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Management in the High North: Young researchers' contribution

Collection of essays

Volume 3

Edited by:

Anatoli Bourmistrov

Elena Dybtsyna

Nadezda Nazarova

Nord universitet
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Summary: As part of the EduGov project, the PhD course "Governance in the High North: Implications for Arctic Private and Public Sector" was organized. The course was open to international scholars from various fields (business studies, economics, public administration, political science, etc.). The essays from these students represent this Volume 3 and focus on the perspectives and challenges in respect of the issues of governance in the public and private sectors in the context of the High North and in general. In addition, PhD students were asked to reflect on and discuss learning points from participating in the PhD course in relation to their ongoing research project.	Keywords: Governance, public and private sectors, High North Dialogue, scenario development	

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FOREWORD

This third volume of the *Young Researchers' Contribution Series* comprises articles by PhD scholars who are participating in the international educational project, "Cooperation in Training of Young Researchers in the Field of Governance in the Public Sector (EduGov)" (2015-2016), funded by the UTFORSK Partnership Programme, which is administered by the Norwegian Centre for International Cooperation in Education (SIU, Norway). This programme supports project cooperation between higher education institutions in Norway and their counterparts in Brazil, China, India, Japan, Russia and South Africa. UTFORSK also aims to enhance the quality of international cooperation in education by encouraging links to research cooperation and work life. To address this call, the EduGov project connects the Research Council of Norway's project, "Local Government Budgeting Reforms in Russia (BUDRUS)", and existing research cooperation between Norway and Russia by developing research competencies at Master- and PhD level. EduGov links BUDRUS's ongoing research – on the impact of changes in the budgeting practices in different dimensions of governance – to education activities at Master- and PhD levels and extends it by reflecting upon multidisciplinary and multitheoretical research approaches to governance and their implications for the private and public sectors in the High North context.

As part of the EduGov project, and to contribute to research-based education, the PhD course "Governance in the High North: Implications for Arctic Private and Public Sector" was organized in 2016 in two parts: the first in Bodø, Norway and the second in St. Petersburg, Russia. The PhD course concentrated on the multidisciplinary approach to governance and how to reflect upon it in the different contexts, focusing on the particular 'level' of governance associated with a type of organization (including, for example, public governance, global governance, and corporate governance). The course was open to international scholars from various fields (business studies, economics, public administration, political science, etc.), wishing to carry out research on topics associated with governance in the public and private sectors in the context of the High North and in general. PhD students also took part in the scenario workshop, where they led multidisciplinary groups of Master's students in producing a scenario on a specific topic developed by relevant stakeholders in the High North.

The essays focus on the perspectives and challenges in respect of the issues of governance in the public and private sectors in the context of the High North and in general. In addition, PhD students were asked to reflect on and discuss learning points from participating in the PhD course in relation to their ongoing research project.

Bardora Padrtova considers the topic of securitization: in particular, the regional security patterns in the Arctic region. Gregor Sharp illustrates the usefulness of the interdisciplinary, young and varied approach in studying complexities surrounding the Arctic. An interesting discussion about the interface between scientific research and policy formulation in the Arctic is provided by Hema Nadarajah. Meanwhile, Irina Zhilina discusses the regime formation processes in the Arctic by using the example of Norwegian-Russian cooperation in the area of offshore hydrocarbon development. Jon Skinner's focus is on the scenario method as an approach to studying complex systems, i.e. identifying key drivers or variables that impact hydrocarbon development by interacting in a complex framework at varying speeds and in a non-linear manner. Julia Olsen's paper deals with the socio-economic heterogeneity of the Arctic region for the local governance system by using three primary variables: multiple stressors in the Arctic, increasing shipping activities and local communities. Mark Stoller

examines the role of Canada in the context of the future Arctic by focusing on some aspects of the Canadian experience of trying to exploit Arctic resources; Stoller then incorporates these into discussions of futures forecasting, value creation and governance for the High North. In his essay, Neil Oculi connects issues of the Arctic and Small Island Development States (SIDS) by demonstrating how sea-level rise and melting ice in the Arctic region affect SIDS. Valeria Guerrieri argues that anticipatory strategies, for example scenario-planning in the case of the development of energy infrastructure such as pipelines, have the ability to exercise a rather ambiguous form of power through the means of hope. Finally, Zhaklin Yaneva discusses the role of the Arctic Council in the governance of the region and its role as a mediator between the different interests.

We hope that the diversity of the papers presented in this volume will provide readers with interesting descriptions and illustrations of a variety of research topics connected to issues of governance and their implications for the private and public sectors in the context of the High North and in general. We also see that the PhD students' reflection on learning points gave them a relevant insight into research-based education. Moreover, we believe that this volume in itself is a useful instrument for scholars to communicate their research projects and to reach out to authorities, enterprises, other scholars and students.

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REGIONAL SECURITY PATTERNS IN THE ARCTIC

Barbora Padrtová

Introduction

In recent years, the Arctic region has been attracting serious attention from scholars. The opening of the Arctic Ocean brings new opportunities and challenges, many of which are depicted and presented as a security threat for Arctic society. The regional security in the Arctic is built around interdependence mainly on political, military, economic and environmental issues. The region exhibits clearly defined and interconnected relations of cooperation and confrontation with an evidence of strategic potential shared with all of the regional actors. The Arctic can be defined as an independent geopolitical region with specific conditions and shared history. The Arctic is a significant security region with the longest direct border between NATO and Russia. Thus, its geopolitical importance is fundamental for all Arctic states and is likely to increase in the future. Although the level of military tension in the region is higher at the time of writing, it is still much lower than it used to be, and lower still than in other parts of the world.

The author's PhD thesis deals with the topic of securitization in the Arctic region. In this paper the author will focus on the regional security patterns in the Arctic. Security is considered to be one of the most important elements in the governance of every region. During the High North Dialogue (HND) 2016 conference, the author discovered several ideas, which will be useful for further research. Cooperation in the Arctic is one of the key factors for maintaining stability and peaceful relations among actors in the region. As both a conference and courses for Master's and PhD students, HND 2016 showed that there are strong cooperative relations on different levels among countries from the Arctic region and beyond. To be able to achieve a level of trust and a high degree of cooperation among countries, it is important to start from the youth and student exchange programmes. Moreover, during the HND 2016 courses, Master's students had a great opportunity, not only to learn how different predictions in the Arctic are created (during the lectures and presentations) but also to elaborate their own scenarios based on the given criteria (course activity). PhD students then assisted Master's students and served as a 'bridge' when connecting top experts in the field with young innovative 'brains'.

Furthermore, the conference itself showed a high level of interconnectedness of several areas and themes. The scenario-building activity included, among other things, predictions of future security developments in the Arctic and mapped implications of those scenarios for a particular sector of the High North economy. All the opportunities for the Arctic economy are strongly influenced by the governance and the regimes in specific states. Thus, the political elite in the Arctic states are trying to look at the security and stability through wider lenses, taking into account the interconnectedness of different factors.

Governance in the Arctic, the central topic of the HND 2016 courses, currently reflects international systemic changes. Moreover, it also mirrors how global changes and trends impact developments in the Arctic in different sectors, including the security sector. From this point of view, governance and security are inseparable and show a high level of interdependency.

Following the introduction, the author looks at the importance of regional security and its role in the future of the Arctic. The paper describes how regional security is created and what the criteria are for the classification of the Arctic as an individual regional security complex. Later, the author briefly elaborates on the so-called 'Russian factor' and on Russia as a key player in the

cooperative and peaceful development of the Arctic. Finally, the paper presents several thoughts on how the Arctic might look in the future, based on proposed scenarios.

Regional security

The Copenhagen School, headed by Barry Buzan and Ole Wæver, introduced a theoretical framework of regional security complexes (RSC) - the analytical scheme, which enables structuring the analysis of how security concerns tie together in a regional formation, where geographical adjacency is the factor of highest importance. Authors of the theory distinguish different RSCs around the world; however, they have not included the Arctic or polar territories as such. The Arctic is therefore considered as a sort of 'leftover' region, without any significant security dynamics. The reason behind this could be either the low intensity of regional security interactions or the peripheral location of the Arctic. The latter characteristic, however, has been gradually changing.

The essential idea of the regional security complex theory (RSCT) is based on the presumption that a comprehensive analysis of one isolated object (e.g. the security of Norway) must be studied in a wider context (Buzan et al., 1998). Buzan and Wæver argue that most states fear their neighbours more than distant powers, because most threats travel more easily over short distances than over long ones, and that security interdependence is, therefore, normally patterned into regionally-based clusters. The classical approach to regional security analysis looks for patterns of security interdependence that are strong enough to mark a group of units from its neighbours. The RSC is defined as "a set of units whose major processes of securitization, desecuritization, or both are so interlinked that their security problems cannot reasonably be analysed or resolved apart from one another." Complexes are ultimately determined by the interaction among their units - interstate security relations - that lead to distinctive regional patterns, shaped by both the distribution of power and historical relations of amity and enmity. The RSC is constituted by the regional actors, as they are the ones defining the problem and interacting to produce a regional formation over the issue. The dynamics and structure of a security complex are generated by the states within that complex - by their security perceptions of, and interactions with, each other (Buzan and Wæver, 2003).

Traditionally, RSCs were generated by bottom-up or inside-out processes, stemming from the fears and concerns within the region. However, the new definition intentionally opens the possibility of another kind of construction of RSCs, which is increasingly relevant especially in the 'new' sectors: regions can be created as patterns within system level processes (Buzan et al., 1998). For example, a group of countries that find themselves sharing the local effects of a climate change is a case of collective response to shared fates arising from outside systemic pressure.

The particular character of a local RSC is also often affected by historical factors. The formation of RSCs derives from the interplay between, on the one hand, the anarchic structure and its balance-of-power consequences and, on the other, the pressures of local geographical proximity. The security interdependence is markedly more intense between the states inside complexes than it is between those outside of it. Moreover, simple physical adjacency tends to generate more security interaction among neighbours than among states located in different areas. According to the Copenhagen School, in order to qualify as an RSC, a group of states or other entities must possess a degree of security interdependence sufficient to both establish them as a linked set and differentiate them from surrounding security regions (Buzan and Wæver, 2003).

Since the Arctic is a 'region of peripheries', it also finds itself on the periphery of scholarly interest. Buzan and Wæver's comprehensive analysis of patterns of regional security contains no mention of either the Circumpolar or the European Arctic region (neither of the two regions is defined by state borders). When we look at Buzan and Wæver's maps (Mercator projections), we can see a distorted world because neither the northernmost nor the southernmost peripheral territories are shown. The geographical distortion could be caused by a failure to identify the precise northern boundaries for any Arctic-rimmed security complex and, also, it has been assumed by Buzan and Wæver that these territories are of little interest (Gibbs, 2011).

To classify the Arctic as an RSC in accordance with the Copenhagen School's revised framework, there is a need to specify two criteria/conditions. Firstly, the RSC has to display an interconnection of the major securitization and/or desecuritization processes. Secondly, the structure and security dynamics in the region should fit into the essential structure of the RSC. If the main (de)securitization processes exhibit strong linkages and the Arctic region in its structure reflects the essential structure of the RSC, then the Arctic can be classified as a distinct regional security complex.

Securitization is defined as an inter-subjective process, by which a particular topic becomes an "existential threat that requires emergency measures and justifies actions deviating from the standard constraints of political processes." The securitization act means the shifting of a specific topic from the non-politicized category through politicized to securitized (Buzan and Wæver, 2003). Extraordinary measures, by which securitizing actors respond in practice to urgent threats, may for example include unprecedented militarization of specific areas, strengthening of the military presence in the region or demonstration of military capabilities. The opposite of securitization is a desecuritization process, when the securitized topic returns back to the political and public debate.

