

# **The Arctic Governance Mosaic and Sustainability**

A corpus-based discourse analysis of documents on the Arctic  
by the Chinese State Council between 2013 and 2021

*Eva Steiger*

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Supervisor: Natalia Rubiano, LUCSUS, Lund University



## **Abstract**

In 2013, China became observer for the Arctic Council, and in 2018, its first official Arctic Policy Paper was published. In view of the Arctic's fragile ecosystems and climate change, this thesis conducts a corpus-based discourse analysis on China's narrative on the environment and sustainability between 2013 and 2021. Oran B. Young's framework, the 'Arctic Governance Mosaic' detangles the complex governance structure of the region ranging from Global agreements to PPPs, and further elements. 201 publications of the State Council are being examined. Throughout the years, the sustainability narrative has shifted from humble and legitimacy-seeking to self-confident and lecturing, which indicates an attitude shift. It appears as if China tries to implicate international acceptance and eventually respect, potentially by means of the narrative on sustainability, while following other interests of infrastructure building and resource exploitation more straightforwardly. Meanwhile, the narrative on scientific expeditions for examining environmental science remains strong.

**Keywords: Arctic, China, Environment and Sustainable Development, Arctic Governance Mosaic,**

**Discourse Analysis**

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# 1 Introduction

As temperatures are rising on our globe, things covered by the secrets of the colds slowly come to light due to the thawing ice and melting caps (Karjalainen et al., 2019). The Arctic region, however, is not only home to approximately four million people (National Snow and Ice Data Center, 2020), but the complexity of the region also increases constantly with growing human activity as the thawing ice due to climate change opens new opportunities such as new shipping lines or access to resources (Stokke, 2011). At the same time, the Arctic's ice sheets and fragile ecosystems are highly sensitive towards any kind of disturbances or changes and potentially affect the entire global climate (Stokke, 2011), which leads to the moral question of economic activities.

The Arctic Council, one of the main bodies of the Arctic governance system, can be seen as one of the main facilitators of the complex Arctic governance system and mainly engages with issues regarding sustainable development (Young, 2016). It accepted the People's Republic of China (PRC), among other countries as a permanent observer to the Arctic Council in 2013 (Arctic Council, n.d.). In 2018, China published its first-ever Arctic Policy Paper (European Parliament, 2018). These two dates can be taken as turning points in the Chinese Arctic engagement and will serve for structuring its portrayal in my thesis. Globally, China is committed to multiple international environmental treaties that also include Arctic matters (Zoltai, 2021). Having climate action and ecological protection as some of China's national main targets (National Development and Reform Commission, 2021), China's incremental involvement in the Arctic, whether it is political, economic-driven, or cultural, potentially raises eyebrows doubting China's true consideration of sustainability issues in their Arctic activities.

## 1.1 Aim and Research Question: Sustainability narrative in Chinese Arctic discourse

This study engages with the Chinese government's environmental and sustainability narrative on its Arctic activities between 2013 and 2021, in all areas of involvements. I am not engaging with the question why or whether or not "the West" is particularly suspicious about it, but I am aware that the origin of my interest potentially derives from that assumption.

As Biedermann argues that China's governance approaches in the Arctic are "underexplored", as most studies rather explore the interest or certain "areas of engagement" (2020, p. 573), I want to gain a holistic overview of how sustainability is being portrayed in the different aspects of Arctic matters and compare the narratives in order to finally draw a comprehensive picture of the overall

representation of it. With progressing climate change, I argue that it makes sense to include the matter of sustainability into every single aspect of human life and, thus, governance.

Following questions, I am going to answer with the succeeding study:

What are the Chinese government's environmental and sustainability narratives on their activities in the Arctic to the international community between 2013 and 2021?

- RQ (1) How are environmental protection and sustainable development portrayed and defined in the Chinese Arctic policy between 2013 and 2021?
- RQ (2) In which aspects of the Arctic regime does the State Council predominantly address environment and sustainability concerns?
- RQ (3) What are the developments of the narratives and what do they imply?

According to Bowman and Xu's (2020) notion of the close relation between China's Arctic policy and its domestic interests, the future involves as much certainty as China always needs to take economic and social stability as well as energy security of their 1.4 billion people into consideration (Xinhua News 新华网, 2022). Just at the National People's congress in March 2022 Premier Li Keqiang pointed out the principle "first stand, then break"<sup>1</sup> indicating that a complete coal exit is only to be expected once a fully reliable alternative energy system stands (Xinhua News 新华网, 2022), it will be interesting to see whether Bowman and Xu's (2020) notion will be applicable to China's Arctic activities as well.

## 1.2 Thesis Outline

For answering my research questions, I am conducting a Critical Discourse Analysis (CDA) by integrating aspects from corpus linguistics and using Oran B. Young's (2016) Arctic Governance Mosaic (AGM) as an analytical framework for coding my findings in Nvivo 12, the qualitative content analysis software programme. The data used for the analysis is all 201 documents found on the Chinese State Council's website on Arctic matters between 2013 and 2021 in English and Chinese by using the search term 'Arctic' and 'North Pole', as well as '北极' (Beiji), the Chinese term for North Pole.

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<sup>1</sup> Original: "先立后破" (Xian li hou po)

I begin with giving background information on the Arctic environment, the most important governance body, and China's historical interest, as well as the notion of sustainability. Following, I present the theoretical background, where I give an introduction to Fairclough's CDA approach, the aspects of corpus-based discourse analysis, and the characteristics of discourse analysis in the Chinese context. Subsequently, I introduce the Arctic Governance Mosaic by Young (2016), my framework of analysis, which I adjust to my research question. In the methods section, I justify the material I am using as well as the division of text corpora, explain boundaries and clean up, and the coding of my data. As the outcome of the study is very complex, I divide the results into the different previously defined text corpora and analyse them right away. Finally, I discuss the narratives within the context of Arctic governance aspects, and the topical shift and differences between the two text corpora and relate them to the bigger contexts of the respective time spans. I compare the Chinese narrative on sustainability in the Arctic to the general notion of sustainability, which I introduced in the background section. This will help to understand the framing of the environment and sustainable development in China's Arctic policy and might give some indication for what the narratives imply.

## **2 Background**

### **2.1 The Arctic environment and population**

There are multiple definitions for the Arctic region. While some are defined politically, one of the most common definitions is the Arctic Circle, which lays on the line of latitude at 66.5° north of the Equator (66 ° 33'N) (Arctic Centre, n.d.). Other definitions refer to Arctic boundaries such as the northernmost tree line or the isotherm line, the southernmost line where mean temperature in the warmest month of the year is below 10°C, areas that would change over time due to changing climate (Keskitalo & Koivurova & Bankes, 2009). In March 2022, the sea ice coverage was 14.59 million square kilometres, the ninth lowest coverage since satellite records (Arctic Sea Ice & Ice Data Center, 2022). As a special report of the IPCC in 2019 states, the surface air temperature in the Arctic has risen at more than a double speed compared to global average, leading to rising sea levels (Sommerkorn & Hamilton, 2008). According to a study by Olsen et al. (2015), the Arctic carbon cycle is very essential to the global climate, not only due to the albedo effect, but the Arctic Ocean and ice function as strong carbon dioxide and methane sinks, due to vertical carbon transport. But this effect is particularly vulnerable to the alteration and acidification of the ocean, as Arctic ecosystems and climate are highly sensitive towards any kind of disturbance or changes.

Besides the global climate, thawing permafrost jeopardizes infrastructure built in the Northern regions, especially the degradation of near-surface infrastructure which can pose a threat to usage of natural resources of local communities (Karjalainen et al., 2019; Keskitalo et al., 2009). 70% of the current infrastructure and almost 4 million people are located in areas that are at high risk by 2050 of thawing permafrost and therefore compromise engineering structures (Karjalainen et al., 2019). Keskitalo & Nuttall (2015) describe the Arctic as "diverse area" with a "complex reality" of a dynamic region shaped by "interaction and "migration" (pp. 176-177). Shaped by migration and interaction the Arctic population cannot be easily pinned down to only nations as cultures might differ from the traits the states have and migration complicates it even more (Keskitalo & Nuttall, 2015).

## **2.2 The Arctic Council**

Most prominent for the region-building is the Arctic Council founded in 1996 by its members signing the Ottawa Declaration (Arctic Council, n.d.-a) . It is an international high-level forum and can be seen as a symbolic milestone of the Arctic's internationalization (Arctic Council, n.d.-a; Keskitalo et al., 2009). The Council includes the eight Arctic countries of Norway, Sweden, Finland, Denmark-Greenland, and Iceland – the European Nordic countries – as well as Russia, the U.S. (Alaska), and Canada. Besides the member states, the Council includes ethnopolitical groups or movements as permanent participants: Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, and the Saami Council. Further, it includes 38 observers and six working groups, which are the primary channels of action and cover a range of topics from climate change to sustainable development (Arctic Council, n.d.-a). Contributions of this body range "from between 60° N and the Arctic Circle to the pole." (Keskitalo et al., 2009, p. 3). The Arctic Council is a result of the complex development in the Arctic and has a large involvement of environmental NGOs and science organizations (Keskitalo & Nuttall, 2015). Russia holds the current chair to the Arctic Council (2021-2023), "promoting collective approaches to the sustainable development of the Arctic, environmentally, socially and economically balanced, enhancing synergy and cooperation and coordination with other regional structures, as well as implementation of the Council's Strategic Plan, while respecting the rule of law." (Arctic Council, n.d.-b)

One of the main action areas of the Arctic Council are its Working Groups. These are the Arctic Contaminants Action Program (ACAP), Arctic Monitoring and Assessment Programme (AMAP), Conservation of Arctic Flora and Fauna (CAFF), Emergency Prevention, Preparedness and Response

(EPPR), Protection of the Arctic Marine Environment (PAME), and Sustainable Development Working Group (SDWG) (Arctic Council, n.d.-a).

Non-Arctic states can get involved in the Arctic Council as observers, which are clearly defined on the website of the (Arctic Council, n.d.). Accordingly, it is specified that all decisions exclusively are being made "by the Arctic eight States with the involvement of the Permanent Participants. The observers are being invited to the meetings of the A.C. while the main role is to observe; however, they should make relevant contributions through their engagement [...] at the level of Working Groups." Observers can propose project via any member of the Arctic States or Permanent Participants and contribute financially. It is regulated though that their contribution will not exceed the contribution of any Arctic States. Observers can make "written statements, submit relevant documents and provide on the issues under discussion." Countries like Germany, the U.K., the Netherlands, and Poland have been observers since 1998. Since then, the number of observers only rose (Arctic Council, n.d.). The eighth Arctic Council ministerial meeting in Kiruna in 2013 adopted the Arctic Council observer manual for subsidiary bodies formally that guarantees sovereignty and the hierarchy within the Arctic Council (see Table 1) (Arctic Council, n.d.-c).

### **2.3 China's interest in the Arctic**

Historically, China's involvement in the Arctic even begins before the foundation of the People's Republic of China with the signing of the Svalbard Treaty in 1925, which grants Norway sovereignty to the Svalbard archipelago (or "the Archipelago of Spitsbergen"), a group of islands north of Norway, and grants those who sign this treaty rights for trade and resource exploitation such as fishing, hunting, and industrial activities (Bowman and Xu, 2020; Biedermann, 2020). Listed by Biedermann (2020), in 1996, China ratifies the UNCLOS treaty system, adopted in 1982 to replace the Geneva Convention from 1959. UNCLOS guarantees Exclusive Economic Zones for the Arctic States. In 2008, the Ilulissat Declaration is signed and renewed in 2018. It blocks any kind of changes in the current legal regime in the Arctic. In 2013, China is being accepted as observer for the Arctic Council, and in 2018, the first official Arctic Policy Paper is being issued. China has a membership in the International Convention for the Prevention of Pollution (MARPOL), International Convention for the Protection of Pollution, International Convention on Oil Pollution Preparedness, Response, and Cooperation, Minimata Convention on Mercury (2013), signed the Polar Code, the first legally binding international code for ships operating in Polar Waters, in 2017, and the International Convention for the Safety of Life at Sea (SOLAS). The Polar Code requires Polar Ship Certificate for environment and ecosystems (Biedermann, 2020).



When it comes to China's activities in the Arctic, Bowman and Xu (2020) divide them into commercial, extractive, and research, accordingly into the Polar Silk Road, the Yamal LNG Shipping Route, and the route of the expedition ship "Xuelong". Generally, there have been multiple studies on China's strategy and interest in the Arctic. Some focus on Arctic climate impacts on China's climate, sea level rises, and desertification (Gong & Wang, 2003; Wang et al., 2008).

