-07/24/c_138253389.htm)
- The New York Times. 2019. “Trump’s Interest in Buying Greenland Seemed Like a Joke. Then It Got Ugly” <https://www.nytimes.com/2019/08/21/us/politics/trump-greenland-prime-minister.html>.
- Thorhallsson, B. and Grimsdottir, S. 2021. “Lilliputian encounters with Gulliver: Sino-Icelandic Relations from 1995 to 2021”. Institute of International Affairs. Centre for Small State Studies. University of Iceland.
- Tiantian, B. 2017. “China releases 1st Antarctic paper”. *Global Times*, <https://www.globaltimes.cn/content/1048187.shtml>
- Tiezzi, S. 2016. “China to Establish Antarctic Air Squadron in 2016”. *The Diplomat*, <https://thediplomat.com/2016/02/china-to-establish-antarctic-air-squadron-in-2016/>
- Tillman, H., Jian, Y. and Nielsson, E. 2018. “The Polar Silk Road: China’s new frontier of international cooperation”. *China Quarterly of International Strategic Studies*, 4(3): 345-362. doi: 10.1142/S2377740018500215.
- Turunen, E. 2019. “Resources in the Arctic 2019”. *Nordregio*. [https://nordregio.org/maps/resources-in-the-arctic-2019/#\\_ftn2](https://nordregio.org/maps/resources-in-the-arctic-2019/#_ftn2)
- Urban, O. 2015. “Future of the Arctic Oil Reserves”. *Stanford University*. <http://large.stanford.edu/courses/2015/ph240/urban2/>
- USGS. 2008. Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle. *USGS Fact Sheet*. <https://pubs.usgs.gov/fs/2008/3049/fs2008-3049.pdf>
- Ushakova, E. 2021. “Arctic Frontier: Ice Silk Road and Its Role in China’s Advance to the Arctic”, *Арктика и Север*, 43(43):109–122. doi:10.37482/issn2221-2698.2021.43.128
- Vargö, L. 2019. “A Swedish perspective”. In Andreas Bøje Forsby (ed), *Nordic-China Cooperation: challenges and opportunities*. Nordic Institute of Asian Studies, 101-108.
- Wang, D. et al. 2020. “Feasibility of the Northern Sea Route for oil shipping from the economic and environmental perspective and its influence on China’s oil imports”. *Marine Policy*, 118. doi: 10.1016/j.marpol.2020.104006.
- Wegge, N. 2014. “China in the Arctic: Interests, Actions and Challenges”. *Nordlit*, 32: 83-98. doi: 10.7557/13.3072
- Wehrmann, D. 2019. *Critical Geopolitics of the Polar Regions: An inter-American Perspective*. London and New York: Taylor & Francis, 1-216.
- Willis, M. & Depledge, D. 2013. “How We Learned to Stop Worrying About China’s Arctic Ambitions: Understanding China’s Admission to the Arctic Council”. *The Arctic Institute Center for Circumpolar Security Studies*. <https://www.thearcticinstitute.org/china-arctic-ambitions-arctic-council/>
- Woon, C. 2020. “Framing the Polar Silk Road: Critical geopolitics, Chinese scholars and the (Re)Positionings of China’s Arctic interests”. *Political Geography*, 78. doi: 10.1016/j.polgeo.2019.102141.
- Wright, D. 2011. “A Dragon Eyes the Top of the World: Arctic Policy Debate and Discussion in China”. *CMSI Red Books*, 8: 1-56. <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1007&context=cmsi-red-books>
- Xi, J. 2014. *The Governance of China*. Volume I. Foreign Languages Press.
- Xi, J. 2017. *The Governance of China*. Volume II. Foreign Languages Press.
- Xie, B.; Zhu, X. and Grydehøj, A. 2020. “Perceiving the Silk Road Archipelago: Archipelagic relations within the ancient and 21st-Century Maritime Silk Road”. *Island Studies Journal*, 15(2): 55-72. doi: 10.24043/isj.118.

- Xinhua. 2017. Vision for Maritime Cooperation under the Belt and Road Initiative”.  
[http://www.xinhuanet.com/english/2017-06/20/c\\_136380414.htm](http://www.xinhuanet.com/english/2017-06/20/c_136380414.htm)
- Xinhua. 2018. “Norway's 2nd largest bridge built by Chinese firm opens to traffic”.  
*Global Times*, <https://www.globaltimes.cn/content/1131225.shtml>
- Yi, W. & Lidegaard, M. 2015. “Deepening China-Denmark Comprehensive Strategic Partnership and Building a Model for China-Europe Cooperation”.  
<https://um.dk/en/about-us/the-ministers/speeches-and-articles-by-former-ministers/martin-lidegaard-speeches-and-articles/deepening-china-denmark-comprehensive-strategic-partnership/>
- Zhang, H. 2014. “Confronting China’s Water Insecurity”. *RSIS Commentaries*, S. Rajaratnam School of International Studies, (57): 1-2.