The analysis of all securitization and desecuritization processes in different security sectors, as defined by Barry Buzan, would exceed the limits and purpose of this paper; nevertheless, it can be stated the main (de)securitization processes in the Arctic exhibit sufficient consistency for emerging the RSC. Moreover, the research shows that sovereign Arctic states demonstrate strong dominance in the military-political sector, and the securitization ties outside this sector are generally very weak; although some scholars, including Exner-Pirot (2013), assess that, exceptionally in the Arctic, the environmental sector dominates the security dynamics and determines circumpolar relations.

The essential structure of an RSC embodies four variables - boundary, anarchic structure, polarity and social construction.

(1) Boundary differentiates the RSC from its neighbours and determines the dynamics inside the RSC. Identifying the borders of the RSC is no different from identifying the borders of any other artificially created geographical entity. Inside the RSC, there are visible features of security interdependence (the intensity/relative strength of security interactions) among individual states/units, while security relations with others - outside the RSC - are weaker (Buzan et al., 1998). In some regions, these features are more visible and stronger (for example between Taiwan and the People's Republic of China), while, in other regions, they can be relatively weak (as between states within the European Union) (Gibbs, 2011).

According to Buzan and Wæver (2003), the boundaries of the complex are identical to the external borders of the units (states). This can be a problematic element in the case of the Arctic as it does not consist of whole states but only parts - northern peripheral territories - of individual states. Thus, if the classic version of RSCCT were to be strictly applied, the classification of the

Arctic as an RSC fails, because the original theory explicitly operates with states as the exclusive building elements of the RSC. The revised definition, however, has replaced the term 'state' with a more general term, 'unit', which represents a sub-state entity (e.g. a sub-state region as an administrative unit of the state). From this perspective, the Arctic as a geographically coherent set of units may be classified as a distinct RSC. The possible demarcation line for the Arctic RSC could be defined as surrounding all territories which lie closely around and north of the Arctic Circle.

(2) The second element of the RSC's essential structure is anarchy, which, according to Buzan and Wæver (2003, p. 53), means that the "RSC must be composed of two or more autonomous units." Based on the theory, the RSC is a small version of the international system, which exhibits the same characteristics - plurality of actors and the absence/recognition of a central superior authority. The fact that four out of five Arctic rim states are founding members of NATO is not an expression of lack of anarchy in the region but rather the existence of a mature form of international organization on a regional level. From this point of view, the Arctic region fulfils the condition of anarchic structure, as it is composed of more than five units, which are subdivided into sub-units within each country's sovereign territory. Thus, according to the RSCT, only water and ice extend beyond the northern territories of coastal states, and the Arctic Ocean might be categorized as an unstructured region.

(3) Based on Barry Buzan's assumption, polarity covers the distribution of power among the units. RSCT differentiates three types of complexes - unipolar/hegemonic, bipolar and multipolar. Unipolarity in this case originates from the superiority of one regional actor, not the intervention of a global power or superpower. Moreover, Buzan and Wæver (2003) argue that the presence of a global power in the specific RSC means stronger interregional ties (between individual RSCs and neighbouring RSCs). Despite the fact that the United States is the only global superpower in the world, it does not hold a superpower position in the Arctic (not interfering in the regional security dynamics), because its presence in the region is geographically conditioned and thus permanent. Therefore, a unipolar character is rejected for the Arctic RSC. Moreover, given that the majority of security relations in the Arctic region relate primarily to the area of the Arctic Ocean (demarcation of the continental shelf, disputes over undersea borders, exploration and exploitation of natural resources, usage of new shipping routes), the United States might, in some respects, even be considered a weaker player. The reason is that the US has not ratified the United Nations Convention on the Law of the Sea (UNCLOS) yet, which precludes it from formally raising any claim regarding the continental shelf, unlike other Arctic states. This limitation puts the US in a weaker bargaining position in the debate on the future of the Arctic.

Although the Arctic RSC contains two nuclear powers (the United States and Russia), they are both playing the role of a regional power. Neither of them dominates the Arctic regional security relations to the extent that the character of the RSC could be described as bipolar. Thus, the Arctic RSC is best described as a multipolar complex, where none of the actors is much stronger than the others.

(4) The last variable includes patterns of amity and enmity among the units. Relations between the countries within the complex range from real rapprochement and expectations of protection or support on the one hand to openly hostile relations motivated by suspicion and fear on the other. There can be two distinct opposite extremes of relations - ranging from total chaos, where all are enemies of all, to mutual trust and a generally accepted commitment to solve any conflicts peacefully. In addition, between these two poles is a relatively wide space of indifference or neutrality (Buzan and Wæver, 2003).

The Arctic is generally considered a peaceful region with pragmatic/cooperative relations among actors. However, with the increasing geopolitical importance of the region, the number of interactions among actors is on the rise and thus the current status quo might be threatened. The character of mutual relations among the Arctic states is to some extent related to their individual foreign policy traditions and orientations. We can see mutual friendly relations (conditioned historically and culturally) in different areas among Arctic states as well as antagonisms and unresolved territorial disputes in the Arctic Ocean, where countries have been searching for solutions for decades.

Olaf Osica accurately classifies three different attitudes among the Arctic states, which determine the security dynamics in the region. The first group, entitled 'Arctic warriors', is composed of Russia and Canada, whose Arctic presence to a large extent determines the identity of their foreign policies. Nordic countries, with Norway at the forefront, belong to the second group, called 'anxious pragmatists', for whom the Arctic determines social and economic development. Nordic states, unlike Russia or Canada, are favourably inclined towards the involvement of the EU and NATO as organizations which strengthen their positions vis-à-vis the Arctic. The United States is characterized as a 'late player', whose Arctic policies have only recently emerged (Osica, 2010). For the US, the Arctic region is only one of a myriad of challenges and, compared with other regions, like East Asia or the Middle East, the Arctic has a secondary importance (Padrtová, 2011). Nevertheless, Arctic policy might be highlighted in the next two years, as the US chairs the Arctic Council (2015-2017).

One successful example of cooperative relations is the existence of regional organizations with a membership of (almost) all Arctic states, depending on different formats. The first Arctic organization was established in 1993 - the Barents Euro-Arctic Council (BEAC) - which aimed to strengthen cooperation in the field of soft-security among regional actors. However, in this platform the US and Canada were left behind. Thus, in 1996 all eight Arctic states signed the Ottawa Declaration as a founding document of the Arctic Council (AC). The AC, as a high level intergovernmental forum, provides a means for promoting cooperation on common Arctic issues. Although, the AC is intentionally omitting security and military issues, the cooperation on other issues, particularly sustainable development, environmental issues, health and scientific research, is highly developed.

It is important to distinguish between cooperation at the local level and at top-governmental level. Whereas the former still exhibits the strong engagement of all Arctic states, the latter has been disrupted in response to the Russian aggressive foreign policy (including violations of international law) and especially after the annexation of Ukrainian Crimea in March 2014. Since then NATO has halted all kinds of official cooperation with the Kremlin. This strategic decision will definitely have a negative impact on Russia's status in the Arctic.

Nevertheless, territorial disputes in the Arctic Ocean (more precisely, maritime limitations) are the most pronounced tensions in the region-between Russia and the US in the Bering Sea, and between Canada and the US in the Beaufort Sea. However, these disputes have been discussed within the limits of diplomatic means. Another conflict issue is the expansive territorial claims of one or several states from the region over the sovereignty of the Lomonosov Ridge - an underwater mountain range 1,800 kilometres long - which divides the Arctic. The Arctic states are trying to prove that the Lomonosov Ridge is the extension of their continental shelves, in order to gain exclusive rights to the territories, which lie beyond the Exclusive Economic zone (EEZ).

The last challenge, which all Arctic states are facing, is the rapid increase of interest in the region manifested by countries, which are geographically not directly linked to the Arctic, such as China, India, Japan or Singapore. The future security of the region is inseparably connected to the response of Arctic states to this challenge.

The “Russian factor”

Current relations between Russia and NATO are at the lowest level since the end of the Cold War. The ongoing armed conflict in Ukraine undermined the perception of Russia as a reliable partner in the eyes of Western countries. Although there are different perceptions of the Kremlin’s foreign policy among particular Alliance members, there is a general consensus on the condemnation of Russian military activities in Ukraine. As a consequence of current security changes in Europe, it has been a great challenge to maintain the Arctic region as a zone of peace and cooperation.

Since 2013, Russia has been substantially restoring its old soviet military airfields and ports in the north. This has been followed by numerous military exercises (increased in number and scale), the modernization of military equipment and the deployment of two brigades with special training for operations in the Arctic environment. The first brigade was deployed in Alakurtti at the beginning of 2015 to the naval airbase with a strategic location, approximately 60 km from the Finnish border. The second brigade should be deployed behind the Ural Mountains in Yamal-Nenets Autonomous Area by the end of 2016. Furthermore, Russia’s controversial statements, non-transparent sources of capabilities and military plans could lead to a classic security dilemma and increase the securitization of the whole region (Padrtová, 2014). As members of NATO, the US, Canada, Norway and Denmark have a stronger joint position in the region; thus, Russia’s topmost priority should be avoiding any further escalation and potential confrontation with other states, as this would inevitably lead to its isolation, not only in the Arctic region.

Combined with political assertiveness, the intensified presence of the Russian naval and air forces has drawn much international attention. In a strategic context, Russia’s Arctic military capabilities and their modernization play a crucial role in their maintaining the current favourable status quo and deterring potential challengers. Following developments in Ukraine, it is expected that the Kremlin will continue to increase its military in the coming years.

The very significant increase in the military deployment of Russian forces, together with frequent manoeuvres of bombers or fighter aircraft in the proximity or on the edge of Arctic states’ airspace, raises security concerns among other states in the region. Those developments inevitably lead to the improvement of US-Canadian capabilities - including NORAD air defense system (North American Aerospace Defense Command) based at the Greenland airport base in Thule, as well as capabilities of Norway and Denmark. This, in turn, leads to increasing Russian perceptions of insecurity and thus creates a classical security dilemma. Although the Kremlin emphasizes the cooperation and peaceful approach in finding solutions to Arctic disputes, official documents show quite the opposite. The new military doctrine from December 2014 declares that “One of the main objectives of Russia’s Armed Forces is to secure the national interests of the Russian Federation in the Arctic.” For the first time in history, Russia included its Arctic interests in its military doctrine. These elements highlight the strategic importance of the region for Russia (Padrtová, 2014).

The first and most direct example of how the Ukraine conflict has started to impact Arctic cooperation was Canada’s decision to boycott an Arctic Council task force meeting held in

Moscow in April 2014. This was followed by other similar meetings, where either Russia was not invited or Russian participation was boycotted by one or several Arctic states. Therefore, claims that there is no aggression in the north and that states are all cooperating fully on all levels is ignoring the reality.

Furthermore, NATO and the EU members expressed their adverse stance towards Russian military actions in Ukraine when they collectively imposed sanctions on Moscow. These restrictive measures have had a dramatic impact on the Russian economy.

Although it is unrealistic to isolate the Arctic from developments of the global security environment, it might serve as an exemplary laboratory for collaboration. The positive aspect of cooperation in the Arctic is that there is no need to open new channels of communication. Western countries can use the already established channels to maintain dialogue with Russia. One of the most functional platforms for cooperation is the Arctic Council (AC), which has been successful in several initiatives such as the oil spill response plan or the formation of the Arctic Economic Council in 2015.