Other studies rather focus on China's general aspirations and strategy in the Arctic, Polar Silk Road and Sino-Russia relations, the consequences of a new trading routes, and some on resource extraction of oil and rare-minerals (Biedermann, 2020; Huang et al., 2015; Bowman and Xu, 2020). Also, there are some studies about the narrative on the Polar regions (Brady, 2017; Andersson, 2021). One paper argues that China is committed to environmental protection in the Arctic, based on looking merely into political global and regional agreements that explicitly address environmental matters (Zoltai, 2021).

## **3 Theory and Context**

### **3.0 The notion of sustainability**

To have a perspective on the portrayal and definition of sustainability within the Chinese narrative, I orientate myself by the definition of the Brundtland Commission and the themes of the Arctic Council Working Groups.

As defined by the Brundtland Commission in 1987 “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development., 1987).

The Sustainable Development Working Group of the Arctic Council engages with following thematic teams in terms of “sustainability of economic assessment”, “educational opportunities”, “heritage and culture of Arctic communities”, “human health”, “infrastructure, reduction and elimination of inequalities”, “science and research for sustainable development”, “sustainable business involvement and development” , “sustainable energy”, “transportation links”, and “water and sanitation services” (Arctic Council, n.d.-d).

As listed above, other Working Groups engage with contamination (ACAP), the conservation of flora and fauna (CAFF), the marine environment (PAME), risk and emergency management (EPPR), and monitoring and assessment of the environment and human health in the Arctic (AMAP) (Arctic Council, n.d.-e).

### **3.1 Critical Discourse Analysis**

A Critical Discourse Analysis (CDA) describes and analyses the social practise in a social context and shows what the producer of the narrative values and dismisses, and who they present as powerful (Fairclough & Fairclough, 2012). For understanding the sustainability narrative in China’s Arctic policy, CDA therefore seems appropriate to understand the political discourse on the issue.

The critical approach in a discourse analysis is not descriptive linguistic, it is rather used for applied and political discourse analysis (Rutherford, 2007). Fundamentally, politics is about making choices on how to act or react in certain situations and, according to Fairclough and Fairclough (2012), political discourse functions as an argumentation that vindicates for or against certain ways of actions and are a representation of human agency and how they reason. They argue that a political

discourse often examines the narrative of a crisis that determines the policies, action, and strategies. For that one must define the so-called crisis and define whether it is systemic and the practical arguments that are based on these narratives such as arguments for “getting back to normal”, in the case of a non-systemic crisis. On the contrary, in a crisis on a systemic account one would argue for radical change (Fairclough & Fairclough, 2012).

Critical Discourse Analysis offers a framework for analysing the argumentation. Discourses, however, essentially showcase the agent in power that decides what discussion is taking place, rather than reason or argumentation. A CDA systematically tests the argumentation of the one in power producing the discourse (Fairclough & Fairclough, 2012). For a critical analysis of a political discourse, sources used are samples of written or oral texts, in what social settings they are used, and information on the individual who produces the texts and who it is produced for. The different types of data are Government reports, Parliamentary debates, Debates on public matters, Internet discussion forums, and Newspapers (Fairclough & Fairclough, 2012)

One macro-perspective can be applied in Foucault’s sense, where a “Discourse” is a regulation of thought that determines what can be said or thought within the system and placed in a certain context (Bäckstrand & Lövbrand, 2019). In a discourse analysis one tries to find out how the truth is determined in a specific context and which particular codes and tools are used to communicate the truth (Triantafillou, 2012). It is important to keep the purpose of political discourse in mind as it is there not to describe the world but to underpin decisions and reproduce opinions and stances as well as certain conflicts and structures (Fairclough & Fairclough, 2012; Rutherford, 2007). Thus, it should always be looked through the lens of a bigger context. Political discourse reproduces political power and the notion of context is highly essential to even understand the discourse (Fairclough & Fairclough, 2012). This complements Bowman and Xu’s (2020) notion that China’s Arctic policy is closely related to domestic interests.

Language and discourse have the role of forming assumptions of realities and on how the world should look like, according to the producer (Qian & Tian, 2014). Discourse is not only shaping the reality, but the reality is also shaping the discourse, which makes an analysis of the political interesting for looking into the desires and aims of a governmental institution (Fairclough, 2010).

### **3.2 Corpus-based discourse analysis**

While discourse analysis and corpus linguistics analyses same type of data, corpus linguistics focusses on lexical items and discursive prosody, where words that appear neutral are examined based on

their frequency and collocation (Flowerdew, 2012). Corpus-linguistic is contested in different aspects including being generally rather referred to as a methodology (Flowerdew, 2012). Corpus-based critical discourse analysis examines social practices and contexts by including the analysis of the frequency of words, respective keywords and word structures, collocation and concordance as well as contextual analysis in order to identify and explain the overall topic (Flowerdew, 2012; Qian & Tian, 2014). Analysing key words and the keyword structures are very essential for understanding the overall topic or “aboutness”, as Qian and Tian (2014) call it, of the text. The frequency of words can be a big indicator for what the discourse is about, what is the preoccupying topic and how certain information is being presented. The concordance and word structure explains the context in which keywords are being used and how the keywords function. These would not only elaborate better on the topic but also the stance the person in power has, helping to understand the essence of a text corpus (Qian & Tian, 2014). In the Chinese political context, this seems to be an appropriate approach as also Qian and Tian used this approach for their analysis of Chinese political discourses in 2014.

### **3.3 Discourse in the context of China**

When applying the theory of critical discourse analysis to China, culturally varying differences must be considered. E.g. the Chinese translation of “critique” (批 *pi* from 批评 *pīpíng*) is connotated negatively as when translated literally it means “to change, or remove something undesirable by beating” as well is in relation to historical events such as the Cultural Revolution (Chilton et al., 2013). Political Discourse in China still carries the heavy expectation of conformity to the political party and is anchored deeply in the culture. Confucius is cited in forms of discourses with a view on language where words determine thoughts, therefore, words are only designated to be chosen by the ruler who may determine the way people think about reality; for Chinese political publications this means there is a set of rules for what can be said and how it should be said (Chilton et al., 2013).

Tong (2014) elaborates on the discourse of journalism in historical and current perspectives. Politics and journalism are historically tightly entangled, and legitimacy of journalism had to be granted by China’s Communist Party (CCP) and would until the 1980s merely function as the political party’s distributor for information. The legitimacy of Chinese journalism has been facing crises over the years due to the Party’s censorship not only about the selection of reporting but also the criteria for the communication of values (Tong, 2013). Questioning the legitimacy of journalism from the CCP would be questioning the ruling of the CCP (Tong, 2013). And while national narratives aim at building nationalism, Brady (2017) argues that often official frames are used for international matters

when there is seemingly a need for legitimacy in desired matter; in the case of China's interest in the Arctic, there appears to be a lack of credibility. For that the CCP aims at guiding the public opinion to secure future interest and legitimacy for involvement in Arctic affairs for which there is a so-called "playbook" that strictly guides language for Chinese and English language (Brady, 2017).

One good example is Xinhua News. Xinhua News is China's national news agency and has franchises all around the world. It is multilingual, has multiple channels as it is used for the accumulation of news, and for press releases by the government. Also, it supplies multiple national and international news agencies with information. It aims at capturing the "correct political direction and orientation of the public"<sup>2</sup>, as it says on their webpage. It is there to tell the "Chinese story" and give the Chinese a "voice" and representing Chinese characteristics<sup>3</sup>. Also, it says to be an important diplomatic tool (Xinhua News Agency 新华通讯社, n.d.). Meaning, that one target group is the international community, while the other target group is the party, the government officials. For them, learn what is to be said and though to comply the "political correctness" in their communication to the outside (Xinhua News Agency 新华通讯社, n.d.).

Hence, documents and news published and accessible for anyone in and outside of China, are rather a representation of the government's goal of how it wants to be seen in the public eye rather than any kind of representation of the society.

### **3.4 Framework of Analysis: Arctic Governance Mosaic**

As there are multiple aspects and factors playing into the Arctic governance, understanding Arctic issues is a task of complexity (Young, 2005; Young, 2012). The Arctic Governance Mosaic is a framework created by Oran B. Young (2016) for detangling Arctic governance complexity. There are multiple aspects and governance modes that convene here, not only due to the multi-nationality in the Arctic region. Economic interests, security, environmental protection, all on different scales, either bilateral, regional, or global, without hierarchical order, reveal a mosaic-like picture for governing the region. As the aim of this study is to look into the representation of environmental concern and sustainability in each and every aspect, Young's (2016) framework can be very practical, for it tries to categorize the different governance aspects. Oran R. Young's governance mosaic is aiming at different governance systems at one defined spatial area. The complexity grows regarding different actors, interest groups and time and space of creation, implementation, and action, and

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<sup>2</sup> Original: "握正确的政治方向和舆论导向"

<sup>3</sup> Original: "讲述中国故事, 传播中国声音, 阐释中国特色"

aims. Those aims can differ from interest group to interest group. Therefore, the different governance regimes within the AGM can contradict to each other in terms of their aspirations. E.g., economic interest can differ from environmental political interests.

Young describes the governance mosaic's distinctiveness as a "number of distinct elements that all deal in one way or another with the same spatially defined region but that are non-hierarchical in the sense that they are not subordinate to one another and that there is no overarching arrangement under which they all operate." (2016, p.21). The emerging institutional arrangement in the Arctic can be categorized into six elements "(i) Global agreements or regimes developed by organizations that are pertinent to the Arctic" (following referred to as 'Global Agreements'), "(ii) the Arctic Council", "(iii) Place-based management mechanisms" (following referred to as 'Place-based mechanisms'), "(iv) Public-private partnerships" (PPP), "(v) Informal venues for addressing Arctic matters of common concerns" (following referred to as 'Informal venues'), and "(vi) all-hands gatherings" (following referred to as 'All-hands gatherings') (Young, 2016, p. 21). The different elements of the AGM are very complex, overlapping, and fluid, and often contradicting in their objective.

For the purpose of this study, the AGM is understood in a broader and more fluid sense. I am using the AGM for categorisation in a more loose sense and allocate my data, the documents, to different AGM-elements according to respective text elements that address the AGM-elements in simplest of ways. Following, introduce the AGM-elements by Young (2016).

### ***3.4.1 Global agreements***

As the title says, this element of AGM concerns all international notions adopted concerning or including Arctic affairs. One example, given by Young (2016), is the 1982 UN Convention on the Law of the Sea (UNCLOS) which provides a legal framework for all human activities in the Arctic Sea (and all other areas). Others are the International Maritime Organization (IMO) established several conventions like the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL).

### ***3.4.2 Arctic Council***

Even though, the Arctic Council is not a formally and legally-binding intergovernmental organization, it has shown remarkable success in identifying important concerns and bringing it into the top of policy agenda. The AGM is, according to Young (2016), non-hierarchical. However, the complexity exceeds manageable circumstances, the Arctic Council can function as a facilitator within the AGM.

### ***3.4.3 Place-based management mechanisms***

This is a mechanism in a spatially defined area in the Arctic and is in place for the “Protection of individual species within their range or at designing more limited areas as marine protected areas.” (Young, 2016). “Five-nation polar agreement” from 1973 is one example of this kind of an agreement. Further are agreements that aim to protect Large Marine Ecosystems (LMEs) or the 1920 Treaty of Spitsbergen (Young, 2016).

### ***3.4.4 Public-private partnerships (PPP)***

This defines anything related to interests in building PPP. In the case of Chinese narrative, I am adjusting this element for any reports that voice any kind of economic interest. Examples can be for instance commercial shipping or cooperation for extraction of natural resources (Young, 2016).

### ***3.4.5 Informal venues for addressing Arctic matters of common concerns***

Young points out two different types of informal mechanisms of which one are “off-the record venues that are conducive to personal interactions, confidence building activities, and the exploration of innovative ideas in a private setting.” (Young et al., 2013). The World Economic Forum is one more example for this category (Young, 2016).

### ***3.4.6 All-hands gatherings***

This includes all assemblies of everyone who is interested in Arctic matters, coming from within the region or outside. This can be in form of informal networking, or anybody who is interested (Young, 2016). For the purpose of this study, I account sciences and scientific cooperation to this element of the AGM.