Another success of Arctic cooperation was the establishment of the Arctic Coast Guard Forum in late October 2015. In addition, all Arctic states should cooperate in regard to the determination of the limits of the outer continental shelf. Specific areas identified by Canada, Russia and Denmark overlap; thus, negotiations to resolve differences will be inevitable (Sevunts, 2016).

Arctic relations to date have been mostly diplomatic and respectful of international law. On the one hand, all Arctic states should be able to prevent their disagreements on Ukraine and conflicts elsewhere from spreading north. On the other hand, the behaviour of the actors of the international security environment in one region cannot be separated from their behaviour in other regions. In contrast to Ukraine or Georgia, the Arctic is the only strategically important region where Russia has not thus far violated the internationally recognized borders and status quo. For the time being, Moscow respects international law in the Arctic, and all her claims for territorial expansion have been addressed by means of international law. The reason for this is that, for Moscow, the current status quo is most favourable, and it is not in Russian interest to have any kind of military conflict in the north. However, the question is whether the Kremlin will also respect the boundaries set by international law once the status quo no longer suits Russia.

Instead of conclusion - future vision of the Arctic

The key activity of the HND 2016 course was the attempt to predict the future and create a scenario with implications for different sectors in the Arctic. Although eight groups of students were working separately, most of them came up with very similar conclusions. In general, the future visions included several assumptions as factors which are happening in the present and will most probably continue happening in the future. Among those factors are the increasing role of non-Arctic states, the undisputable warming of the climate, improving infrastructure, increase in tourism, growing demand for energy, technological development and innovations and growing environmental protection. If uncertainties and so-called 'unpredictable black swans' or wild cards are not taken into consideration (as they differ in each individual sector), the above-mentioned assumptions will be relevant in the future. Those factors will appear either in smaller or greater intensity but, in any case, will influence all sectors including Arctic shipping, the oil industry, fisheries, mining, the military sector and developments in the energy sector.

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Gregor Sharp

Setting the stage for a discussion on the Arctic

In 2007, just as the world was teetering on the brink of one of the worst economic recessions since the Great Depression, a small submersible, piloted by the Russian explorer, Artur Chilingarov, planted a titanium Russian flag on the seabed at the North Pole. Predictably, an international uproar ensued. The world was quick to condemn this action, with then Canadian Foreign Minister, Peter MacKay, dismissing the stunt by saying: “This isn’t the 15th century. You can’t go around the world and just plant flags and say ‘We’re claiming this territory’” (Parfitt, 2007). Sensationalist headlines, such as “Move over Santa: Putin claims the North Pole”, soon followed (Garver, 2015). Fast forward several years and competing UNCLOS claims are submitted by Denmark, Canada, and Russia; the United States Geological Survey reveals vast potential mineral wealth in the region; and the annexation of Crimea leads to heightened tension between the West and Russia. The Arctic appears to be on the verge of conflict.

In spite of the predictions carried by the media, the Arctic was not submerged in conflict. To the contrary, these last few years have seen impressive levels of cooperation between the Arctic powers above and beyond the already substantial regional cooperation that has characterized the last two decades. Early examples include the 1994 agreement between the US, Russia, China, Japan, South Korea, and Poland, as well as the 1999 agreement between Russia, Norway, and Iceland on managing fishery stocks in the Barents Sea (Byers, 2013). More recently in 2015, the five Arctic coastal states—Canada, Denmark, Russia, the US, and Norway—signed a declaration, in which they agreed to abstain from commercial fishing until a regulatory framework is developed, and the International Maritime Organisation (IMO) brought into place the mandatory Polar Code for ships operating in the polar regions. Furthermore, the recently inaugurated headquarters of the Arctic Economic Council in Tromsø is a physical testament to the desire to foster cross-border business-to-business cooperation in the region.

While this is by no means a comprehensive list, it is clear that, far from being on the verge of conflict, the Arctic is characterized by cooperation. In bringing together a wide variety of speakers throughout the conference—spanning many different ages, backgrounds, and roles in the Arctic—the High North Dialogue is an important reminder of the many projects and problems that have been overshadowed by this focus on conflict. By moving past these lurid headlines, it becomes possible to focus on the multiplicity of pressing issues, ranging from climate change to local engagement, affecting the Circumpolar North.

Asking the right questions

Instead of endlessly speculating over the possibility of a ‘new Cold War’, there are many other questions worthy of our attention. In the case of my research, the governance of hydrocarbon extraction—the focus of much speculation and one of the alleged drivers of conflict in the Arctic—would not be possible without cooperation between states, companies, and organizations. This cooperation does not necessarily equate to clear or solid governance structures, however. Instead, as Oran Young points out, governance in the Arctic is not an easy question to tackle; it is a challenging region from many perspectives and the prospects of any form of strong legally binding charter or treaty are dim (Young, 2010). According to Stoker (1998),

this is especially true as the lines between private and public are blurred in creating governance outcomes.

Coming into this conference with several overarching questions drawn from my focus on extractive industries, I was curious to see what would emerge. What can you do to ensure that best practices are being deployed? How do you design a project that meets the needs of current *and* future generations? Is it possible or even desirable to create meaningful Arctic specific regulations? In response to these questions, amongst many others discussed, the High North Dialogue offered a rich diversity of answers from a range of perspectives. Of these, three insights jumped out: the necessity of interdisciplinary approaches; the need to further engage youth in the region; and the importance of understanding the (at times) vastly different perspectives adopted by the Arctic countries. Far from being limited in their application, these three themes enjoyed currency across the gamut of different issues raised in Bodø.

Interdisciplinary approaches as best practice

In a region as complex and interrelated as the Arctic, it is of utmost importance to understand as much as possible about the connections between sectors, disciplines, and different forms of knowledge in order to operate effectively. These linkages take many forms, ranging from the effects of seismic surveying on marine life to how indigenous voices inform international governance in the region. Such complexities are obviously beyond the purview of one single discipline. The problems faced in the Arctic are not only transnational in nature but also interdisciplinary. Climate change, for example, cannot be tackled by legislation unless it is based on good evidence from a multiplicity of disciplines, spanning the gamut from economics to biology and everything in between.

And while the importance of interdisciplinary perspectives is often recognized, as illustrated at this conference by the diversity of presentations, not all connections are equally valued. The industry-policy axis, for one, does very well. One need look no further than the creation of the Arctic Economic Council—the self-branded primary forum for interaction between the Arctic Council and the wider business community—and the support it has received from prominent politicians and executives across the Arctic countries to see evidence of as much. Furthermore, industry and science have a good link in that businesses operating in the Arctic must constantly adapt and innovate in order to remain competitive with those working in less harsh climes and with greater access to infrastructure and markets. These linkages are important in that they allow the construction of efficient policies and practices to foster well-regulated growth.

A crucial connection is lacking between sciences and government, however. Yes, there is obviously communication between the two spheres, but it is nowhere near as entrenched—or as valued—as that between industry and government. Indeed, it often seems that government's exposure to scientific innovation and research is moderated by industry. That is to say that industry will present what it is technologically capable of doing to government and lobby for the government to allow it to do so. This privileges certain sciences that revolve around engineering (in particular with hydrocarbon extraction) at the expense of others. Ultimately this creates a situation where a biologist working with polar bears does not have the same access to government officials as industry executives and thus cannot inform the relevant policies. This over-privileging of certain axes is problematic in that it inherently marginalizes some aspects of a problem within the policy-crafting process. The governance outcomes that result from this are, in turn, sub-optimal.

Things are further complicated as the region feels the effects of globalization. At the risk of reciting the same list of tired facts: trade flows are intensifying, supply chains stretch around the globe, and workers are increasingly mobile—and the Arctic is no exception. This has had profound impacts on governance and has ushered in a new “golden era of regulation” (Levi-Faur, 2005). This has led to a constellation of new organizations, institutions, standards, and rules around the world that are redefining the notions of governance (Djelic and Sahlin-Andersson, 2006). As these institutions and regulations evolve, it is important that they take into account the perspectives offered by different disciplines—that they adopt best practices informed by the full run of information available. In the Arctic this translates into going beyond simply integrating different scientific disciplines; instead, it needs to involve indigenous knowledge, the spectrum of social scientific studies, and differing national perspectives.

To its credit, the Arctic has, for the most part, been fairly inclusive in this respect. This is even in spite of the dominance of the industry-policy axis. The Arctic Council, for example, is fairly progressive in that it gives indigenous peoples permanent representation; it also privileges a broad range of scientific research through their working groups. Nonetheless, there is still much work to be done. The relatively recent Polar Code, for example, does not include a ban on heavy fuel oil (also known as “bunker oil”). This is in spite of the Arctic Council’s 2009 Arctic Marine Shipping Assessment identifying a spill of heavy fuel oil as one of the top environmental threats to the region (Santos-Pedro et al., 2009). That the science is out there, that local communities have spoken about the importance of maintaining the northern climate, and that this did not translate into policy indicate that there is still a way to go towards implementing interdisciplinary best practices in the region.

Connecting present and future

It is no surprise to anyone in business that the importance of engaging with local stakeholders is paramount. Beyond simply playing into an “enterprise strategy” (Freeman, n.d.), the need to evaluate and adjust to the needs of local communities is the difference between success and failure. A good example is that of Clyde River, Nunavut, where residents opposed seismic testing. The local Inuit appealed the decision to allow testing in the area on the basis that they were not adequately consulted, but their concerns were dismissed. The issue has since escalated and captured headlines around the world, casting a negative light on the still fresh-faced Trudeau government. As the mayor, Jerry Natanine, aptly reminded politicians: “Governments grant permits. Only communities grant permission” (Maloney, 2016).

In this process, the question often arises as to who is a legitimate stakeholder. Often overlooked or dismissed is the youth voice: those who will have to live with the decisions made long after those who made it have moved on. Here the effort by the organizers of the High North Dialogue was much appreciated. The panel discussion by the “Future Leaders of the Arctic” was an invaluable, albeit all too rare, platform for voicing the concerns, frustrations, and aspirations of youth from across the Arctic states. Of interest, was the common theme linking them all: the fact that they did not feel empowered, that they did not feel their voices were being listened to.

Echoing the disconnect between science and policy-makers, it seems that youth voices do not resonate with those in power at the moment. This is certainly true in the North American context, where the North is a minor concern at best, and the issues facing Northern youth are rarely considered. And, if the youth panel was any indication, it seems that this is not just a North American phenomenon but rather a pan-Arctic one. The presentation given by the young Sámi

leader, for example, made it clear that the concerns of Sámi youth are not being taken into account.

Overall, it is heartening to see that things are changing and that conferences are taking youth concerns seriously. Perhaps even more exciting, however, is that the youth seem to be taking matters into their own hands. Across the Arctic you see young researchers and entrepreneurs forging new paths for a different Arctic one built to reflect their needs, wants, and desires—one that reflects their values. As the attention focused on the Arctic across the world by those seeking to exploit the region's riches fades and wanes, it will be crucial to maintain this momentum so that Arctic communities remain sustainable, liveable, and vibrant.

Many Arctics

More than anything, what became clear throughout the conference was that there are many very different Arctics. This is true geographically, in that the North American Arctic is characterized by long periods of ice cover, extreme temperatures and sparse populations, whereas the European Arctic is ice-free all year long, much warmer, and (relatively) densely populated. But it is also true in that visions of the Arctic—what it means to a country and its people—differ greatly.

Coming from Canada, as I do, there is a deep almost symbolic attachment to the country as an 'Arctic nation'. It is a way of differentiating ourselves not only from our southern neighbours but also from our British and French roots. That is not to say that we have forsaken the latter but instead have adapted them to our distinctly 'northern' context. As much is reflected in our national anthem, where we proudly sing about "the true North, strong and free" or in provincial politics, with Québec implementing its own vision of the Arctic with Plan Nord. This image most Canadians have of the Arctic is disingenuous, however. Instead, Canada is a country where a vast majority of the population is straddled along the southern border, and the north is romanticized by those who do not live there, while its original inhabitants are forgotten.