## **4 Method**

### **4.1 Material**

Following the approach of Fairclough and Fairclough (2012), I am using text-based data produced by and for the institution of the Chinese government. This would be government reports, parliamentary debates and the analysis of texts by the state media. Thus, I am collecting texts from the website of the State Council of the People's Republic of China. Texts in English language will be retrieved from the English website (<http://english.www.gov.cn>) using the key term “Arctic” and “North Pole” in the search engine, resulting in 98 texts that directly discuss issues related to the Arctic. Also, I am collecting texts from website in Chinese (<http://www.gov.cn>) using the key term “北极” (Beiji) in the search engine, resulting in 117 texts that are directly related to the Earth’s Arctic. Comparing articles that allegedly seem to be translated, I found out that those (besides the Arctic Policy Paper in 2018) still slightly differ from each other, therefore I am keeping them as separate texts. I analyse the English and Chinese texts equivalently.

### **4.2 Boundaries and clean up**

The clean-up, which leaves us with 89 English texts and 112 Chinese texts, a total of 201, is based on the relevance of the topic on the Arctic. Some texts might include the topics of the Arctic in politics, economy, science, and culture, as a central topic, as a topic that is part of a motive, or as the actual goal or aim. Other texts only mention the Arctic in a side note, either as another placement station for a satellite while the text mainly focuses on domestic affairs for example, or the text focusses on the Antarctic expedition but the Arctic is being mentioned in a clause. In these cases, I exclude the text from the analysis as they do seem neither relevant nor helpful to understand China’s sustainability narrative in their Arctic policy.

### **4.3 Time frame 2013-2017 and 2018-2021**

I divide the text corpus into two corpora. The total period ranges from 2013, the acceptance of China as an observer to the Arctic council until recently. As there has been none relevant documents published in 2022 it only ranges from 2013 to 2021. As there is the major event of the issuance of the Arctic Policy Paper in 2018 (European Parliament, 2018), it seems interesting to see if there has been any development between the two time periods. The first corpus, therefore, ranges from 2013 to



2017 and the second from 2018 to 2021. Moreover, dividing the big text corpus into two smaller corpora might increase the accuracy of the results.

#### 4.4 Coding and nodes

The coding of each document is based on the theory and analytical framework described above. Sorted into different sets organized by year of publication, text parts are coded into the different components of the Arctic Governance Mosaic (AGM). For determining further codes and categories I follow the approach of snowball sampling, meaning that I create codes I perceive as relevant along the process, leaving me with 116 different topical nodes, including sub-ordinated nodes. The node 'Environment and Sustainable Development' is the independent variable in this study and follows a wide notion of anything that anyhow includes the terms "Environment" and "Sustainability". I keep the understanding of this node purposely open to include all kinds of mentions to gain a holistic view of the general narrative of these terms.

Table 1 shows all aggregated superordinated nodes coded (Complete list of nodes in Table 2 Appendix). Based on frequency and amount of coverage, new nodes that are included indicate topics such as 'Legitimacy', 'Catchphrases', 'Scales', or 'Geo Strategy'.

**Table 1.** List of most relevant nodes with number of aggregated documents and references

Name	Description	Documents	References
AGM	Arctic Governance Mosaic	201	1377
All-hands Gatherings	Include policy and regulation on Arctic matters South from the Arctic Circle and Science	118	498
Arctic Council	Everything related.	20	92
Global Agreements		18	115
Informal Venues for Addressing Arctic Matters	Policy and Regulations that were decided in collaboration with Arctic states	48	174
Place-Based Management Mechanisms		4	61
PPP	Public-Private-Partnerships; anything related, either expressed interest or plans	82	435
Scales		140	372
Bilateral and Informal		63	113
Global		93	198
National (CN)		7	7

Regional		42	53
Environment and Sustainable Development	Subordinated nodes can overlap	102	224
Citation 'The Truth' Creation		13	18
Geo Strategy		48	71
Arctic Navigation	Can overlap with AGM-PPP	18	21
Catchphrases	Used by Chinese government e.g. "Basic principles")	9	21
Legitimacy	For the purpose of justification of China's involvement	122	347
Pandemic		1	1

#### 4.5 Research outline

I draw qualitative conclusions out of quantitative data, following the corpus-based discourse analysis approach. First, I look into the production process of the material analysed, i.e. the source of the documents and the frequency of the source, followed by giving a macro perspective based on quantitative evaluation of the representation of the node 'Environment and Sustainability', the keywords, and the most frequent coded topics throughout the entire time span between 2013 and 2021. Subsequently, I dive into the two text corpora, examining the concordance of the keywords of the documents between 2013 and 2017, and 2018 and 2021. Hereafter, I look into how the documents are allocated within the Arctic Governance Mosaic and elaborate on each aspect of the Mosaic, the frequency of the node 'Environment and Sustainable Development', and how sustainability is represented and if, how it is defined. Lastly, I answer the research questions in the discussion by including the broader context of Chinese politics during these periods of time.

Rather than analysing each text individually, the amount of data combined with chosen method enables me to gain a holistic overview, which is the aim of the study.

## 5 Results and Analysis

### 5.1 Production process

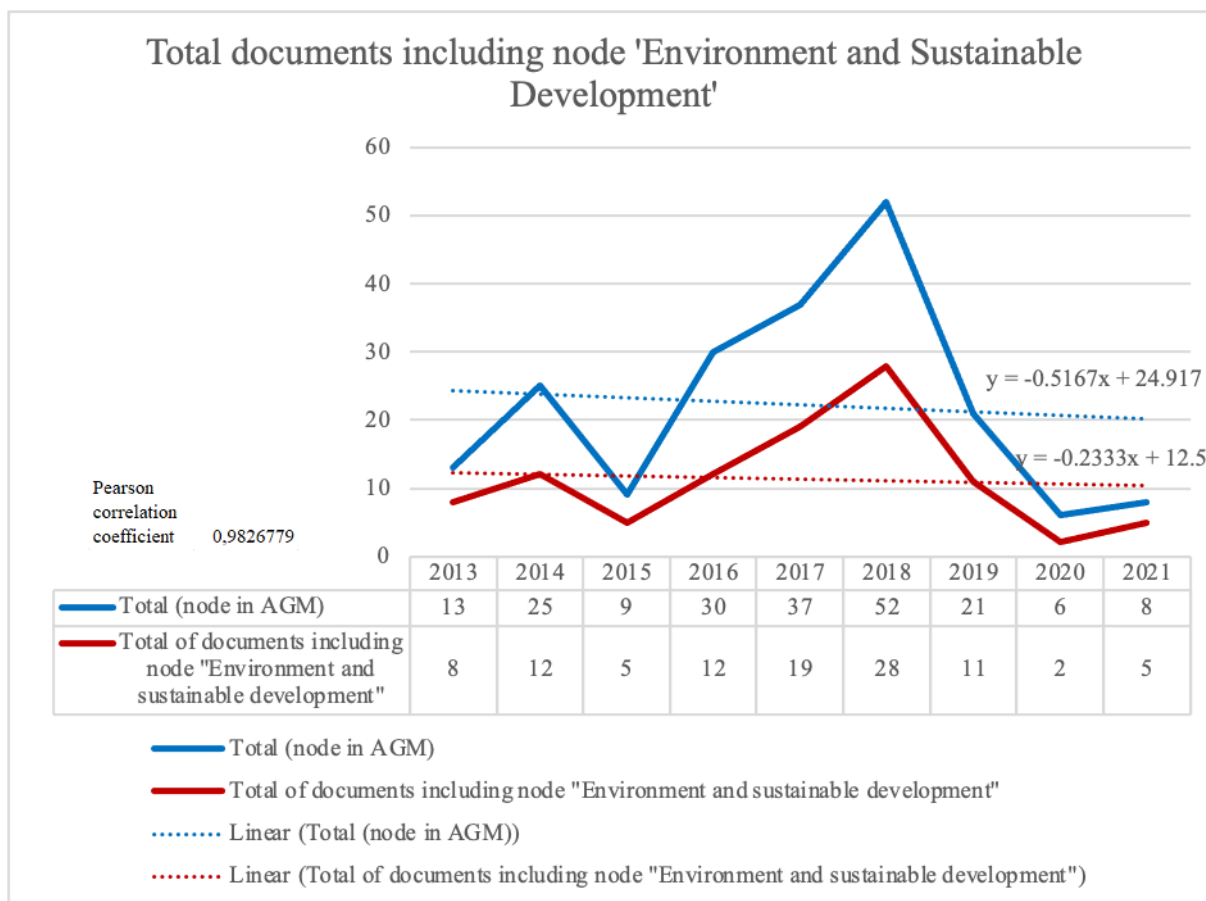
Producer, or source for the most part in both languages is “Xinhua News”, especially when not directly published by state ministries. This, however, is not surprising as Xinhua News is the main provider for news of the Chinese government, as mentioned above (Xinhua News Agency 新华通讯社, n.d.). The proportion of Xinhua News compared to other sources, is in both languages approximately between 60 % and 70 % (see Table 1 in Appendix).

While in Chinese, the sources of documents are, if not published by Xinhua News, mostly distributed between ministries, in English, other news channels such as CGTN or CNTV, and China Daily are used, news governmental agencies that particularly aim at the international audience (see Table 1 in Appendix) (Brady, 2017). This indicates a strong control of the narrative by the government, therefore, the strong shaping of reality by the government. Certainly, this is nothing new, as I have already elaborated on the characteristics of political discourse in China above. However, this proves that the data represent the government’s positioning on Arctic policy. As mentioned above, the target group of media published on the website of Xinhua News, but also those directly from government sites, are Chinese government officials as well as the international community (Xinhua News Agency 新华通讯社, n.d.). Government officials would receive the news as what is politically correct to be said from the party, leaving the language, in which documents are being published, as not being crucial for interpretation as this is the same information all government entities supposedly disseminate.

### 5.2. ‘Environment and Sustainable Development’

In total, there are 102 documents and 220 references regarding the environment and sustainable development in the Arctic out of a total of 201 documents (see Table 2 in Appendix), meaning that 51% of the documents have references referring to environmental issues and/or sustainability in any way. As this study uses the framework of the Arctic Governance Mosaic, we take a closer look at the distribution of documents throughout the year between 2013 and 2021.

The development over the years shows that the total amount of documents fluctuates over the years, increase in 2015 and peak in 2018 before it abates into very few publications in 2020, 2021, and none in 2022 (see Figure 1).



**Figure 1.** Total documents published between 2013 and 2021 and share of sustainability node by %

Out of 201 documents, 102 documents include the node 'Environment and Sustainable Development' (Following referred to as "the node"). Sorted by year, there are 13 texts in 2013 of which eight include the node (on in English (EN) and 12 in Chinese (CN)). For 2014 there are 25 objects (5 EN, 20 CN), of which twelve include the node, 2015 nine (2 EN, 7 CN), of which 5 include the node, 2016 there are 30 publications of texts (10 EN, 20 CN), of which 12 include the node, and 2017 has 37 documents published (25 EN, 12 CN), of which 19 include the node. Number of publications peaks in 2018 with 52 texts (21 EN, 31 CN), of which 28 include the node, while it starts decreasing again in 2019 with 21 texts (12 EN, 9 CN), of which 11 include the node. Only six texts are published in 2020 (3 EN, 3 CN), of which 2 include the node, and eight in 2021 (5 EN, 3 CN), of which 5 include the node.

In total, there is a (very) slightly negative trend regarding the number of publications with a distinctive peak in 2018. The share of documents that include the node 'Environment and Sustainable Development', follows the trend with the correlation coefficient of 0,98, indicating a consistency of mentions of the environmental aspect compared the total number of AGM nodes (see Figure 1).

### 5.3 Concordance in topical themes

Out of the total of documents 122 documents include arguments that are coded with the node 'legitimacy', a topic-node based on references that show attempts of the producer to justify China's engagement in the Arctic. One example justifies China's involvement based on 'Climate and Change

and the Changing Arctic’ due to its effect on the global climate. One example presented in a highly political interview with Gao Feng, the head of the Chinese delegation on climate negotiations of the Ministry of Foreign Affairs in 2013, where he particularly justifies the activities with climate change as “common interest” that “requires a joint response” (Text 1 in Appendix).