This perception of the Arctic is a very specific one, to say the least, and very different from the ways the other Arctics are imagined. This was emphasized during the panel discussions, when one participant pointed out that he did not even realize he lived in the Arctic until he moved to Brussels. There, surrounded by European policy wonks and lobbyists keen on investing in the lucrative north, he came to appreciate that he was from northern Norway. For him, and as he pointed out for Norwegians more generally, the north is not some kind of romanticized, mythical place.

Yet another perspective is that from Russia, often misunderstood and misinterpreted. The opportunity to collaborate and work with so many students from Russia was truly valuable. It allowed real, frank conversations about where the other side is coming from. Beyond the larger outstanding issues, such as the situation in the Ukraine (which rightfully should not find its way into the Arctic), it was great to have the chance to cut behind the propaganda of Western politicians and media outlets. Furthermore, it was refreshing to see such a different perspective on the Arctic. Conversations about environmental protection, indigenous rights, the role of the state, to what extent the military should play a role in the north, and the future of the Arctic *inter alia*, were interesting both in how Russian perspectives differed from those of the West but also, and perhaps more importantly, in how they often overlapped. It is easy for politicians to negatively portray others, in particular in North America where we do not have daily interactions with Russians, but in reality many Russians have the same concerns.

Why is this important? Why should we care about these different Arctics, imagined or otherwise? Practically, it is about knowing how to react in different environments. To give a concrete example, oil and gas have long been extracted in some parts of the Arctic, notably the Komi Republic and Nenets Autonomous Okrug in Russia, and Prudhoe Bay in Alaska (Henderson and Loe, 2014). Today, Norway, Russia, and Alaska all have significant extractive capacities in their Arctic regions. Despite several exploratory efforts, Greenland, Canada, and Iceland do not. This is the result of these vastly different Arctics—in terms of geography, societal attitudes, and governance structures.

Indicative of these different Arctics, and one thing that was impressed upon me during the High North Dialogue, was the extent to which innovation is homegrown in the European Arctic—that is to say that it was built specifically for use in that region by people in that region. This stands in stark contrast to the situation in the Canadian Arctic, where technology is adapted from something in existence down south in order to ‘weatherproof’ it for the Arctic up north. All this illustrates that what is palatable and possible in one place might not be in another.

The reason that these are so important, that these differences and similarities are worth paying attention to, is that they inform the way in which policy is crafted and business done. The lens through which someone sees the Arctic will obviously affect the ways in which they choose to engage and interact with the region. Appreciating these different viewpoints, how different stakeholders perceive a given situation, is crucial to successfully operate in the north. Beyond the differences, however, there are so many commonalities upon which cooperation can be built. It is important to appreciate these differences but appreciate them in a way that does not blow them out of proportion.

Conclusion

Far from being complete answers to the open-ended questions posed at the beginning of this reflection, these insights are a distillation of some of the discussion found at the High North Dialogue. Although there is a long way to go in resolving the many problems facing the region, progress is being made. Forums such as this one provide an important venue for discussion to take place and thoughts to be exchanged. Importantly, this is happening between a diversity of stakeholders ranging from scientists to politicians, analysts to indigenous peoples, and local communities to environmental activists. By tapping into the creativity of this broad range of stakeholders, and looking to the future with an appreciation of the very different needs of different parts of the Arctic, the potential is significant. It is now a matter of translating these conversations into action.

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HIGH NORTH DIALOGUE

Hema Nadarajah

Introduction

The PhD course (DR 437E) on “Governance in the High North: Implications for Arctic private and public sector” conducted by Nord University Business School from 23rd to 27th May 2016 was held in Bodø, Norway in conjunction with the High North Dialogue Conference. The course aimed to impart multidisciplinary and multi-theoretical research methodologies that can be utilized when studying High North public, global and corporate governance. The conference, entitled “Norwegian-Russian Partnership in Business Education and Research: Impacts on individuals, institutions, and society”, aimed to provide a real-world application of the governance issues in the High North.

The course was conducted via a scenario-building exercise that aimed to create projections of the High North in 2030 and the various implications for different sectors. My group, Group 9, tackled issues on natural gas. Each PhD student was assigned the supervision of approximately ten Master’s students. The course and conference has imparted several lessons that will be of particular use to my own research, which will be elaborated below. This report will then discuss the following four of these in detail: the role of scientific knowledge in the High North, supervisory skills, scenario-building and agenda conflicts between young researchers and senior academics.

Research Background

The overarching theme in my research interests is the interface between scientific research and policy formulation in the Arctic. I then narrow my focus to the role of observers and certain epistemic communities. Although I do not, as yet, have a specific research question for my PhD dissertation, I am exploring several research topics, which will be discussed briefly below.

Science-policy interface

My research interest concerns the political processes of translating scientific research into international policy and cooperative management in the Arctic. Scientific cooperation has been at the centre of collaboration efforts between Arctic states and, most recently, observer states¹

¹ In order to be accepted into the Arctic Council (AC) as an observer, applicants were required to fulfil the following criteria: support the Council’s objectives as defined in the Ottawa declaration; acknowledge the Arctic states’ sovereignty in the region; recognize the legal framework applying to the Arctic Ocean, particularly the Law of the Sea; respect the traditions and interests of the Arctic indigenous communities; demonstrate a political and financial ability to contribute to the work of the Arctic indigenous communities; show interest and expertise pertaining to the Council’s work; and show an interest in working with members and permanent participants to elevate Arctic concerns in international organizations. The role of observers in the AC is largely limited to observing the work of the Council, attending meetings by invitation, contributing via the working groups, task forces and expert groups, and proposing projects and making financial contributions (Observer Manual, 2015).

to the Arctic Council.² I am exploring two particularly important forms of cooperation. The first concerns how technical research, mostly on marine science, conducted by observer states to the Arctic Council, is translated into international policy on a broader scale. By analysing these processes, my research will contribute to the broader literature on the science and policy interface and advance solutions that can assist in formulating and implementing sustainable and effective policies. As part of this work, I will examine the environmental and socio-economic implications of these research processes and outcomes, as well as what they mean for key Arctic stakeholders—Arctic states and indigenous communities—as well as for the respective observer states’ Arctic strategies. This could have implications for the Arctic Council, including its approach to applications for observer status.

Politicization of climate change

The second important form of cooperation concerns the global implications of the politicization of climate change by Arctic states and observers. The consequences of the Arctic’s biophysical changes on global marine systems cannot be overemphasized. Almost every conference or media release pertaining to the Arctic usually includes the now clichéd phrase ‘What happens in the Arctic does not stay in the Arctic’. Moreover, almost every strategy or policy paper released by Arctic Council member states or observers begins with the dire consequences for the region of warming temperatures.

The first, and usually the most cited, concern is sea-level rise, since there is an enormous amount of land-based ice in the Arctic, including but not limited to the Greenland ice sheet. The melting of even some of this ice would severely impact Small Island Developing States (SIDs) such as Kiribati, which are already facing the consequences of warming temperatures, for example extreme weather events and coastal erosion. However, there has been little engagement between Arctic and non-Arctic actors, such as SIDs, on this matter. Furthermore, research by observer states has been largely skewed towards economic prospects in the Arctic that could result from sea ice melt. In the course of my research, I will examine the policy implications of climate change research in an Arctic environment that is already highly stressed and where the changes have truly global implications—including for the conduct and management of international politics.

Science diplomacy and epistemic communities

I am working on exploring the role of science diplomacy in the Arctic. Some questions that I aim to answer include the following: the extent of scientific knowledge required to make diplomatic judgements and decisions; the role of scientists at national and international levels; and the dynamics at play between the various epistemic communities of diplomats and scientists.

Arctic exploration has been pursued for centuries, not only for reasons of conquest but also for cartographic and scientific reasons (Wallis and Arnold, 2011). In recent decades, scientific

² The Arctic Council, a high-level intergovernmental forum, comprises of eight Arctic Member states—Canada, Finland, Iceland, Sweden, Russia, Norway, the United States and Denmark (by way of Greenland)—and six Permanent Participants made up of the region’s indigenous groups; the Council serves as a forum that seeks to address issues faced by these countries (Ottawa Declaration, 1996). It addresses issues on sustainable development and environmental protection that are faced by the Arctic states and the indigenous people of the region (IUCN 2001). As outlined in the Ottawa Declaration (1996), the Council “explicitly excludes military security”. The six working groups within the Council address issues such as emergency preparedness, Arctic contaminants, conservation of biodiversity, monitoring and protecting the environment and sustainable development in the region (Ottawa Declaration, 1996).

research in the region has intensified, primarily due to the growing concerns over warming temperatures. Scientific cooperation has existed in the region for nearly a century. One of the earliest examples of successful regional international cooperation with roots in science emerged out of the 1911 North Pacific Sealing Convention, when Japan, Russia, the United States and Great Britain (on behalf of Canada) aimed to rehabilitate the northern fur seals' population in the Bering Sea and to resolve a potential resource conflict (Young, 2000). In 2013, two legally binding agreements were signed by Arctic Council members—the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic and the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (Arctic Council Agreements, 2015). In May 2014, the Arctic Council established a task force on scientific cooperation, and an agreement is to be discussed at the next ministerial meeting in 2017. The agreement would cover many important aspects of conducting Arctic research, which often extends beyond national borders. It could cover the movement of people and scientific equipment, improving data sharing, access to research infrastructure, facilities and research areas, advancing science education. In April 2015 another task force on marine cooperation was established. At that time it also adopted a Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions (Arctic Council SAO Plenary, 2015). In line with these agreements, the conference highlighted several times the importance of scientific cooperation in building diplomatic ties. As such, several presentations were highly topical for my own research.

Climate change has altered and continues to alter various environments on a range of spatial and temporal scales and, as such, the geopolitics of these regions is also changing. The melting of Arctic sea ice, for example, has made economic prospects such as shipping, fisheries and resource extraction in the region increasingly feasible (Gautier et al., 2009). Given the highly volatile climatic impact on the Arctic ice, natural resources and indigenous communities, Arctic governance is complex, and a more polycentric approach has taken shape in recent years. Bilateral and multilateral scientific cooperation has been a focus in the region for several decades now and has gained even greater momentum in recent years. During the last two major Arctic science conferences—ArcticNet in 2015 and the Arctic Science Summit in 2016—the focus was mostly on establishing deeper international scientific cooperation and integrating the resulting scientific research with sound policies to address the multitude of changes occurring in the region. Although there have been discussions about the need for greater scientific cooperation in the Arctic, the literature on this form of collaboration has been limited in international relations, let alone political science. Extensive scientific cooperation can exist, but what are its effects on the policy-making processes and institutional and epistemic community dynamics?

This project aims to examine what international scientific cooperation signifies for the policy-making process in the Arctic. I answer this by addressing three subsidiary questions; firstly, to what extent have epistemic communities contributed to scientific cooperation? Secondly, what are the outcomes of increasing scientific cooperation in the Arctic among members, participants and observers and its influence on policy outcomes? Have the outcomes been positive, negative or have there been none? Thirdly, has increased international scientific cooperation helped to narrow the science-policy gap? There has been some discussion on the role of scientific cooperation in narrowing science-policy gaps, but no comprehensive work has as yet been carried out to actually show that international scientific cooperation does lead to an effective collaboration between scientific research and the policy process. Answering this will help to address the challenges faced in the ongoing deepening international scientific cooperation as well as to highlight the gaps between policy-makers and scientific researchers that have prevented more effective solutions from being formulated.

The topic of epistemic communities will take its analytical point of departure from the literature on epistemic communities by Peter Haas (1992) and other International Relations scholars. The focus will be on the Arctic Council and the networks of expert communities that provide their science-based advice during the decision-making processes. The Arctic Council (which will be introduced later) has increasingly become prominent, and when six non-regional states were granted the status of observers to the council, the gravitas of a changing Arctic geopolitical sphere was further amplified and the council's legitimacy as the leading organization for Arctic affairs strengthened.

A constructivist framework works best in answering the question of scientific cooperation, as it takes into consideration the role of non-state actors—networks of experts (academics and think tanks for example)—which form the unit of analysis in this project. The underlying assumption here is that cooperation does exist and is an approach that all Arctic members have been observed to take. This is evident in the fact that scientific cooperation existed during the two prominent military events in recent history—the Cold War and Russia's annexation of Crimea, which will be further discussed below. Current analyses of the role of policy-making are more often than not state-centric and frequently take the form of realist or liberal approaches. A constructivist framework allows for exploring the role of epistemic communities in international scientific cooperation and the subsequent policy-making process. Unlike rationalist approaches of neo-liberalism and neo-realism, a constructivist approach that integrates the concept of epistemic communities takes into account actors that would otherwise have been omitted in the analysis of international policy-making processes (Bukhari, 2004).

Asian observers' role

Another area of research interest is the collaboration on Arctic-related issues between China, South Korea and Japan, which was first officially broached during the 2015 Trilateral Summit between the three neighbours. Such collaboration is almost akin to that which takes place between the US and Russia in the context of the latter's annexation of Crimea and, going further back, the Cold War. The three states have had a troubled history, one that surfaces frequently and is carefully trodden down. Economic competition and China's rise to become the region's superpower has only made their relationship more complex. However, the Arctic, as has been the case among the states in the region, has served to be a platform of cooperation. One question that begs to be answered is whether this recent China-Japan-South Korea Arctic cooperation is an extension of what the Arctic Council represents, as a forum for cooperation among states with a troubled past, or a strategy by these states that assures themselves of greater involvement? Scientific research forms the core of these states' cooperation. Understanding how such research, by a sub-group within observer states, translates into broader policies in the Arctic would be useful for understanding the potential limitations and opportunities for observers as well as for member states.

Singapore in the Arctic

This area of research analyses whether seeking and acquiring observer status influences the Arctic policy of non-regional states in ways that benefit the Arctic countries, thus justifying their grant of observer status. I use Singapore, a recent observer to the council, as a case study and analyse changes to its Arctic strategy through recent years. To determine whether admission to the council has been central in the net benefits to the members, the analysis will be limited to

the three periods of application—before deciding to apply, during application and after receiving observer status—in order to discern whether admission to the council has contributed net benefits to the members. Singapore is used as a case study for two reasons. Firstly, unlike its East Asian counterparts, Singapore’s interests in the Arctic have primarily concerned maritime matters and capacity-building solutions, rather than the energy potential of the north (Storey, 2014). Secondly, as an island state situated one degree north of the equator, Singapore has been referred to as an “unlikely applicant” by many, given its sheer distance from the Arctic (Solli et al., 2013). With a land area of about 700 square kilometres, Singapore is about 148 times smaller than Iceland, the smallest Arctic member state, and is situated more than 7200 km away from the Pole. Furthermore, unlike Japan, Korea, China and India, which have had long running polar research programmes, Singapore’s interest in the region is relatively recent. The involvement of non-regional states has raised several concerns, such as their potential to undermine the dominance of Arctic members in the region, as well as to overshadow the position of the permanent participants within the council (Stokke, 2013). In the case of Singapore, we will see that this has not been the case. On the contrary, admitting the equatorial state has only increased the legitimacy of the council and its members’ primacy in the region and strengthened the capacity of the permanent participants.

Learning points from the PhD Course

Role of scientific knowledge in businesses/academia

The importance of scientific knowledge came up frequently during the conference. Dr Rasmus Bertelsen’s lecture on knowledge-based Sino-Nordic Arctic relations was particularly valuable to my own research on science diplomacy. Dr Bertelsen introduced a different perspective of China’s role in the Arctic. Although to many Arctic members, China’s involvement in the region is often perceived to be a threat, Dr Bertelsen provided a counter argument, stating that the political and economic development in the Arctic has allowed China to enter the region in a less threatening way and that the take-away lesson was an increased understanding and knowledge of how to integrate a rising China in regions around the world. He stated that there were two major shifts in the last 25 years: one was environmental in nature and the other, political-economic. The former was in reference to the changing climate and the latter to the rise of China and other emerging economies. He then went on to look at the two common lenses, through which the power transition in the Arctic can be viewed through the lenses of Mearsheimer’s realism or Nye’s constructivism. He finally ended with an overview of science diplomacy and what it meant in China’s case. Referencing Abram de Swaan’s *Words of the Worlds*, the lecture was also useful in providing a guideline for formulating a researchable hypothesis.

Given my research interests in the role of observers, with particular reference to the Asian states, and in scientific diplomacy in the Arctic, Dr Bertelsen’s contribution was especially useful in deepening my understanding on the topic.

Supervisory role

Aside from a strong understanding of academic knowledge and writing, teaching and supervision very much form a part of the core skills required by an academic. Supervising the team of ten Master’s students of various academic backgrounds and nationalities required being able to

communicate and manage effectively. The team that I supervised faced some challenges in listening to each other, mostly due to different sets of expectations and levels of understanding of the subject matter. Students were each experts on different geographic regions of the Arctic. Furthermore, they had various levels of understanding on the current state of natural gas extraction and may not have completely understood what was expected of them during the scenario-building exercise. I learned to manage the various expectations of the students and aimed to help them communicate effectively with each other.

Thinking ahead—Scenario-building

Sometimes, in all the eagerness of trying to answer a question, a researcher might tend to ignore the long-term implications of the particular research. The scenario-building segment of the course was an extremely useful exercise in understanding where the research we are conducting fits into the bigger picture in the long run.

Dr Indra Øverland's lecture on the uncertainty of change exemplified this issue with several cases of companies that had failed to foresee changes. He went on to highlight the importance of how "having to look back is to look forward". Dr Anatoli Bourmistrov gave the second lecture on how to build scenarios. His lecture in particular was useful as he examined the various philosophies of foresight—the intelligent machine versus the creative machine. The former is grounded on strategic thinking, based on rigorous, analytical and quantitative methodology, while the latter requires imagining a future situation and inventing ways to make it happen. Being aware of these two forms helps in formulating a research topic, as an ideal topic would be one that falls somewhere between the two ends of the spectrum.

Diverging views between young researchers and other stakeholders

During the conference, it was valuable to hear senior academics and business owners bring to the discussions their respective perspective on a diversity of Arctic issues, ranging from mining to climate change. The various experts referred to the importance of young professionals being heard. Some panels did provide such an opportunity. What was lacking, however, was a discussion between young professionals and business or political representatives. Although this might have taken place on the sidelines, it would have been useful for there to have been a formal panel for this purpose.

During the panel discussion between the Future Arctic Leaders, young researchers, activists and a journalist, the importance of environmental issues and climate change impacts in the Arctic was voiced. As important and commonly discussed as climate change is, the topic was barely touched upon during the conference among other stakeholders. Bearing in mind that the presenters were mostly representatives from various businesses, the minimal coverage of such a critical issue shows where the priorities of large businesses generally lie, in terms of corporate responsibility.

Another goal of my PhD topic would be to contribute to the ongoing discourse on climate change and other environmental issues in the Arctic. Hearing from these various stakeholders was highly beneficial for gauging what my work should be more focused on.

Conclusion

The conference helped me gain a deeper understanding of the complexities surrounding various issues in the Arctic. Learning about the long-term potential outcomes of various issues, ranging from tourism to natural gas extraction also allowed me to gain a broader overall understanding. Aside from academic knowledge, supervising as a PhD student further honed critical skills such as teamwork building and communication. In terms of my own research, hearing from various stakeholders helped me to better orient my own research question.

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Introduction

Since the end of World War II, interdependence among states has been growing, despite strong polarization between the Western and Eastern Blocs during the Cold War. Cooperation between Norway and Russia in the Barents Sea resulted in the construction of a bilateral management regime for joint fish stocks. It demonstrated that common problems should be and can be tackled jointly. In addition, bilateral Norwegian–Russian cooperation created an institutional link between East and West, which has become an important element of what we now call Arctic governance.

Today we witness offshore oil and gas development becoming a new industrial activity in the Barents Sea. It is accompanied by many risks of transboundary character and, thus, calls for bilateral cooperation. After a dramatic collapse of oil prices, and sanctions imposed on Russian offshore development in the Arctic, the prospects of the future of the Barents Sea as a petroleum province were seriously questioned. However, stabilization of the oil prices, a new US presidential administration, as well as resumed Norwegian–Russian dialogue at the level of petroleum ministers, signals that the story of bilateral cooperation on oil and gas activities will continue.

The role of Norwegian–Russian cooperation has been widely studied by Arctic governance scholars as an example of a successful management regime of natural resources (Hønneland, 2010; Hønneland & Stokke, 2007; Young, 1999). All of these, however, focused on the well-established fisheries sector. The purpose of this article is to contribute to the discussion on regime formation processes in the Arctic by analysing the initiatives of Norwegian–Russian cooperation in the area of offshore hydrocarbon development.

Based on a comparative historical analysis of the economic and political reasons for offshore oil and gas development in the Barents Sea, the paper will address the following questions: Why does cooperation take place in the first place and why do Norway and Russia choose to cooperate?

The paper is organized in four main parts. Firstly, I give an overview of the theoretical background, based on the concepts of governance and international regime formation. Secondly, I will briefly outline the history of Norwegian–Russian cooperation in the field of oil and gas and then I will take a closer look at the bilateral collaboration initiatives constituting a patchwork regime. Finally, I will discuss the factors that shape the future scope and direction of oil and gas exploration and exploitation in the Barents region.

This paper is written within the framework of frames of the PhD course, “PhD course – Governance in the High North: Implications for Arctic private and public sector”, organized by Nord University in Bodø in 2016.

Regime formation as part of global governance

My previous work was based on regime formation theory, which originates from international relations studies. Since the PhD course was devoted to governance theory, I decided to look at these theories side by side, trying to understand what implications they offer for the analysis of

international politics and its many facets. Governance and regime theories overlap in many respects. Both theories are based on the same concepts of order and stability; both involve participation, negotiation and coordination of various stakeholders, whose interests and activities may coincide or collide. International regimes, as well as governance arrangements, are problem-driven and can be interpreted as efforts to manage joint affairs. The difference between governance and regime lies in the subject in focus. Governance theory emerged from the research on European integration; the governance perspective cross-references domestic and international policy agendas, which have been traditionally regarded as separate domains. Regime theory has studied the institutional usefulness.

Krasner defined regime as “implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations” (Krasner, 1982). At the same time, Young introduced a similar definition of regime “as multilateral agreements among states which aim to regulate national actions within an issue area” (Young, 1982). Governance theory focuses on the “strategy, process, procedure or programme for controlling, regulating and managing the problem” (Lemke, 2007). “Governance is the sum of many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and co-operative action taken” (The Commission on Global Governance, 1995). While regime theory puts emphasis on the desired standards of behaviour agreed by actors, governance theory draws attention to the complex structures that are built up and through which the actors operate.