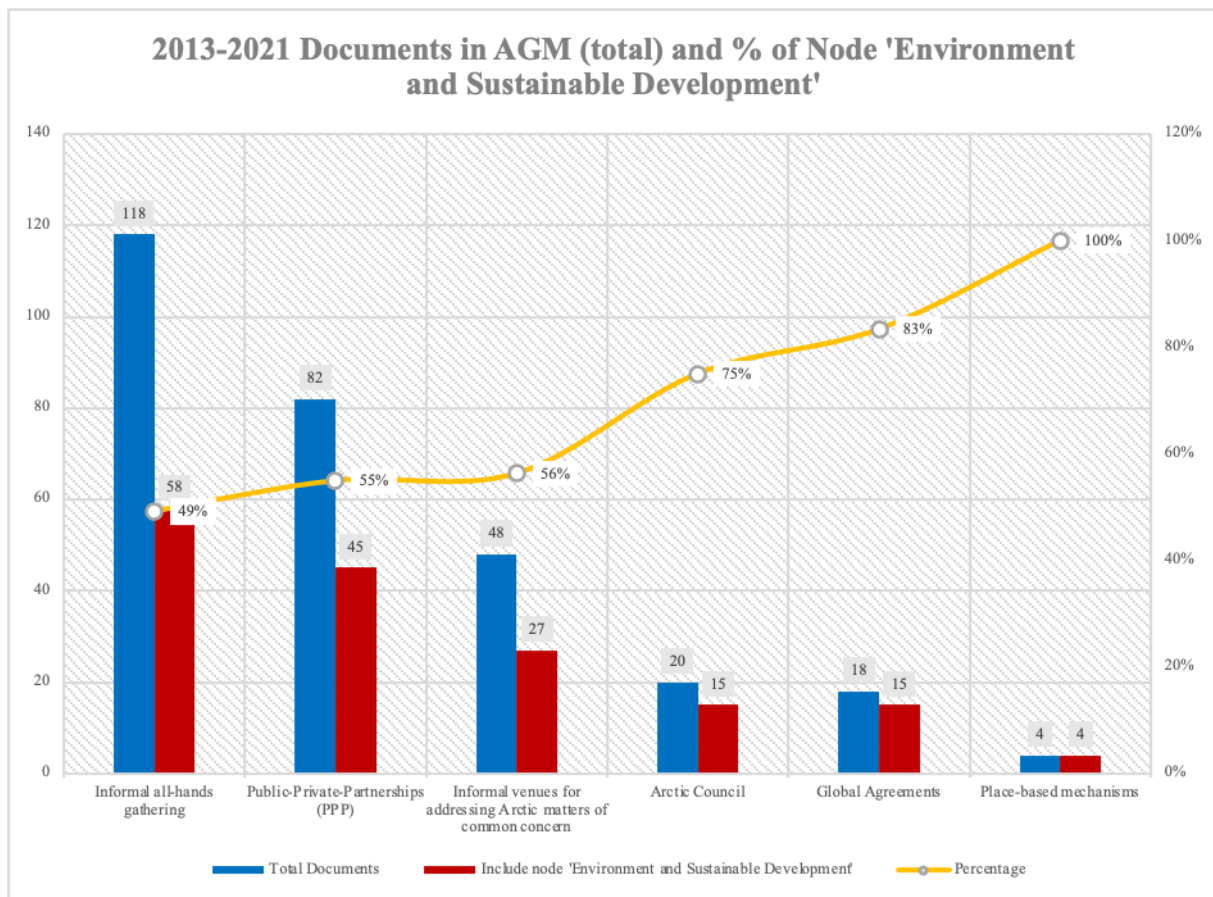
Another topic is 'Geo Strategy' (48), which overlaps with 'Arctic Navigation' (18). In this example, the expansion of the Arctic passages as partially seen as “safety backup to the current ... trade channel” (see Table 2)

**Table 2.** Example

Example: 张侠说，对于中国这一海上贸易大国来说， <u>北极航道的开通不仅可以大大缩短至欧洲、北美东岸的航运距离，更为目前相对单一的贸易航道增加了一个安全备份。</u> (Text 2)
Translation: Zhang Xia said that for China, a major maritime trading country, the opening of the Arctic waterway can not only <u>greatly shorten</u> the shipping distance to the east coast of Europe and North America, but also add a <u>safety backup to the current relatively single trade channel.</u>

### 5.4 Arctic Governance Mosaic

Within the Arctic Governance Mosaic, most dominant nodes are ‘all-hands gatherings’ (118 documents), as many articles report on scientific expeditions (99) to the Arctic, namely with the ship “Xuelong”. ‘PPP’ are very dominant as well and mentioned in 82 documents, either as in interests or in agreements and plans. Main topics here are on building infrastructure and resource exploitation. Other report on matters related to energy.



**Figure 2.** Total documents distributed in all different components of the Arctic Governance Mosaic published between 2013 and 2021 and share of sustainability mentions

Some texts have multiple AGM modes as topics were overlapping, meaning that the sum of all texts here does not equal the total amount of texts. 118 texts are published with 58 (49%) of them including the node in 'All-hands gatherings'. 82 texts are published with 45 (55%) of them including the node in the theme 'PPP'. 48 are published in 'Informal venues' with 27 (56%) including the node. 20 texts are published relating to the 'Arctic Council', of which 15 (75%) include the node. 18 texts are published on the theme of 'Global Agreements', including 15 (83%) with the node. 4 out of 4 published texts that engage in some way with 'Place-based management mechanisms' also include the node.

Most documents published are attributed to 'All hands-in gatherings' and 'PPP' with a share of documents including the node 'Environment and Sustainable Development' of 49% and 55% (see Figure 2).

Having less publication, documents regarding 'Place-based management mechanisms', 'Global Agreements', 'Arctic Council, and 'Informal venues for addressing Arctic matters of common concern' seem to have the highest rate of addressing environmental concerns, given respective governance aspects themselves mostly exist for the purpose of environmental protection and sustainable development.

## **5.5 Corpus-based narrative between 2013 and 2021**

At first glance, the narrative between 2013 and 2021, according to the frequency of topical nodes, concerns issues of China's legitimacy being involved in the Arctic and the topic of geo-strategy such as Arctic passages. Within the AGM, elements on 'all-hands gatherings', mainly with topics on science, are being addressed dominantly, as well as topics of economic concern, shown by the second most dominant representation of 'PPP'. The node of 'Environment and Sustainability' is being relatively consistently represented in approximately 50 % of the documents.

There is a peak in Chinese publications on Arctic matters in 2018. To understand why and what precise narratives and their developments are, the total time span is divided into two sections, 2013-2017 and 2018-2021. Following, we are taking a closer look in both sections.

## **5.6 Results 2013-2017**

Between 2013 and 2017, 114 documents were published on the website of the Chinese State Council that include the term "Arctic", "North Pole", or "北极". 43 in English and 71 in Chinese.

### ***5.6.1 Frequency and collocation of keywords***

Most frequently used words besides ("Arctic" and "China") used during that time period are "cooperation" (mentioned 598 times), "expedition" (342), "scientific" (291), "research" (262), and "sea" (242). Looking into the word structure of each term, the concordance of collocation of each term gives insights into the dominant contexts. Based on respective word structure, most frequent collocation of the terms is detected and represented here as examples.

Dominating concordance of the word structure of "cooperation" is "Arctic cooperation", indicating China's interest in "deepening and widening of Arctic cooperation", as "China's participation in Arctic cooperation is still in its infancy" (Text 3).

Much reporting covers scientific research expeditions. Throughout the years, there have been the sixth, seventh and eight scientific expeditions. The concordance of "expedition" shows that these expeditions are narrated as great success.

Other keywords "scientific", "research", and "sea" strengthen the impression of the text corpus' propensity building cooperation through scientific accomplishments and involvement.

5.6.2 Hierarchy of nodes 2013-2017



Figure 3. Hierarchy graph for the nodes in the documents between 2013 and 2017

The hierarchy graphic of Nvivo 12 represents the share of different nodes, referenced in the documents between 2013 and 2017. As mentioned earlier, nodes are topical attributions of marked references within a text. They are helpful to gain an impression on the overall topic of a certain text corpus – in the case, the texts between 2013 and 2017. The Environmental and sustainability aspect are being addressed in 118 references in 44 documents. Most reports are discussing occurrences on 18 documents discuss issues on bilateral and informal scale with 65 references while, global scale with 128 references in 12 documents; on bilateral scale, most discussed country is Russia with 16 references in 13 documents. On global scale the 'International cooperation' is the most mentioned topic with 34 references in 19 documents. Social settings are mostly highly political with 46 references in 44 documents .

Dominant topic is 'Legitimacy', with 167 aggregated references in 67 aggregated documents (see Figure 3). 'Legitimacy' consists mainly of argumentation based on the node 'legitimacy and importance', arguments in which China emphasizes its own importance in the matter, due to the country's important stance in international affairs. This overlaps with the legitimacy through the



node 'international responsibly' where the Arctic is stressed as a common area and common responsibility (see Figure 3).

Also, the node 'Legitimacy through Arctic states' is added for the purpose of showing that there are several moments when China uses other Arctic states' voices of welcoming to justify their involvement, or within the context of China's acceptance as an observer for the Arctic Council, where Arctic countries second this decision.

Another big part is the legitimacy through the node 'Climate Change and Changing Arctic'. Here, reports justify China's interest based on the direct impact of Arctic climate change effects on China's ecological environment as well as social and economic development.

### ***5.6.3 Summary of corpus-based narrative between 2013 and 2017***

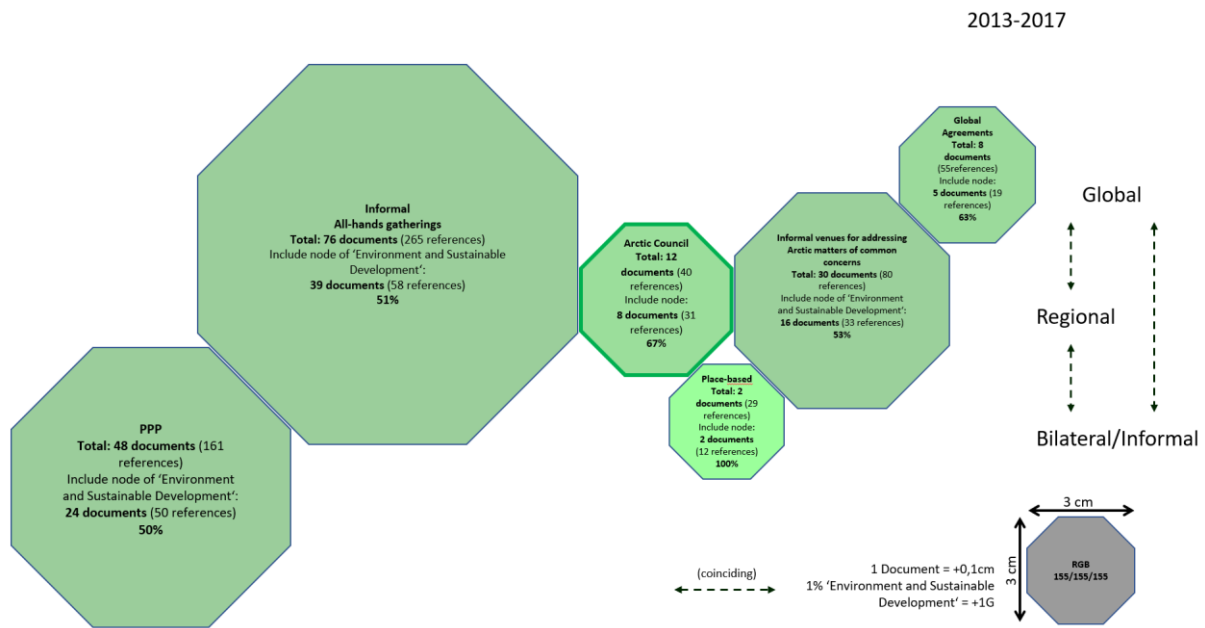
In summary, these keywords indicate that between 2013 and 2017, the narrative was dominated by building, establishing, and strengthening cooperation with Arctic states. This is accompanied by the strong reporting on yearly conducted scientific expeditions. Looking into the coded nodes, one of the strongest topics, appears to revolve around legitimacy, sought out by emphasizing China's important international role, by positive and welcoming words from Arctic states, and, finally, by the severe impact that climate change in the Arctic has on China.

The node 'Environment and Sustainable Development' is second most dominant node. It contains 118 aggregated references and 56 aggregated documents, out of a total of 114 documents. As the independent variable, however, we are looking into this node in relations to the Arctic Governance Mosaic.

### ***5.6.4 The Arctic Governance Mosaic (AGM) and the representation of the node***

#### ***'Environment and Sustainable Development': 2013-2017***

Figure 9 shows how published texts are topically distributed throughout the AGM and the share of documents that include anything related to environmental topics and topics regarding sustainable development. The share of documents that include the node 'Environment and Sustainable Development' is evenly shared between 50% and 67% among all the different components of the AGM.



**Figure 4.** China's approach at the Arctic assorted to AGM: 2013-2017

There are 48 documents between 2013 and 2017 that refer to the AGM element of 'PPP' of which 50% also refer to environmental and sustainability topics. 76 documents are attributed to 'all hands-in gatherings', of which 39 documents refer to environmental and sustainability topics. 12 documents include the element 'Arctic Council'. Despite the fact that the Arctic Council's purpose is about sustainability, eight document specifically refer to it. Both of the two documents that touch on 'place-based management mechanisms' also include the node on 'Environment and Sustainable Development', 53% of the 30 documents on 'Informal venues for addressing Arctic matters of common concern' include that node, and five out of the eight documents that refer to 'Global Agreements' also refer in some way directly to sustainability. (Size and colour are relative to total amount of documents referable to the governance topic and relative number of documents referring to environment and sustainable development. Basic diameter of octagon is 3 x 3 cm. Adding one document to one topic increases the diameter by 0,25 cm. The decimal colour code R, G, B is set at 155/155/155. One percentage of documents within one topic increases G by 1.)

#### **PPP and Environment and Sustainable Development**

Public-Private-Partnerships are the second most mentioned topic in the years between 2013 and 2017 with a total of 48 documents of which 24 use the node 'Environment and Sustainable Development' (see Figure 4). In the context of the China's acceptance as observer for the Arctic Council, PPPs are mentioned in the highly political context, in relation to resources and environmental protection often in one sentence (see Table 3). However, there is no concrete definition of sustainability in this context.

**Table 3.** Example

Observer of the Arctic Council
Example: 还强调可持续利用资源、 <u>经济发展及环境保护</u> 的重要性 (Text 4).

Translation: the sustainable use of resources, economic development and environmental protection.

Other documents report on interest in bilateral relations with Arctic countries such as Norway, Finland, and Russia as well as encourage free trade agreements. Often set in a highly political context, these meetings aim at building cooperation for “win-win” within the context of the three “policy concepts: respect, cooperation and win-win” (Text 5) in order to fight climate change. The economic areas of interest are resources, shipping, technology, energy. Again, climate change and sustainable development, as well as environmental protection are mentioned rather briefly in one sentence together with other aspects that imply interest in economic cooperation and building PPP. Only themes on energy conservation and clean energy might indicate a more specific interest.

Other documents stress the risks of inconsiderate economic activity in the Arctic. These do not only “disrupt[] the lives of local indigenous peoples” but also the fragile ecosystem and can lead to “irreversible consequences” (Text 6), therefore must be taken into consideration when utilizing Arctic resources.

The other big topic regards Arctic navigation. While being interested in commercial shipping lanes through Arctic waters, the establishment of shipping routes through the Arctic is being justified with environmental benefits through the shortening of distance as it, “reduce[s] fuel consumption and carbon dioxide emissions of ships, improve energy efficiency” (Text 7).

#### ***All-hands gatherings and Environment and Sustainable Development***

In total, there are 76 documents of which 39 documents use the node ‘Environment and Sustainable Development’ in the AGM on ‘All-hands gatherings’. I attribute China’s scientific involvement in Arctic matters to this category, as mentioned above. Thus, has China included the Arctic environmental protection already in form of “comprehensive environmental survey during the period of the 12<sup>th</sup> Five-Year-Plan” (Text 8) as the article in 2014 states. Also, in a highly political context, Vice-Premier Wang Yang states that “— China will actively participate in environmental preservation and push for environmental cooperation in the Arctic” (Text 9). The protection of the environment is also included in the policy papers on Arctic expedition activities.

A big portion of published articles revolve around China’s scientific involvement in Arctic matters. Different than in the ‘PPP’, the environment and sustainable development play a central role in China’s scientific matters and the investigation includes the “distribution characteristics and changing

laws of environmental elements such as marine hydrology and meteorology, marine geology, geophysics, marine biology and ecology, and marine chemistry in the Arctic." (Text 10). Further, these expeditions aim at "first monitoring of marine plastic waste, microplastics and artificial nuclides in the Arctic and sub-Arctic regions." (Text 11) as well as study characteristics of energy and material flow to better understand climate and environmental changes in the Arctic region.

Further topics cover involvement of cooperation with third party countries such as Argentina, Chile, Germany, however, also here environmental protection is rather mentioned as part of a subordinate clause without any further definition.

#### ***Arctic Council and Environment and Sustainable Development***

Out of twelve documents eight specifically address this matter. Mostly, however, it is not particularly defined or elaborated on and rather generic on a side note. Rather justifies why China has the right to join as it is directly affected by environmental changes in the Arctic as a "near-Arctic state" and setting the aim to promote peace, stability and sustainable development in the Arctic region.

#### ***Informal venues for addressing Arctic matters of common concern and Environment and Sustainable Development***

There are 30 documents on informal venues for addressing Arctic matters of common concern, of which 16 documents include the node of 'Environment and Sustainable Development'. Two main events that fall into this category are the Third Arctic Circle Forum and the Arctic Circle Conference taken place in 2015 and 2016. Addressed are issues of topics on science, oil and gas, research on climate change, as well as grid power connection and clean energy.

#### ***Global Agreements and Environment and Sustainable Development***

In terms of Global Agreements, the policy paper on Arctic Expedition Activities iterates China's commitment to international environmental agreements and appeal to all legal persons and citizens to not violate any international treaties and laws.

#### ***Place-based management mechanisms and Environment and Sustainable Development***

There is not much specifically on China's involvement in the place-based management mechanisms, however, it is mentioned in a broader context, where China would voice commitment and respect for all regional place-based management mechanisms such as laws and regulations as well as local customs and habits.

### **5.6.5 Summary of narratives within the AGM 2013-2017**

50% to 60% of the documents explicitly address sustainability. The narrative is strong on scientific expeditions contributing to all disciplines of environmental sciences, which are accordingly well defined and include the aim of the expeditions, such as the effects of waste and pollution and the characteristics of climate change in the Arctic. In terms of PPP, the Chinese narrative implies engagement and interest in expanding economic activities, which besides shipping or resource exploitation also explicitly include clean energy and energy conservation. Within the 50% of documents that refer to sustainability there is a share that is pointing at environmental risks that come along with economic activity, implying China is considering the environment even in the light of business. However, other mentions are rather in a clause or just re-emphasize commitment to previously to already approved environmental agreements. This can be applied to the other AGM elements of 'Global Agreements', 'Arctic Council', 'Informal venues for addressing Arctic matters of common concern', and 'place-based management mechanisms'.

### **5.7 Results 2018-2021**

Between 2018 and 2021, 88 documents are published. 42 in English and 46 in Chinese. 46 of the totals include the node 'Environment and Sustainable Development'. 52 alone were being published in 2018, 21 in 2019, since then there have been very few per year, and none in 2022 so far.

#### **5.7.1 Frequency and collocation**

Key terms are very similar to the text corpus between 2013 and 2017. The most frequently used word is "cooperation" (mentioned 329 times), followed by "scientific" (325), and "research" (276). However, different than the previous years, following most frequent terms are "Development" (267) and "International" (261).

Looking into the word structure of "cooperation" the most frequently appearing word structure is "international cooperation". China now seeks to strengthen international cooperation with Arctic countries, also it is essential for the "conservation of Arctic and utilize [...] resources" (Table 4) as well as "the protection of the Arctic" in an article where the title says, "China will contribute Chinese wisdom to the sustainable development of the Arctic" (Text 13).

**Table 4.** Example

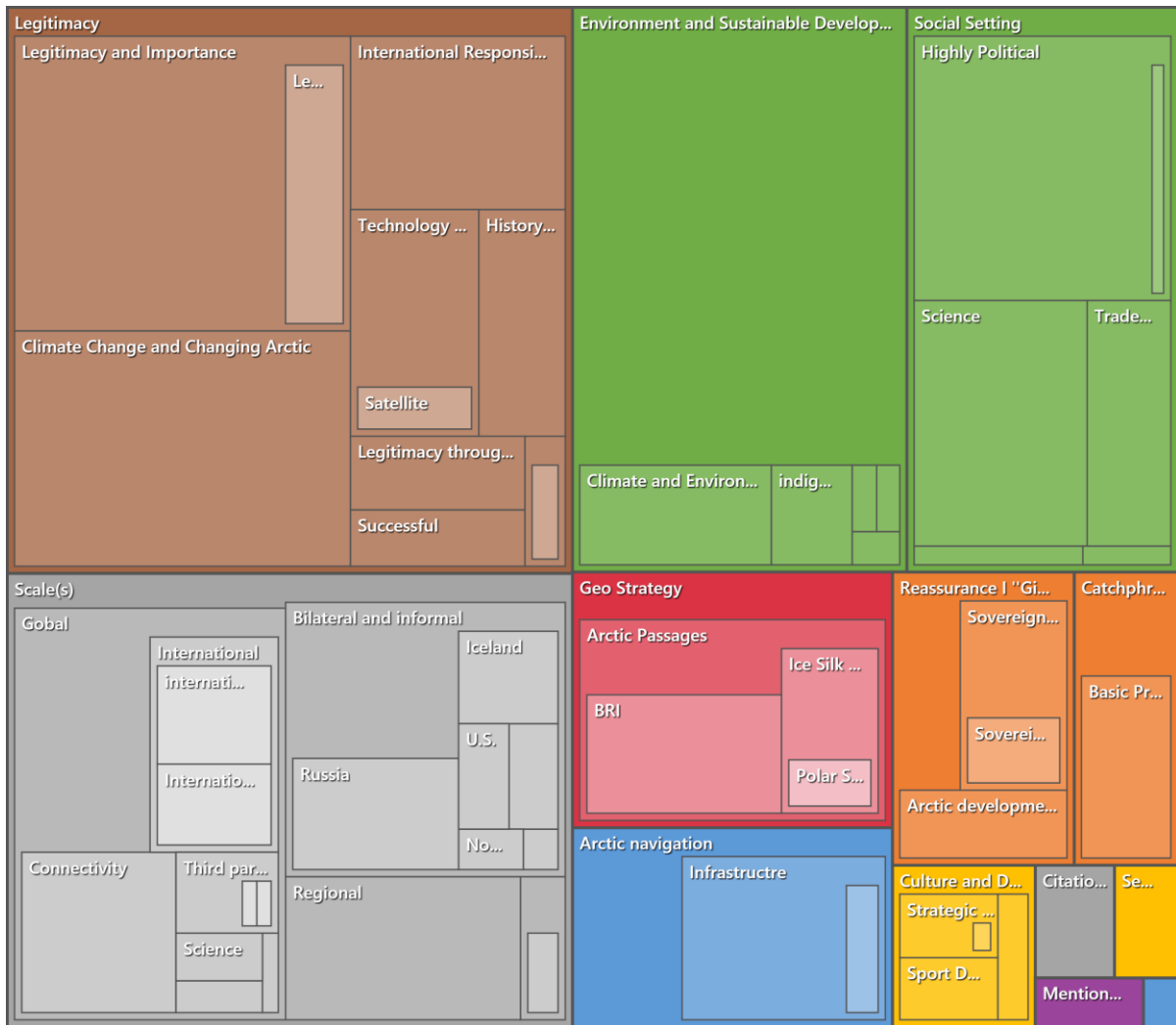
Concordance: Cooperation (Examples)	
1	and self-resilience, and advance <u>international cooperation in the conservation of Arctic and utilize Arctic resources through international cooperation.</u> [...] China is committed to strengthening <u>international cooperation with Arctic countries</u> (Text 12)

The concordance and collocation of “development” exposes a strong relationship with the term “sustainable” (see Table in Appendix). Especially in the context of the Arctic Policy Paper published in 2018 (Line 1) and respective documents, Line 2 showing one example, the combination of “peace, stability and sustainable development of the Arctic” (Line 1 and Line 2 in Table 5) appear multiple times in one document as well in multiple documents that are published along with the Arctic Policy Paper. Other narratives mention sustainable development in one go with are the expansion of trade and tourism.

**Table 5.** Example

Concordance: Development (Examples)	
1	promote the <u>peace, stability and sustainable development of the Arctic</u> together with (Text 12)
2	Example: 共同维护北极的 <u>和平、稳定和可持续发展的意愿</u> (Text 14). Translation: safeguard the <u>peace, stability and sustainable development of the Arctic.</u>

### 5.7.2 Hierarchy of nodes 2018-2021



**Figure 5.** Hierarchy graph 2018-2021

The Environmental and sustainability aspect are being addressed in 106 references in 38 documents. On global scale the (in the first corpus) most frequent node of 'international cooperation' has shifted to 'Connectivity' as the most mentioned topic with 18 references in 16 documents in the second corpus. Social settings are mostly highly political with 43 references in 38 documents (see Table in Appendix). 'Geo-Strategy' and 'Arctic navigation' grew respectively in size, while within 'Legitimacy', 'international responsibility' and 'Technology and Progress' increased in terms of visibility.