In the context of Arctic affairs, I understand governance as a broader framework than regime. It can include different regimes that coexist and interact with each other. One may find the example of the UN Law of the Sea Convention (UNCLOS) contradicting this approach. Indeed, UNCLOS is a governing legal system that regulates numerous issue areas. However, even top-level international agreement as a legal document alone remains only part of a bigger picture, a part of Arctic governance. In fact, UNCLOS gives explicit instructions that states should manage conflicting interest through bilateral or multilateral cooperation agreements and thus are obliged to cooperate. Its realization depends solemnly on the state actors. It does not mean that a regime can be realized through various governance structures; rather, I suggest that it can be realized within the structures by the numerous actors.

International regimes and governance can be multi-level and multi-actor, but only governance encompasses numerous “issue areas”. According to James Rosenau, “Regimes exist only in well-defined areas, whereas governance is inseparable from the global order and is not confined to single sphere of endeavour” (Lemke, 2007). In a similar way, I see my study of the formation of a joint oil and gas management regime as part of a bigger multi-dimensional, multi-level and multi-actor process, where the Barents Sea region is only a subsystem of an overarching complex architecture.

The mission of effective governance is to reconcile these cross-sectoral interests in a democratic manner, with all stakeholders being included. However, “It does not occur in a vacuum, it works within a minimum institutional framework” (Smouts, 1998). Therefore, governance is steered by regimes, which may either facilitate or drive back the development of the issue area. Regimes may also conflict or overlap. Therefore, international regimes can be regarded as a means of governance (Stokke, 1997).

The role of the petroleum industry in Norway and Russia

Norway and Russia are two oil-producing countries with highly different backgrounds and preconditions. Petroleum production in Russia dates back to the 19th century, whereas the history of Norwegian oil and gas is much shorter. Russian production has mainly been onshore; in Norway, however, all oil and gas activities have taken place offshore. Moreover, the Russian and Norwegian petroleum sectors are characterized by different actors and institutional frameworks. Until the collapse of the Soviet Union, the Russian petroleum industry was part of a centrally planned economy, whereas the Norwegian system has always been more market-based. Despite fundamental differences between the Norwegian and Russian petroleum industries, the two countries also share similar characteristics. The oil and gas sector plays a pivotal role in the national economies. As of 2013, the oil and gas sector accounted for 68% of Russia's total exports and more than 50% of federal budget revenues (EIA, 2014; World Bank, 2014). The corresponding figures for Norway were 49% and 29%, respectively (NMPE/NPD, 2014). Nowadays, both countries are slowly exhausting their hydrocarbon fields that have been in operation since the second half of the 20th century. According to a BP statistical report, since 2004 Russia has lost its positions in both oil and gas production. Today it is the third largest world oil producer after the United States and Saudi Arabia and the second largest gas producer after the US. As for Norway, oil production figures have gone down around 60% since 2004; however, gas production has increased by 36% (BP, 2015). Moreover, both Russia and Norway are major suppliers to the European market, linked to the receivers by a comprehensive network of pipelines. As Europe is diversifying its trading partners as well as shifting towards alternative energy sources, it is crucial for both countries to secure their positions as exporters. Hence, the development of the oil and gas sectors in Norway and Russia is an overriding political concern.

By the end of the 20th century, the oil and gas industries in both countries had begun to expand northwards. This was stimulated by both international and domestic reasons. On the one hand, such international developments as the adoption of the United Nations Convention on Law of the Sea UNCLOS and the extension of the Exclusive Economic Zones (EEZ) to up to 200 nautical miles spurred expansion of economic activities on the continental shelf as a tool for sovereignty projection. On the other hand, it has become clear that the existing production fields are getting exhausted. Launching greenfield became crucial in securing future economic growth. In the mid-1970s, the Soviet Union commenced offshore exploration works in the Barents Sea; the Norwegian exploration campaign started in the first half of the 1980s. Soon the two industries of the two countries met face to face.

The Norwegian–Russian petroleum cooperation initiatives

Over the last few decades, offshore oil and gas development has emerged as a new industrial activity in the Barents Sea region. The petroleum resources of the Arctic region emerged in the national strategic thinking of both countries long before international community set its sights on the Arctic's offshore potential, as the first exploration activities in the Barents Sea began in the 1970s.

The reassuring estimations of the hydrocarbon potential of the Arctic continental shelf appeared in the years of unprecedented energy consumption growth and high oil prices, which reinforced national interests in offshore development. The US Geological Survey concluded that the Arctic continental shelf is an area with substantial hydrocarbon deposits, containing up to 30% of the world's discovered fossil fuels, and will remain a major petroleum province in the future (USGS, 2000, 2008).

Cooperation in the field of oil and gas between Norway and Russia was initiated by Mikhail Gorbachev in 1987. In his famous Murmansk Speech, he invited Norway "...to form mixed firms and enterprises for developing oil and gas deposits of the shelf of our northern seas" (Gorbachev, 1987). By the following year, the Norwegian company Norsk Hydro had already opened its office in Moscow. In the same year, 1988, a remarkable event happened on the Russian continental shelf in the Barents Sea: one of the world's largest natural gas fields, named Shtokman, was discovered. However, Gorbachev's initiative was not realized until after the dissolution of the Soviet Union. In the 1990s, with a new Russian political and economic environment, it was the industrial sector that pushed forward for joint offshore projects. Although the Shtokman project did not become a success story, as the development never took off, it brought Norwegian and Russian companies together and became a driving force for joint efforts over the next 20 years.

The petroleum cooperation between Norway and Russia has been developing fragmentarily. On a business level, Norwegian–Russian cooperation is based on joint offshore exploration and extraction operations³, mutual declarations on environment protection⁴ and on less formalized formats of the industrial links of The Norwegian-Russian Chamber of Commerce and Norwegian Oil and Gas Partners (INTSOK). At the governmental level, the cooperation operates in the frames of bilateral, multilateral and international agreements.

Bilateral agreements (2005 Joint Declaration on Energy Cooperation, 2010 Delimitation Treaty, 1994 bilateral OSR Agreement, Joint Contingency Plan managed by Joint Steering Group since 2006)

Multilateral agreements/regional organizations (2013 Agreement on Cooperation on Marine Oil Pollution and Response, EPPR working group of the AC)

International agreements (UNCLOS, MARPOL, OSPAR, International Convention for the Prevention of Pollution from Ships, OPRC, Polar Code).

The growing interest of industry stakeholders in oil and gas development in the Arctic paralleled the formalization of bilateral cooperation on a governmental level. While business stakeholders were uniting their efforts in planning actual offshore operations, national governments started to develop different cooperation areas, such as environment protection, oil spill preparedness and response, and search and rescue operations. These arrangements are aimed at reducing the risks of petroleum operations to an acceptable level before the operations actually start.

Different dimensions of oil and gas cooperation

Environmental cooperation

Environmental cooperation between Norway and Russia was established in 1988 and renewed after the collapse of the Soviet Union. This agreement established the Joint Russian-Norwegian Environmental Commission and, in the 2000s, petroleum activities appeared on its agenda. The Commission has been working on unified environmental standards for the oil and gas industry, the harmonization of methods for environmental monitoring and environmental impact assessment, and developing measures to ensure safe exploration and drilling operations on the

³ For example, Shareholder and Operating Agreements establishing joint ventures for the four offshore Russian licence areas, Agreement on joint bidding for licences in the Norwegian section of the Barents Sea.

⁴ For example, the Declaration on Protection of the Environment and Biodiversity for Oil and Gas Exploration and Development on the Russian Arctic Continental Shelf signed by Rosneft, ExxonMobil, Statoil and Eni.

continental shelf (Bambulyak et al., 2015). A new bilateral agreement to exchange seismic data from the areas around the demarcation line in the Barents Sea was negotiated under the auspices of the Joint Commission. negotiate.

Search and rescue cooperation

Norway and Russia have a long history of working together on search and rescue (SAR) matters under the umbrella of the bilateral 1995 Barents agreement⁵ and the regional 2008 BEAC agreement⁶. These arrangements target many emergency situations – oil spills among others⁷. Emergency response operations refer inter alia to “search and rescue efforts and other activities...undertaken in order to limit or eliminate material and environmental consequences”⁸. The agreements establish points of contact between many relevant agencies on each side, provide procedures for the notification of emergencies, mutual assistance, and border crossings. In addition to bilateral and regional agreements, Norway and Russia participate in binding the 2011 SAR agreement⁹, signed under the auspices of the Arctic Council. This clarifies the spatial division of responsibility, lines of communication among relevant agencies, and sets procedures for border-crossing during rescue operations. The agreement became a part of the Arctic cooperation architecture. However, in the context of Russian-Norwegian SAR cooperation in the Barents Sea, it has limited practical significance for improving the efficiency of SAR operations. It focuses on the general coordination of activities, rather than on organizational innovations, resources or infrastructure (Rottem, 2014).

Oil spill response cooperation

Cooperation on Oil spill response cooperation (OSR) between Russia and Norway, in respect of environmental protection from oil and gas pollution, stems from the adoption of the International Convention on Oil and Gas Preparedness, Response and Cooperation (OPRC) in 1990. At the regional level, OSR cooperation is incorporated into the work of the Arctic Council and the Barents Euro-Arctic Council (BEAR). Whereas the Arctic Council contributes to policy-making at the international level and is focused on scientific cooperation and recommendations’ provision, the BEAR provides a platform for joint exercises and therefore contributes to cooperation at the operational level (Bambulyak et al., 2015; Sydnes & Sydnes, 2012). On a bilateral level, the cooperation is based on the 1994 Agreement on Oil Spill Response in the Barents Sea, the Joint Contingency Plan of 1994, and the Memorandum of 2006. The regime developed over time from a common understanding of the importance of the joint efforts into the institutionalization of a decision-making process and the conducting of joint exercises. The cooperation regime was also strengthened by standardizing the procedures to handle oil spills. In other words, the regime developed “from paper to practice” (Young, 1999). As such, the problem-solving capacity of the OSR regime has never been tested in a real-life situation due to

⁵ *Agreement on Search and Rescue of Persons in Distress in the Barents Sea*. The agreement is founded in the International Convention on Maritime Search and Rescue from 1979 and is an extension of an agreement between Norway and Russia from 1957.

⁶ Agreement between the Governments in the Barents Euro-Arctic Region on Cooperation within the Field of Emergency Prevention, Preparedness and Response

⁷ These include traffic accidents, forest fires, tourism-related accidents, fires in open cabins, floods and ice plugs, and industrial and chemical accidents <http://www.beac.st/en/Working-Groups/BEAC-Working-Groups/Rescue-Cooperation>

⁸ https://www.barentsinfo.fi/beac/docs/Agreement_Emergency_Prevention_Preparedness_and_Response_English.pdf

⁹ The Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic

the absence of major accidents (Sydnes & Sydnes, 2012). Norway and Russia are also parties to the 2013 Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic, signed under the auspices of the Arctic Council and members of the Emergency Prevention, Preparedness and Response Working Group of the Arctic Council.

The 2010 Delimitation Agreement

Before Statoil pulled out of the Shtokman project, Russian–Norwegian relations reached another milestone in the signing in 2010 of the treaty on maritime delimitation and cooperation in the Barents Sea and the Arctic Ocean. This is the only bilateral document that refers to the exploitation and exploration of hydrocarbon resources in the Barents Sea as such. The agreement split the disputed area into two almost equal parts and opened new possibilities for petroleum development in a previously unavailable area. Importantly, the agreement covers the issue of transboundary hydrocarbon deposits. It states that oil and gas fields extending across the Russian–Norwegian border should be exploited conjointly as a unit, and the profits should be shared proportionally (Regjeringen.no, 2010). As soon as the treaty came into force, seismic surveys commenced on the Norwegian side of the border, with Russian surveys starting one year later. Nevertheless, it remains unclear how can the development of the transboundary deposit can be realized in practice because of the differences in Norwegian and Russian licensing legislation (Bambulyak et al., 2015).