In the second corpus, 'Catchphrases', i.e. the basic principles of "respect, cooperation, win-win and sustainable" (Text 12), are being introduced and used more frequently, probably due to the establishment of a proper Arctic strategy by publishing the first Arctic Policy Paper in 2018. In 2015, these were the three basic principles known as "respect, cooperation, win-win" but without "sustainability" or any notion that would indicate sustainability (Text 5).

Also, the node 'Geo Strategy', as in 'Arctic Passages' and 'Ice Silk Road' within the frame of the Belt-and-Road Initiative, increased in frequency, and the Polar Silk Road is also included in 14<sup>th</sup> Five-Year-Plan (2021-2025). This can be related to the increased number of nodes of 'Connectivity' (see Figure 5).

The narrative around building "Legitimacy" has changed, going a new direction with "contribut[ing] Chinese wisdom" for a "shared future for mankind" in China's Arctic Policy Paper (Text 12; Text 13).

Another new dominant sub-ordinate node for 'Legitimacy' is 'Technology and Progress' which increased its appearance from 3 documents and 8 references to the most strongly represented sub-node with 14 documents and 18 references (see Figure 5). China claims to have an "important role" due to all its capabilities such as "capital, technology, market, knowledge, and experience" for "promoting the economic and social development of countries along the waterway" (Text 12).

### ***5.7.3 Corpus-based narrative between 2018 and 2021***

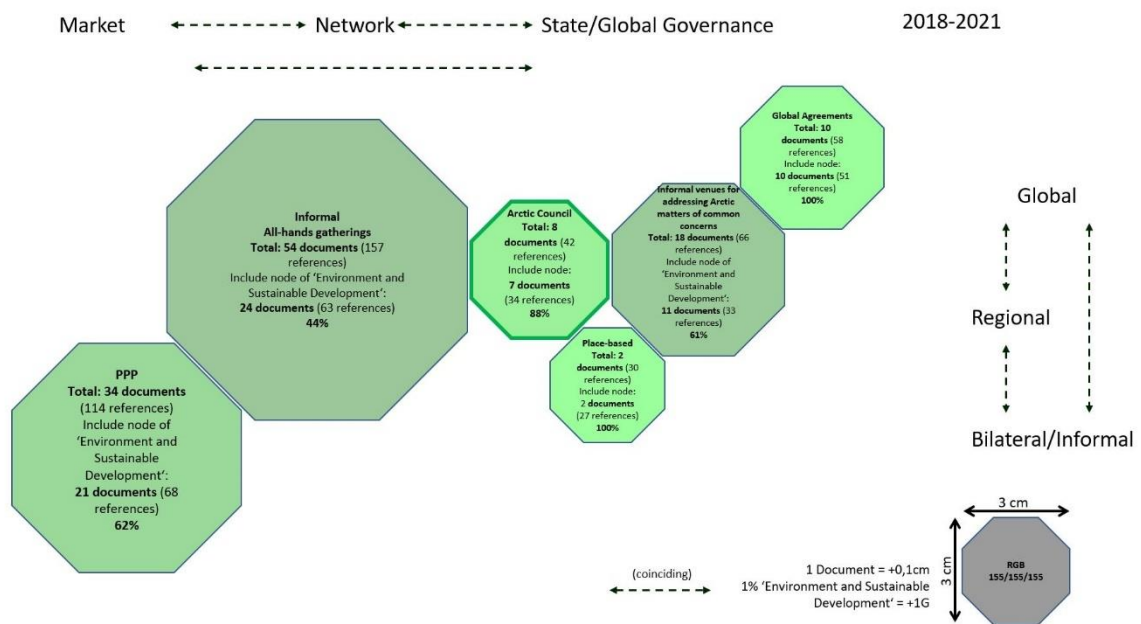
The narrative between 2018 and 2021 generally has shifted slightly in comparison to the previous years. The change from "Arctic cooperation" to "International Cooperation" implies a shift in the matter from an only Arctic matter to a global matter and, consequently, indicating legitimized international involvement. While following keywords remain and preserve the narrative of science and research, there is a new narrative implying China's strong position on "sustainable development", indicating a power shift in the ambit of environmental and sustainability issues.

The node of 'Legitimacy' has shifted as well. Instead of argue reasoning the involvement in Arctic matter with climate change, it has modified into a narrative of the Arctic matter being an international responsibility and China, technologically advanced, sharing its knowledge on sustainable development to Arctic countries. Other dominant nodes are 'Geo Strategy' and in this relation the Polar Silk Road, as one important objective in China's Arctic Policy. Also, with the Arctic Policy Paper China is officially taking responsibility.

### ***5.7.4 The Arctic Governance Mosaic (AGM) and the representation of the node 'Environment and Sustainable Development': 2018-2021***

The share of documents among the different modes of the AGM remains very similar to the share of the previous years, with 'All-hands gatherings' being represented the most, followed by 'PPP' and 'Informal venues'.





**Figure 6.** China’s approach at the Arctic assorted to AGM: 2018-2021

There are 34 documents between 2018 and 2021 that refer to the AGM element of ‘PPP’ of which 62% also refer to environmental and sustainability topics, 12% more. 54 documents are attributed to ‘all hands-in gatherings, of which only 44%, 24 documents refer to environmental and sustainability topics. 8 documents include the element ‘Arctic Council’. Again, both of the two documents that touch on ‘place-based mechanisms’ also include the node on ‘Environment and Sustainable Development’, 61% of the 18 documents on ‘Informal venues for addressing Arctic matters of common concern’ include that node, all of the ten documents that refer to ‘Global Agreements’ also refer in some way directly to sustainability.

Besides 'All hands-in gatherings' with 41 %, there is a slight increase of share that mentions of any kind of environmental or sustainability matter. The share is between 61% to 100% of documents that refer to the node 'Environment and Sustainable Development' (see Figure 6).

**PPP and Environment and Sustainable Development**

Public-Private-Partnerships are the second most mentioned topic in the years between 2018 and 2021 with 34 documents of which 21 include the node ‘Environment and Sustainable Development’. Though the total amount of documents is less, the share of documents with the node increased by more than 10% compared to corpus 1.

Still, for most parts, especially in the high political context, the meaning of ‘Environment and Sustainable Development’ is still very vague and not defined and rather mentioned quickly in one sentence along with other topics such as trade or the pandemic. Arguing that “Technological equipment is the basis for recognizing, utilizing and protecting the Arctic”, interest in different sectors such as “construction of infrastructure for Arctic development [...], oil and natural gas drilling

[...] renewable energy development, ice navigation and monitoring, and construction of new ice-class ships” are voiced in one sentence with ecological and environmental protection (Text 12). Within another White Paper published in the same year, low-carbon tourism and ecotourism in the Arctic are being promoted. Being still very general about the meaning of ecological and environmental protection, having the actual sectors of interest being pointed out such as tourism or energy, the meaning of ‘Environment and Sustainable Development’ becomes more tangible in this context.

**All-hands gatherings and Environment and Sustainable Development**

As already mentioned, several times above, ‘All-hands gatherings’ is very broad. And as it involves all activities that concern the Arctic but are not necessarily directly dependent on the Arctic states, China’s Arctic Policy Paper falls into this category. A great amount of content relates to environmental and sustainability issues. 13,41 % of the text is coded in the node of ‘Environment and Sustainable Development’. Here, the meaning of the node finally becomes clearer and finally clearly defined (see Table 6). Not only is it “fundamental”, there is interest in deepening natural and social science collaborations in this regard, also China expresses full commitment “under relevant international treaties” and “respects relevant environmental regulations of Arctic countries. Areas of action are “marine environmental pollution”, “conservation of biodiversity”, and the “development of Arctic cryosphere science” for tackling climate change. China “advocates the protection and rational use of the Arctic”, “respects the interests and concerns of the residents of the Arctic region”, aim to “conserve fishery resources”, and “promote the sustainable development of Arctic tourism” by “raising the awareness of Chinese tourists about Arctic environmental protection” (Text 12).

**Table 6.** Example

Arctic Policy Paper
In order to achieve the above policy goals, China participates in Arctic affairs based on the <u>basic principles of "respect, cooperation, win-win and sustainable"</u> . ... "Sustainability" is the fundamental goal of China's participation in Arctic affairs. This means promoting the sustainable development of the Arctic by ensuring the sustainability of environmental protection, resource utilization and human activities in the area. It means realizing harmonious coexistence between man and nature, better coordination between ecological protection, economic growth and social progress, better balance between utilization, management and protection, and intergenerational equity. (Text 12)

Other than that, reports on research expeditions continue up until the latest report on the completed 12<sup>th</sup> Arctic scientific expedition with the focus on climate change and the protection of the ecological environment of the Arctic.

With China's first official Arctic Policy Paper being issued in 2018, there is a proper definition of China's stance on environmental protection and sustainability. Other than listing all areas of action for the protection of the Arctic, the Arctic Policy Paper introduces the catchphrases mentioned above, and places "sustainability" as "fundamental" in its Policy (Table 6).

#### ***Arctic Council and Environment and Sustainable Development***

There are 8 documents that include nodes on the Arctic Council. In the Arctic Policy Paper, China iterates the "commitments it made when applying to become an observer of the Arctic Council" including all the Agreements made by the Arctic Council. In another context in 2019, when the Arctic Council fails to issue a joint declaration due to the U.S. denial of the concept of climate change, China expresses its regrets and makes its stance at the acknowledgment of the importance of addressing climate change.

This kind of statement by the Chinese government is one indication of a kind of moral powershift in regards of environmental protection. If there really is one, it means that China's position has changed from the one proving their commitment to environmental protection towards the A.C. to the position of regretting other's lack of commitment, as the U.S. is losing its reliability in these terms.

#### ***Informal venues for addressing Arctic matters of common concern and Environment and Sustainable Development***

18 documents of which 11 include the node of 'Environment and Sustainable Development'. Between 2018 and 2021, many bilateral ties are being fostered with Nordic European countries such as Iceland, Norway, and Finland in which focus lies on environmental protection, climate change, and waterways.

Other than that China participates with an active role in the Arctic Circle Forum where it addresses the importance of "climate change, environmental protection, scientific research, and waterway utilization in the Arctic" and is ready to share "Chinese wisdom and Chinese strength to the sustainable development of the Arctic" (Text 13).

This might underline the powershift, which I mention above. Sharing someone's wisdom implies a teacher student relationship and, in this context, China is the teacher. This differs strongly compared to Corpus 1, where China was still proving itself to be eligible and aware of environmental challenges.

### ***Global Agreements and Environment and Sustainable Development***

All of the 10 documents that include the node 'Global Agreements' also include 'Environment and Sustainable Development'. Again, a big part concerns China's Arctic Policy, where it states China's history in participation in the global environmental governance and the full commitment to the United Nations Framework Convention on Climate Change, Kyoto Protocol and Paris Agreement.

This repetition can be interpreted as China strengthening its stance and commitment to the international community.

### ***Place-based management mechanisms and Environment and Sustainable Development***

It is difficult to distinguish concrete place-based management mechanisms in the context of China's involvement in the Arctic, as everything is overlapping (Young, 2016). I am including aspirations or mentions that can be seen in China's general commitment to get involved on all scales including regional ones.

### ***5.7.5 Summary of narratives within the AGM 2018-2021***

44% to 100% of the documents explicitly address sustainability. With the issuance of China's Arctic Policy paper in 2018, there are many publications revolving around the paper. For the first time, there is an official definition of sustainability in China's Arctic policy, which is "fundamental" in the policy (Text 12). The narrative is determined by China's self-confidence and acclimation as leader in climate protection, ready to share its knowledge and technology to other countries. The narrative on the Polar Silk Road becomes more prevalent as well as China's interest for economic cooperation becomes more straightforward on shipping, resources, and oil and gas, with decreased narrative on environmental risks. The self-confidence becomes very distinct, and indicates a moral powershift, when voicing their regrets on the A.C. fail in issuing a joint declaration due to the U.S.' disbelief in the concept of Climate Change.

## 6 Discussion

I conducted a corpus-based critical discourse analysis of 201 documents retrieved from the website of the Chinese State Council between 2013 and 2021, that includes mentions of Arctic matters. For the corpus-based discourse analysis, I used Young's Arctic Governance Mosaic which helped me to sort and categorize the data into the different elements of the Arctic governance. Based on the frequency of words and coded topics, it can be said that generally, the narrative between 2013 and 2021 is strongly determined by China proving its legitimacy to be involved in Arctic affairs, and their interest in cooperation and in Arctic passages. About half of all retrieved data include sustainability in one way or another. 'All hands-in gatherings' is represented the strongest with very much reporting on scientific expedition as well as the Arctic Policy Paper, followed by 'PPP'.