Business2business cooperation

The beginning of the 2000s was marked by a bundle of cooperation initiatives in the Arctic between Russian and Norwegian companies. They laid the ground for the notoriously known Shtokman framework agreement between Gazprom, Statoil and Total to develop the infrastructure for future exploitation activities. Although the project never took off, it paradoxically served as a catalyst for extended cooperation between Norway and Russia in many ways. It demonstrated both the challenges and the opportunities of international business interaction with a Russian state-owned company in the very technology- and capital-demanding environment of the Stockman project. Consequently, Statoil and Norsk Hydro strengthened their presence in Russia and helped establish Murmanshelf and Sozvezdye, two associations of Russian oil and gas industry suppliers, to prepare the Russian companies for participation in the Shtokman project and other oil and gas projects on the Arctic shelf. Norwegian companies, such as Aker Kværner, FMC, Det Norske Veritas, Reinertsen, and Ølen Betong, set up subsidiaries in Russia. The Norwegian–Russian Chamber of Commerce was also established, and INTSOK—Norwegian Oil and Gas Partners—an organization promoting the internationalization of the Norwegian offshore supply industry, began to organize annual Norwegian–Russian oil and gas conferences. INTSOK also became a platform for the research project, RU-NO Barents. The goal was to identify the main technological needs for operation on the Arctic Continental shelf in a sustainable and responsible manner. As governmental bodies were also participating in the project’s activities, the project itself has become an integrated part of the official Norwegian–Russian energy dialogue (INTSOK, 2015). A project on Arctic oil-spill response technologies, run by the International Association of Oil and Gas Producers (IAP OGP), became another example of business collaboration in research.

In 2012, Rosneft took the lead and launched new initiatives to bolster the company and become a global energy player. Rosneft signed comprehensive strategic cooperation agreements with

Statoil on joint offshore operations on the Russian Arctic shelf. Rosneft's strategic joint ventures comprise large swathes of the Barents Sea and the Sea of Okhotsk. Soon after that, Rosneft and Statoil signed another agreement on joint bidding for licences on the Norwegian continental shelf. At the beginning of the 2010s, Rosneft established a subsidiary in Norway and was prequalified as an operator on the Norwegian continental shelf. Shortly after, Lukoil also opened an office in Oslo. Thus, two Russian companies have become licence holders and gained access to the upstream activities in the Norwegian part of the Barents Sea. Winning entry into the Norwegian sector in competition with many other players was an achievement. Rosneft received a 20% share of the production licence PL713 (Pingvin), together with Edison, North Energy and Statoil (the operator). Exploration drilling began in August 2014; however, the discovered gas reservoir was assessed as non-commercial (Statoil, 2014). Lukoil joined two projects: the company received 30% of the production licence PL719 (Scarecrow) in cooperation with North Energy and Centrica Resources (the operator) and 20% in PL708 (Seiland East) together with Edison, North Energy and Lundin Petroleum (the operator). The drilling in the latter block also turned out to be unsuccessful for Lukoil. Nevertheless, Rosneft and Lukoil took part in 23rd licence round for blocks in the Norwegian continental shelf, along with two more companies that have Russian ownership, namely DEA Norge and E.On E&P Norge. In 2016 Lukoil received a 20% stake in Fedynsky High [PL858], a licence located in the Barents Sea along the Norwegian–Russian borderline (Staalesen, 2016).

Formation of “patchwork” regulatory regime

Globalization and intensifying interdependence erased the borders between international and domestic agendas. This was followed by an increasing level of cooperation around the globe by the end of the 20th century. With the adoption of numerous international documents, the intensification of globalization, as well as the emergence of numerous non-state actors in international relations, the Arctic region also entered a “golden era of regulation” (EIA, 2014; Hufty, 2011; World Bank, 2014).

All the formal agreements listed above are forming an international oil and gas management regime in the Barents Sea Region, where Norway and Russia as states, together with the corporations of these two countries, are major actors. The legal setting of Norwegian–Russian cooperation is embedded primarily in international regulation designed for combating pollution at sea. However, there is no overarching international document that would specifically cover the standards or address best practices for oil and gas exploration and exploitation activities of any kind. Instead, many international rules apply when it comes to pollution at sea.

At the current stage, this regime has not evolved into an integrated and well-structured system; the order has not been completed yet. Moreover, full-scale all-around operations have not yet begun. As for now, offshore projects are few and far between. Norwegian Snøhvit and Goliat and Russian Prirazlomnoye are located within national EEZs and far away from the border. Nevertheless, all the formal agreements on international, regional, bilateral and b2b levels discussed above constitute a regulatory patchwork. For the purpose of this paper, I define it as a patchwork regime, with reference to Kobrin, Djelic and Sahlin-Andersson, who described ‘patchwork’ as interdependent and entangled political structures, with blurred boundaries of responsibilities. “Actors converge across fluid boundaries in the ways they structure themselves, connect with the others and pursue their interests” (Djelic & Sahlin-Andersson, 2006). I interpret the patchwork regulatory regime as a fragmented system consisting of separate bits and pieces

of arrangements, but at the same time they represent a multilevel governance structure, as seen in Figure 1.

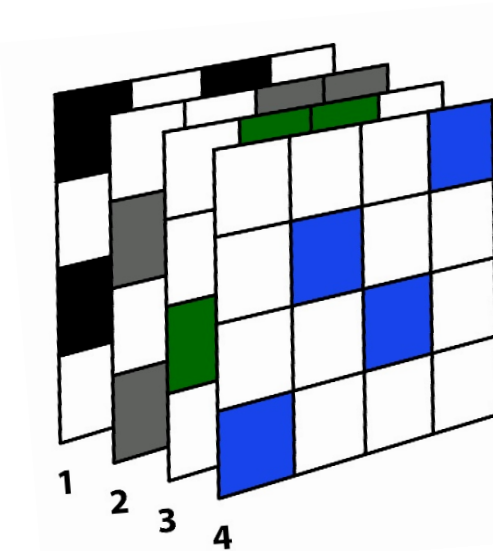


Fig.1. A patchwork regulatory regime. 1-international level; 2-regional level; 3-bilateral level; 4-business level.

Why do Norway and Russia choose to cooperate in the first place? The states cooperate because of their geographical proximity and shared functional dependency. First of all, the Barents Sea contains a number of trans-border hydrocarbon deposits such as Fedynsky High. The development of such a project requires agreement not only between the states but also between the companies on how exactly to run the production in terms of investment, product and profit sharing. Secondly, geographical proximity implies the possibility of trans-border contamination in the case of a contingent event, such as an oil spill, which would have an effect on the whole regional ecosystem, including joint fish stocks.

If we take a broader perspective and look into the history of the oil and gas industry in both countries, we can see that, without expertise and capital from abroad, Norwegian oil and gas development would not have started. It was American ConocoPhillips that discovered Ekofisk field in 1969; furthermore, foreign oil companies held a dominant position on the Norwegian continental shelf NCS for a long time. In the case of Russia, partnerships with international companies allowed them to revive the declining production rates throughout the 1990s and early 2000s. Arctic oil and gas development is capital-intensive; it also requires state-of-the-art technology. In the case of the Barents Sea region, it is logical to expect that Russian companies with little offshore expertise would be interested in joining efforts with Norwegian companies, because the history of Norwegian oil and gas is all about offshore development. At the same time, Norwegian companies entering the Russian market gain access to a resource base and the possibility of powering the national budget with petroleum income for decades, because hydrocarbon reserves in Norway are declining.

The oil and gas industry is capital-intensive and dominated by powerful companies that operate on a global scale. Investments are long-term, and they require substantial infrastructure and predictable framework conditions. Cooperation agreements, designed for both future joint production activities and emergency response, create a legal field, within which national companies can maximize gains and reduce costs. International agreements improve the institutional environment for companies' operation in the region by reducing the risks of

petroleum operations to an acceptable level before the operations actually start. They allow the advancement of environmental safety and risk mitigation to be facilitated by preparing infrastructure to combat the accidents. The effectiveness of such a patchwork regime model is yet to be examined.

Offshore development in the Barents Sea region is an issue area “bridging the global and the local and taking place at the same time within, between and across national boundaries” (Djelic & Sahlin-Andersson, 2006). Hydrocarbon development in the Barents region is influenced by external pressures, such as price volatility, geopolitical instability, climate considerations and internal pressures, for example favourable tax regimes, environmental regulations, etc. At the international level, oil and gas activities in the Barents Sea waters stir activities in other parts of the Arctic. At the local level, even the potential of future activities evokes a conflict between different stakeholders, in terms of environmental impact and economic sustainability in the long term. In Russia and Norway, extractive industries are the biggest taxpayers; they contribute the lion’s share of national budgets and generate the largest portion of GDP. Hydrocarbon development is very important to the national economies, but it can undermine the economies of the northern communities that are not adequately represented in the decision-making process and are commonly left with harsh environmental impacts.

What does this regime analysis mean in terms of governance theory? Regime theory offers a narrower perspective on the current developments than governance theory (Stokke, 1997). Regime theory focuses on the arrangements that have been made at the international level and, therefore, the main actors in this context are those that operate internationally. The regime analysis focuses primarily on the legislative side of the issue area and pays little attention to domestic discourses and internal drivers behind national foreign policies (Haufer, 1993 in Stokke, 1997). Furthermore, the discussion on cross-sectoral interaction is unrepresented, as regime theory detaches each issue area from the political agenda canvas, while, from the governance perspective, the borders between the issue areas are blurred and “often transcended by various actors, ideas and mediating norms” (Stokke, 1997). For example, the development of offshore hydrocarbons is impossible without established jurisdictional boundaries regarding the seabed. It may facilitate commercial shipping and at the same time negatively influence industrial fishing and tourism.

Governance theory allows similar questions to be asked from a broader perspective. In the wake of new geopolitical crises, the joint fisheries regime in the Barents Sea can be regarded as a role model, not only for joint resource management but also of cooperation between Russia and Western countries. In this respect, if we return to the discussion on effectiveness, Haas and Rothwell stated that the effectiveness of the international regime implies the “ability to enforce or impose its decisions upon the members and at the same time obtain a degree of acceptance from those who are outside of the region” (Haas, 1983; Rothwell, 1996) So, it becomes possible to shift the research focus from the agreed standards of behaviour, studied by regime theory, to the process of re-establishing cooperation, studied by means of governance theory.

Conclusion

Offshore hydrocarbon development in the Barents Sea is in its infancy; nevertheless, it is a dynamic process. Today’s focus area for joint Norwegian–Russian projects has shifted from the Russian sector of the Barents Sea to the Norwegian sector. Local regional processes are interconnected with global political and economic trends, for example: market forces and energy demand, climate considerations, national foreign policies, corporate interest and technological

solutions. On the other hand, under the pressure of new developments in international relations, the prospects of the oil and gas industry in the Barents Sea will change again in the not-so-distant future. Global oil prices have stabilized and OPEC10 is ready to slow down production. After the election of Trump as the new American president and the appointment of Tillerson, the Exxon CEO, as secretary of state, the sanction policy against the Russian oil and gas industry is very likely to shift. Development of offshore natural gas is interpreted by the energy majors in line with the Paris agreement, as this type of fossil fuel is the most energy-effective in terms of carbon dioxide emissions.

The internal factors in relation to proceeding with oil and gas development in the Barents Sea, such as economic dependence on hydrocarbon exports and maturing brownfields, have not changed over the last few years. Therefore, the rationale for bilateral cooperation will remain in place. What will this mean for the patchwork model of regime? It will continue to extend with new agreements on different levels as the new oil and gas development prospects will come into picture. In addition, its development will indicate general improvements in East–West relations and contribute to predictability of political actors in the region.