As mentioned above, half of the documents include the node 'Environment and Sustainable Development', indicates that a text portions within a document refers to sustainability in any way. The distribution among different aspects of the AGM is similar in both text corpora, which are divided into 2013-2017 and 2018-2021.

### 6.1 Text corpus 2013-2017

The narrative on sustainability is strongly portrayed through a scientific lens, in 'all hands-in gatherings', and refers at most times to environmental sciences, including pollution and climate change mitigation. In fact, the environmental notion is more central than it is explicitly named, as there are many reports on the same Arctic expeditions that not necessarily repeat the aim of the expeditions, which, however, in other reports are more clearly defined, i.e. for monitoring pollution, conducting scientific exploration in hydrology and meteorology, marine geology, geophysics, marine biology and ecology, and marine chemistry and understanding climate and environmental changes in the Arctic. This is a definition that complies with the sustainability notion of the Arctic Councils Working Group for Sustainable Development, as they are having one topical theme of "science and research for sustainable development" as well as themes of the other working groups, including the "Arctic Monitoring and Assessment Programme", "Conservation of Arctic Flora and Fauna", and the Working Group "Protection of the Arctic Marine" (Arctic Council, n.d.-e).

Given the context that China's has been accepted as observer for the Arctic Council in 2013, this strong emphasis is comprehensible, proving China's eligibility in fields that concern the Arctic Council.

The other dominant AGM element, 'PPP', often talks about sustainability within the context of building cooperation and rather mentions it in a clause without a concrete definition. However, there is interest in "energy conservation" and "clean energy", which also comply with the Sustainable Development Working Group of the A.C., within the theme of "sustainable energy". On the other hand, there are other documents that allude to the risks of economic activities in the Arctic and specifically refer to the fragile ecosystems and protection local communities. In that context they would also voice the concern about responsible resource, and gas and oil extraction. Then again, when it comes to Arctic navigation in terms of trade routes, it is portrayed as being favorable to the environment due to the minimized distances and respective minimized shipping in total. This narrative appears to aim at showing China's consideration of environmental issues, while expressing in economic interest.

Within the context of 'Arctic Council', the narrative rather seems to nurture the confirmation of China's commitment to the A.C.'s aim, which mainly involve environmental protection and sustainable development, as this is the main purpose of the A.C. itself. About half of the documents in the AGM element 'Informal venues' include the node 'Environment and Sustainable Development'. Mostly in a highly political context, topics such as energy and grid connection are touched upon as well as the protection and responsible use of Arctic resources, but also the protection indigenous communities, addressing the theme "Heritage and culture of Arctic communities" of the Sustainable Development Working Group of the A.C. (Arctic Council, n.d.-d). However, in these contexts, there is no clear definition of elaboration on what is explicitly meant by 'protection'. In 'Global Agreements', Out of the eight documents five refer to the environmental aspect mostly by reaffirming the commitment to global agreements.

According to the concordance of the collocation of the keywords, dominating narrative between 2013 and 2017 is determined by building and strengthening cooperation and scientific expeditions. There is this strong narrative that indicates the strong need for acceptance and legitimacy, using all kinds of narratives, including good partnership with other Arctic states or the Arctic's impact on China's climate. The notions of environmental and climate science in concordance with the A.C.'s working groups can also reflect a sense of careful integrity and trust building by showing involvement in environmental and sustainability issues. These are however not really central as they are represented only in half of the documents, but they are very present.

As mentioned above, according to Fairclough (2012) a certain narrative often is a response to a certain kind of crisis. Therefore, the strong narrative of legitimacy based on environmental sciences

and climate change impacts and environmental considerations in economic activity, implies a response to prevailing attitude of the target group, which, according to Xinhua News, is the international community.

In the broader context, this careful approach makes sense. Between 2011 and 2015 China's 12<sup>th</sup> Five-Year-Plan (FYP) was in place. This was the first FYP that dedicated more than a few notes but an entire chapter to environmental protection, which included tackling climate change by promoting renewable energy, resource efficiency, ecological conservation, and circular economy (Weng et al., 2015). The 12<sup>th</sup> FYP period was the period in which economic growth slowed down for the first time in decades (BBC, 2016). The newly amended Environmental Protection Law came into effect in 2015 (Weng et al., 2015), the same year in which the Paris Agreement was adopted (UNFCCC, n.d.). 2013 was not only the year in which China was finally accepted as an observer for the Arctic Council, it was also the year in which the Belt-and-Road Initiative (BRI) was officially launched by President Xi Jinping (Chatzky & McBride, 2020). The BRI is a massive global infrastructure project inspired by the ancient Silk Road and includes the Silk Road Economic Belt and the Maritime Silk Road stretching from Asia to and Europe Africa via different routes, which at first was viewed very critically and even phrased as new colonialism (Van Mead, 2018 ; Chatzky & McBride, 2020).

The BRI being mentioned in the first text corpus, there is even greater focus on it in the second text corpus between 2018 and 2021.

## **6.2 Text corpus 2018-2021**

The narratives between 2018 and 2021 indicate to be more self-confidence than the trust-building humble legitimacy-seeking narrative in the previous years. Arctic matters are themed as international concerns for international cooperation. However, this can be attributable to the Arctic Council's Agreement on Enhancing International Arctic Scientific Cooperation, signed in 2017 (Arctic Council, 2017). China therefore adjusted the narrative. Internationally, China phrases itself as playing a major role as it can share its "wisdom" to other countries but also justifies its Arctic involvement as contributing to the "shared future for mankind" (Text 12; Text 13). Sciences and expeditions are still very strong in the narrative, but there is a new very strong narrative on "sustainable development. Also, the notion of legitimacy shifted to a narrative as China bringing technological process and economic opportunities and building infrastructure such as the Polar Silk Road.

About half of the documents published on the website of the State Council on Arctic Matters, include the node 'Environment and Sustainable Development'. In that time span, the meaning of the node is being officially clearly defined for the first time.

With China's first official Arctic Policy Paper being issued in 2018, there is a proper definition of China's stance on environmental protection and sustainability. Other than listing all areas of action for the protection of the Arctic, the Arctic Policy Paper announces the basic principles of China's Arctic Policy and elaborates extensively each single principle of "respect, cooperation, win-win and sustainability", whereas "sustainability" is added to the principles in 2015 and is very clearly defined and "fundamental" for the overall policy (Text 12).

The Arctic Policy Paper's definition of sustainability is as follows

"Sustainability" is the fundamental goal of China's participation in Arctic affairs. This means promoting the sustainable development of the Arctic by ensuring the sustainability of environmental protection, resource utilization and human activities in the area. It means realizing harmonious coexistence between man and nature, better coordination between ecological protection, economic growth and social progress, better balance between utilization, management and protection, and intergenerational equity." (Text 12)

This definition complies with the Brundtland Commission's definition, especially the part of "intergenerational fairness" as well as the Working groups of the Arctic Council. 52 documents are published in the year of 2018, of which most discuss the Arctic Policy Paper.

Similar to the first text corpus, the issue of sustainability is mostly rather mentioned very shortly within the context of 'PPP' or in a side note and neither it is clearly defined. 'PPP' being still the second strongest category within the AGM, there is a lot of emphasis on technology and progress in the Chinese narrative, building bilateral ties and being very straightforward in their interest in oil and gas, natural resources, and building infrastructure. There is also interest in the expansion of renewable energy as well as ecotourism in the Arctic. In this context, the documents always mostly refer to the environmental aspect but also even argue with the utter need for technology to protect the environmental protection develop sustainably.

Regarding 'Global Agreements', China is strongly emphasizing its commitment to global environmental agreements but has gained some self-confidence in terms of its role in environmental protection. This becomes very clear with China's official utterance of regret within the context of the



failure of issuing a common statement first time in the history of the Arctic Council due to the denial of the concept of climate change during the Trump administration (BBC, 2018). This event indicates a moral power shift. This is visible, when China offers its “wisdom” to the other countries, implying some sort of teacher-student relationship.

The development of the sustainability narrative, from humble and legitimacy-seeking to self-confident and lecturing, indicates an attitude shift. It appears as if China tries to implicate international acceptance and eventually respect with the narrative on sustainability. China’s narrative in the second text corpus seems to show its strong positioning towards environmental and sustainable development, partially attributable to a reaction to a U.S. government administration that denies the concept of climate change. We can define this as one of the “crises” to which the narrative responds to. The narrative aims at proving China’s eligibility as a global leader in environmental protection and sustainability.

When the 13<sup>th</sup> FYP came into place in 2015, “Made in China 2025” was on the top agenda, along with environmental protection and low-carbon development - China’s plan of innovating high-tech and becoming home to high-quality global brands, proving to be a role model for modernity and technology as well striving for being a global leader in environmental protection and Xi Jinping’s revision of the “Going-out” policy (Wübbecke et al., 2016). This might be reflected in the less humble narrative on Arctic involvement between 2017 and 2021. China’s ambitions in climate politics have increased tremendously since 2015 until the government announced the ambitious plan of carbon-neutrality before 2060 in 2020 along with many other ambitious goals (IEA, 2021; Xinhua News, 2021).

However, it remains questionable whether the most recent rather clearly defined and strong sustainability approach is a narrative being pushed strongly to upstage assertive instigation of economic co-operation, whether or not it is a tool in terms of Triantafillou (2012). In February 2022, China released its National Strategy for Climate Change Adaptation (Ministry of Ecology and Environment 生态环境部, 2022), and the National People’s Congress in the same year indicates rather a backtracking from the ambitious climate policy of the previous years, in order to secure the country’s energy and economic stability (Xinhua News 新华网, 2022).

## **7 Concluding remarks**

With current circumstances concerning Russia, the future of the Arctic governance is shadowed with a lot of uncertainties as even the Arctic Council has paused all meetings until further notice (Arctic Council, n.d.-a; Friedman, 2022). However that be, it can be said that based on this study one can assume that the stance on the environment and sustainable development in the Arctic can be partially attributable to China's domestic affairs and the current international environment. In the first years, the narrative served to gain legitimacy and trust from the other states. Obviously, there has been a power shift in the environmental narrative in the Arctic by the Chinese government, from being a humble contender to being an active and strong participant. It will be interesting to see how this develops over the course of time, especially within the context of China's current and future environmental policy and priority.

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## 9 Appendix

**Table 1.** Text production and language

Name	Note	Documents
<b>CN</b>		117
Economic Daily		1
Government Network China Net		3
Guangming Daily		1
Meteorological Bureau		1
Ministry of Foreign Affairs		6
Ministry of Natural Resources		2
Ministry of Transport		3
Oceanographic Administration		8
People's Daily		2
SASAC	State-owned Assets Supervision and Administration Commission of the State Council	1
Xinhua News		78
<b>EN</b>		84
CGTN		4
China Daily		18
CNTV		2
Government Network China Net		8
Xinhua		53

**Table 2.** Overview of all nodes

Name	Description	Documents	References
<b>AGM</b>	Arctic Governance Mosaic	201	1377
<b>All-hands Gatherings</b>	Include policy and regulation on Arctic matters South from the Arctic Circle and Science	118	498
Science		99	134
Xuelong	Name of expedition ship	26	26
<b>Arctic Council</b>	Everything related.	20	92
A.C. Observer Status		4	4
<b>Global Agreements</b>		18	115
<b>Informal Venues for Addressing Arctic Matters</b>	Policy and Regulations that were decided in collaboration	48	174



	with Arctic states		
<b>Policy and Regulation</b>		7	8
<b>Third Arctic Circle Forum</b>		4	4
<b>Place-Based Management Mechanisms</b>		4	61
<b>PPP</b>	Public-Private-Partnerships; anything related, either expressed interest or plans	82	435
<b>Agriculture</b>		2	2
<b>Civil Aviation</b>		3	3
<b>Energy</b>		17	27
<b>Nuclear</b>		3	3
<b>Renewables And Clean</b>		5	6
<b>Infrastructure</b>		41	59
<b>Shipping</b>		11	13
<b>Mining</b>	Mining and Resources overlap	1	1
<b>Resources</b>		32	50
<b>Fisheries</b>		1	2
<b>Oil, Gas, LNG</b>		17	25
<b>Other Resources</b>	Can include minerals, see “mining”	1	1
<b>Tourism</b>		4	5
<b>Scales</b>		140	372
<b>Bilateral and Informal</b>		63	113
<b>Denmark</b>		4	4
<b>Finland</b>		10	10
<b>Iceland</b>		8	11
<b>Norway</b>		7	9
<b>Russia</b>		23	30
<b>Science</b>		3	3
<b>Sweden</b>		3	4
<b>U.S.</b>		5	5
<b>Global</b>		93	198
<b>Connectivity</b>		36	48
<b>EU</b>		8	8
<b>International</b>	Includes cooperation, recognition, and governance	35	60
<b>International Cooperation</b>		26	45
<b>International Governance/ of the Arctic</b>		12	13
<b>Recognition by the International Community</b>		1	2
<b>Russia-Mongolia-China</b>		2	2

Science	Can overlap with AGM	29	35
Atmospheric Sciences		1	1
Third Party Countries		8	11
China-ROK-Japan		2	3
Japan		1	1
<b>National (CN)</b>		<b>7</b>	<b>7</b>
Public (CN) Awareness		3	3
<b>Regional</b>		<b>42</b>	<b>53</b>
<b>Environment and Sustainable Development</b>	Subordinated nodes can overlap	<b>102</b>	<b>224</b>
Climate and Environmental Science		28	33
Energy Security		3	3
Green	In one specific case	1	1
Local/Indigenous Cultures		5	5
Pollution and Mitigation		1	1
<b>Reassurance/ "Give the All-Clear"</b>	Regarding China's interest	<b>26</b>	<b>53</b>
Arctic Development		6	8
Sovereignty and Respect for Arctic States	China's stance on other states	20	33
Sovereignty, Territorial Integrity, Mutual Respect	Importance of reciprocal stance	7	8
<b>Citation 'The Truth' Creation</b>		<b>13</b>	<b>18</b>
<b>Geo Strategy</b>		<b>48</b>	<b>71</b>
Arctic Passages	Can overlap with AGM-PPP	35	54
BRI	Belt-and-Road Initiative	23	27
"Ice Silk Road"		12	16
"Polar Silk Road"		4	5
<b>Arctic Navigation</b>	Can overlap with AGM-PPP	<b>18</b>	<b>21</b>
<b>Social Setting</b>		<b>142</b>	<b>178</b>
Energy Security and Pollution Mitigation	Only when strongly emphasised	2	2
Highly Political		82	89
Science		56	57
Security and Military		3	3
Trade and Economic Relation		26	27
<b>Security Reference to other Disputes Areas</b>		<b>5</b>	<b>17</b>
Militarization		2	2
<b>Catchphrases</b>	Used by Chinese government	<b>9</b>	<b>21</b>
Basic Principles	In China's Arctic strategy	8	16
<b>Mentioned Very Little or Once</b>		<b>10</b>	<b>10</b>
<b>Culture And Diplomacy</b>		<b>13</b>	<b>19</b>
Partnering Up		2	3

Sport Diplomacy		5	7
Strategic Energy Partnership		8	9
Russia		1	1
<b>Legitimacy</b>	Anything that implies it	122	347
<b>Legitimacy and Importance</b>	General	68	139
<b>Legitimacy through Arctic States</b>		14	21
<b>History of Interest</b>	Using historic events	17	19
<b>International Responsibility</b>		25	40
<b>Climate Change and Changing Arctic</b>		55	87
<b>Climate Change and Outer Space Travel</b>		1	1
<b>Legitimacy Through Emphasis and Iteration</b>		17	20
<b>Success</b>	Successful Chinese projects or expeditions and missions	9	9
<b>Critique</b>	Reaction to critique	5	6
<b>Critique On China</b>		4	5
<b>European Reference Exploitation and Navigation</b>		1	1
<b>Technology and Progress</b>	Advancements “qualifying” China	25	26
<b>Satellite</b>		8	8
<b>Pandemic</b>		1	1

**Table 3.** Text samples

Text Nr.	Quote	Source
1	“common interest” that “requires a joint response”/ “共同利益，需要各方携手应对”	Xinhua News 新华网. (2013). <i>zhuān fǎng : zhōng guó yuàn wéi běi jí dì qū kě chí xù fā zhǎn zuò chū gòng xiàn</i> [Interview: China is willing to contribute to the sustainable development of the Arctic region]. The Central People's Government of the People's Republic of China. <a href="http://www.gov.cn/jrzq/2013-03/23/content_2360686.htm">http://www.gov.cn/jrzq/2013-03/23/content_2360686.htm</a>
2	“Zhang Xia said that for China, a major maritime trading country, the opening of the Arctic waterway can not only greatly shorten the shipping distance to the east coast of Europe and North America, but also add a safety backup to the current relatively single	Xinhua News 新华网. (2018). <i>gēng hǎo wéi běi jí shì wù zuò chū jī jí gòng xiàn</i> —— <i>zhōng guó shǒu fèn běi jí zhèng cè wén jiàn jiě dú</i> [Better make positive contributions to Arctic affairs —— Interpretation of China's first Arctic policy document]. <a href="http://www.gov.cn">www.gov.cn</a> . <a href="http://www.gov.cn/xinwen/2018-01/26/content_5261206.htm">http://www.gov.cn/xinwen/2018-01/26/content_5261206.htm</a>

	trade channel.”/ “张侠说，对于中国这一海上贸易大国来说，北极航道的开通不仅可以大大缩短至欧洲、北美东岸的航运距离，更为目前相对单一的贸易航道增加了一个安全备份。”	
3	“deepening and widening of Arctic cooperation”/ “促进北极合作走向深入和广泛” “China’s participation in Arctic cooperation is still in its infancy”/ “贾桂德说,中国参与北极合作还处于初级阶段”	Xinhua News 新华网. (2016). <i>zhōng guó yuàn yǔ běi ōu guó jiā jiā qiáng guān yú běi jí hé zuò [China is willing to strengthen cooperation with Nordic countries on the Arctic]</i> . <a href="http://www.gov.cn/xinwen/2014-11/02/content_2774070.htm">http://www.gov.cn/xinwen/2014-11/02/content_2774070.htm</a>
4	“..the sustainable use of resources, economic development and environmental protection”/ “还强调可持续利用资源、经济发展及环境保护的重要性”	Xinhua News 新华网. (2013). <i>zhōng guó 、 yìn dù dēng 6 guó chéng wéi běi jí lǐ shì huì zhèng shì guān chá yuán guó [Six countries including China and India become official observers of the Arctic Council]</i> . The Central People's Government of the People's Republic of China. <a href="http://www.gov.cn/jrzq/2013-05/16/content_2403698.htm">http://www.gov.cn/jrzq/2013-05/16/content_2403698.htm</a>
5	three policy concepts: respect, cooperation and win-win/ 三大政策理念：即尊重、合作与共赢	Ministry of Foreign Affairs website, 外交部网站. (2015). <i>wáng yì bù cháng zài dì sān jiè běi jí quān lùn tán dà huì kāi mù shì shàng de zhì cí [Remarks by Minister Wang Yi at the Opening Ceremony of the 3rd Arctic Circle Forum]</i> . <a href="http://www.gov.cn/guowuyuan/vom/2015-10/19/content_2950053.htm">www.gov.cn. http://www.gov.cn/guowuyuan/vom/2015-10/19/content_2950053.htm</a>
6	disrupts the lives of local indigenous peoples/ 也会对当地原住民生活造成干扰  The Arctic region is ecologically fragile, and any missteps may lead to irreversible consequences  北极地区生态脆弱，任何闪	Xinhua News. (2016). <i>zhōng guó yǔ běi ōu guó jiā běi jí hé zuò wěn bù tuī jìn [The Arctic cooperation between China and the Nordic countries is advancing steadily]</i> . <a href="http://www.gov.cn/xinwen/2016-06/14/content_5082177.htm">www.gov.cn. http://www.gov.cn/xinwen/2016-06/14/content_5082177.htm</a>

	失都可能酿成难以挽回的后果	
7	reduce[s] fuel consumption and carbon dioxide emissions of ships, improve energy efficiency/ 减少船舶燃油消耗和二氧化碳排放，提高能源效率	SASAC 国资委网站. (2013). <i>zhōng yuǎn jí tuán " yǒng shèng " lún shì shuǐ běi jí dōng běi háng dào shǒu háng yí shì jǔ xíng [The maiden voyage ceremony of COSCO's "Yongsheng" ship to test the waters of the Arctic Northeast Passage was held].</i> The Central People's Government of the People's Republic of China. <a href="http://www.gov.cn/gzdt/2013-08/13/content_2466111.htm">http://www.gov.cn/gzdt/2013-08/13/content_2466111.htm</a>
8	comprehensive environmental survey during the period of the 12th Five-Year-Plan/ 南北极环境综合考察专项北冰洋区域调查十二五期间的	Xinhua News. (2014). <i>" xuě lóng " hào 11 rì chū zhēng zhí xíng dì liù cì běi jí kē xué kǎo chá rèn wù ["Xuelong" expedition on the 11th to carry out the sixth Arctic scientific expedition mission].</i> <a href="http://www.gov.cn/xinwen/2014-07/11/content_2716142.htm">www.gov.cn. http://www.gov.cn/xinwen/2014-07/11/content_2716142.htm</a>
9	China will actively participate in environmental preservation and push for environmental cooperation in the Arctic	Xinhua News. (2017). <i>China ready to enhance Arctic environmental cooperation. The State Council The People's Republic of China.</i> <a href="http://english.www.gov.cn/state_council/vice_premiers/2017/03/30/content_281475611650212.htm">http://english.www.gov.cn/state_council/vice_premiers/2017/03/30/content_281475611650212.htm</a>
10	distribution characteristics and changing laws of environmental elements such as marine hydrology and meteorology, marine geology, geophysics, marine biology and ecology, and marine chemistry in the Arctic 北极的海洋水文与气象、海洋地质、地球物理、海洋生物与生态、海洋化学等环境要素的分布特征和变化规律。	Xinhua News. (2014). <i>" xuě lóng " hào 11 rì chū zhēng zhí xíng dì liù cì běi jí kē xué kǎo chá rèn wù ["Xuelong" expedition on the 11th to carry out the sixth Arctic scientific expedition mission].</i> <a href="http://www.gov.cn/xinwen/2014-07/11/content_2716142.htm">www.gov.cn. http://www.gov.cn/xinwen/2014-07/11/content_2716142.htm</a>
11	The first voyage of the Arctic Northwest Passage was carried out for the first time in the Arctic and sub-Arctic regions to monitor marine plastic waste, microplastics and artificial nuclides. 首航北极西北航道，首次在北极和亚北极地区开展海洋	Shiyao, L. (2017). <i>" xuě lóng " hào kāi xuán dì bā cì běi jí kē kǎo shí xiàn sì dà tū pò [The "Xuelong" triumphantly achieved four breakthroughs in the eighth Arctic scientific expedition].</i> Renmingribao. <a href="http://www.gov.cn/xinwen/2017-10/11/content_5230931.htm">http://www.gov.cn/xinwen/2017-10/11/content_5230931.htm</a>

	塑料垃圾、微塑料和人工核素监测。	
12		NDRC. (2018). <i>Full text: China's Arctic Policy</i> . The State Council Information Office of the People's Republic of China. <a href="http://www.scio.gov.cn/ztk/dtzt/37868/37869/37871/Document/1618250/1618250.htm">http://www.scio.gov.cn/ztk/dtzt/37868/37869/37871/Document/1618250/1618250.htm</a>
13	<p>China will contribute Chinese wisdom to the sustainable development of the Arctic/ 我国将为北极可持续发展贡献中国智慧</p> <p>contribute Chinese wisdom and Chinese strength to the sustainable development of the Arctic./</p> <p>我国将积极参与北极事务，努力为北极可持续发展贡献中国智慧和力量。</p>	Xinhua News. (2019). <i>wǒ guó jiāng wéi běi jí kě chí xù fā zhǎn gòng xiàn zhōng guó zhì huì [China will contribute Chinese wisdom to the sustainable development of the Arctic]</i> . <a href="http://www.gov.cn">www.gov.cn</a> . <a href="http://www.gov.cn/xinwen/2019-05/10/content_5390481.htm">http://www.gov.cn/xinwen/2019-05/10/content_5390481.htm</a>
14		Xinhua News. (2018). “ <i>zhōng guó shì běi jí shì wù de jī jí cān yǔ zhě 、 jiàn shè zhě hé gòng xiàn zhě</i> ”—— <i>guó xīn bàn jǔ xíng 《zhōng guó de běi jí zhèng cè 》 bái pí shū fā bù huì [“China is an Active Participant, Builder and Contributor to Arctic Affairs” - The State Council Information Office Holds a White Paper Conference on “China's Arctic Policy”]</i> . <a href="http://www.gov.cn">www.gov.cn</a> . <a href="http://www.gov.cn/xinwen/2018-01/26/content_5261069.htm">http://www.gov.cn/xinwen/2018-01/26/content_5261069.htm</a>