The next step will be to research the effectiveness of such a patchwork model in general and cooperation arrangements in particular. That will be possible once the joint development begins in the form of a joint venture operating within EEZ or in a form of trans-border field development.

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SCENARIO METHOD AS AN APPROACH TO COMPLEX SYSTEMS

Jon Skinner

Overview

This paper seeks to capture the contribution of the coursework and scenario exercise (Bodø 23-26 May, 2016) to the researcher's own dissertation effort, "Russian capacity to develop its offshore hydrocarbon reserves in the Kara Sea: Arctic and global implications". The theme of that research is a comprehensive interdisciplinary assessment of the hydrocarbon extractive enterprise in the Kara Sea to gain insight into a future Russia's relative strategic stability and capacity to make unilateral foreign policy choices. The basic premise is that Russia's development of its Arctic natural resources, particularly hydrocarbons, is central to its overall geopolitical strategy and is candidly declared so in its strategic Arctic policy. An identified declared risk and threat to that strategy is a: "...lack of modern technical means and technologies for exploration and development of offshore hydrocarbon fields in the Arctic" (Strategic Development, 2013, p. 2). Further, the Kara Sea is emphasized because of the magnitude of its estimated hydrocarbon reserves, particularly of oil (Piskarev and Shkatov, 2012), and its consequent potential to impact the long-term progression or regression of the Russian economy, thereby influencing future central government interactions with the global community. This paper is divided into two sections: the first, for context, a discussion of the researchers own dissertation; the second, a discussion of scenario development methods with reference to DR437E course materials, including a description of the scenario exercise in Bodø and the researcher's Kara Sea scenario outcomes.

Research approach, tools and methods

The dissertation's objective was to first identify the key drivers impacting hydrocarbon extraction in the Kara Sea. Some of these were policy driven, e.g. Russian strategic goals: some climatic and others market based, such as the fluctuating demand and price of oil. These drivers were then analysed to isolate and assess the most critical and uncertain for the future development of the Arctic offshore in general and, when possible, the Kara Sea specifically. The last step was to experiment with how these drivers, or variables, might interact within a complex system by the creation of plausible future scenarios. In preparation, interdisciplinary research tools from international relations theory and energy economics, as well as incorporated historical, environmental science, geographic area studies, and technical reports from the oil and gas industry were utilized. Primary research incorporated three qualitative methods: a survey of experts, a workshop and a scenario-development process (it was to the latter, scenario development, that DR437E proved a useful contribution). Lastly, from the researcher's pragmatic worldview perspective or bias (Creswell, 2014), an already complex analysis would have become impenetrable by the addition of philosophical, normative or ideological policy questions, the most potent and obvious being: Is a strong Russia good, or bad?

Qualitative methods

The overall research approach was qualitative for a holistic interdisciplinary study (Creswell, 2014). A geographically delimited intensive research design was used to ground, isolate and enrich the detail of the data (Clifford et al., 2010) but not to arbitrarily limit the research, as most

of the key drivers ranged across political and geographical borders. Rather, the intent was to enrich a regional backdrop for the employment of the study's research tools. Although data collection was as detailed as could be plausibly incorporated into analysis, early in the effort a judgement was made to approach the research questions with a top-down approach. A mechanical bottom-up manipulation of the data, driven by an incremental economics model, or assessing and quantifying—even with the most rudimentary simplistic method—only the economic variables, such as future rents and revenues, cash flows, hydrocarbon market pricing and the influences of supply and demand, just could not be proven with scientific methods. A judgement was also made that it would not be achievable to develop realistic probabilities (Scott, 2014). The applicability of *qualitative* scenario methods for the research objectives is supported by Swart, Raskin and Robinson: “The distinction between *quantitative* (modeling) and *qualitative* (narrative) should be underscored...Quantitative modeling is...appropriate for simulating well-understood systems over sufficiently short times...as complexity increases and the time horizon of interest lengthens, the power of prediction diminishes” (Swart et al., 2004, p. 140).

Complexity

Key drivers or variables that impact hydrocarbon development—global and regional energy markets, climate change effects and technological advancement—interact in a complex framework at varying speeds and in a non-linear manner. The same is true of the effectiveness and influence of strategic policy, regional governance and the other social-political variables, as well as those specific to the Kara Sea region. Analysis of how key drivers might interact within scenarios for hydrocarbon extraction still has to embrace the challenge of different timescales for the multiple drivers of the future. –theory was deemed useful as a means to ground this interplay, taking into special account the capacity for shared learning and change overtime, especially with social-political drivers (Levin et al., 2012, p. 12). Complex adaptive systems have strong roots in archaeology, where rules of the natural sciences do not always bind research parameters, as information is shared within the data set and direct modifications must be accounted for (Barton, 2013). Even the simplest human societies and their components are complex because of this relatively rapid adaptability and the capacity to share and learn.

Scenario method

The scenario method approach, largely relied upon in the author's own dissertation work, is most closely associated with Peter Schwartz's methods, developed while at Royal Dutch Shell and Global Business Network (GBN) (Schwartz, 1991). A fundamental of that approach is that there is no intent to predict or determine the probability of future events. The objective is to identify the variables, usually termed drivers, and assess how they might interact within a complex system to produce plausible outcomes or narratives. Scenario futures are not attempts to forecast or predict linear projections into the future. Rather, they are used to best prepare future decision-makers for uncertainties. Kees van der Heijden, who has often partnered with Schwartz, further characterizes this process: “A scenario's focus on developing and differentiating drivers and how they are interconnected in a complex system, will produce structurally different futures ...conceived through a process of causal rather than probabilistic thinking (Van der Heijden, 2005, p. 27).” This approach has strong roots in industry, particularly oil and gas, but has also been applied in government.

Origin of the scenario method

The scenario method has strong roots in strategic planning and in the O&G industry specifically. Very useful and worthy of special mention was DR437E's assigned reading of Amer, Tugrul, Daim and Jetter's, *A Review of Scenario Planning*, which provided a very thorough theoretical framework and comprehensive overview of the history of scenario-planning and its quantitative and qualitative theoretical schools (Amer et al., 2103). The reference list accompanying this article provided at least three more excellent sources utilized for both this paper and the relevant dissertation chapter. Scenarios' narratives use storyboards, much like a novel or a screenplay, but the intent is to construct plausible narrative futures to enrich future decision making, not to simply entertain or build a timeline for the captivating or sensational. Rare events can and do have great impact, but by definition they are also improbable within the time frame of effective human decision. These rare but impactful possibilities termed 'wild cards' or, if especially cataclysmic, 'black swan' events, are identified in the process but kept aside and not incorporated into the analysis. Highly improbable but impactful astronomical events and strategic nuclear war, for example, would both usually fall into this category. A philosophical foundation for coping with these rare but dramatic potentials in the future, as well as the impossibility of predicting them, is provided by Nassim Taleb:

The Black Swan is about consequential epistemic limitations, both psychological (hubris and biases) and philosophical (mathematical) limits to knowledge, both individual and collective. I say "consequential" because the focus is on impactful rare events, as our knowledge, both empirical and theoretical, breaks down with those—the more remote the events, the less we can forecast them, yet they are the most impactful. (Taleb, 2010, p. 330)

This "intuitive" approach to scenarios was also used by Herman Kahn and the Rand Corporation as early as the 1960s (Amer et al., 2013). No mathematical algorithms are utilized and the focus is on identifying causal processes, decision points to improve decision-making processes. While at Royal Dutch Shell, Pierre Wack contributed to "adaptive" scenario-planning, by leading the 1972 process that developed a set of plausible "stories" envisioning an interruption in global oil supplies. This corporate scenario work gave Shell a leg up among their peers in reacting to the 1973 Arab oil embargo and its related dramatic pressures on market supply (Amer et al., 2013). If, in the future, a forensic re-assessment proved available for looking back and scoring a scenario project, it would not be the eventual actual outcomes themselves of scenario narratives that validate their value, but how they assisted decision makers in best preparing for necessary decisions along the way. This approach has strong roots in industry, particularly in oil and gas, but has also been applied in government. Most notably it was used as a tool for "transformative planning" in early post-apartheid South Africa, in what are known as the Mont Fleur series of scenario exercises; but it has also been employed by Singapore's Ministry of Defence and in the US, in areas such as the 2000 report of the Commission on National Security/21st Century (Kahane, 2012; Wilkinson and Kupers, 2014).

Quantitative and mixed method scenarios

The scenario method described above and adopted for the researcher's dissertation is fundamentally qualitative and intuitive. But there are other noteworthy schools of scenario development that are better suited to narrower research questions in shorter time frames. These include the "probabilistic modified trends" methodology, which uses the matrix based tools of "trend impact analysis" and "cross impact analysis". Another is the "prospective thinking" or French School model, which does not presuppose that the future is predetermined

by its drivers but, rather, can be modified and shaped (Amer et al., 2013). Quantitative methodologies are more generally applied to public or infrastructure development policies and planning, e.g. Carl Steinitz and his use of a wide range of sources and stakeholder perspectives to develop scenarios for use in landscape and public resource planning (Steinitz et al., 2002). Mixed methodologies have also found a place in Royal Dutch Shell's own studies to enrich with statistical models the qualitative method they themselves pioneered to assess topical futures as diverse as climate change, biodiversity, demography, migrations and transforming states (Shell, 2005).

Overview and preparation for the Bodø scenario exercise

As part of a group exercise, this writer led a group of international graduate students through a scripted scenario-development process and competition. The topic and criteria were provided, as well as the organization of the participating groups themselves. In scenario-construction, there are multiple opinions as to how many narratives are most useful. In opening first day presentations of the course, both Indra Øverland and Anatoli Bourmistrov discussed a three-scenario process to be utilized by course participants, similar to the one used in their contribution to their recent book (Øverland et al., 2015). The table of assumptions was also held in common for all three scenarios in their methodology. A separate matrix was developed to identify uncertainties which varied in their influence on the three alternative narratives. This approach was somewhat different from the method employed by GBN, which focuses on "key drivers" that play out within four quadrants framed by "critical uncertainties", which was the method employed by this researcher to create four dissertation scenarios for Kara Sea futures. The GBN method was used by our group (Group 4) for scenario-building, although portions of the Øverland and Bourmistrov method were incorporated as well, such as the "fingerprint diagram". Both the GBN and "Øverland" methods require the identification of "wild cards". These are deemed to be events that could dramatically impact the future but are also of *low probability*. Generally "wild cards", although identified, are excluded from narrative construction as they are unlikely to assist the future decision-making process.

The High North: framing aquaculture future scenarios 2030

The first step utilized by Group 4 to build our scenarios was to identify all the different kinds of drivers (assumptions, critical uncertainties and wild cards) that could contribute to the future High North world. Once compiled, we then assessed and classified the different drivers between assumptions, critical uncertainties and wild cards. By means of a vote, we selected two of what we considered the most important critical uncertainties that would determine the future development of the High North by 2030. This was essentially the GBN method. Each member of the group could select up to two. Hydrocarbon extraction and international cooperation were thus selected by vote as framing uncertainties (both axes from a high to low endpoint scale). The remaining unselected uncertainties dropped down to be included in discussion simply as other drivers/assumptions. We then crossed these two axes to frame four quadrants to sketch plausible scenarios, as depicted by the following (Figure 1).



Figure 2 1 High North: aquaculture future scenarios to 2030

In the next step we fleshed out and entitled/named three scenarios (the fourth was eliminated due to an external course directive) by ranking the remaining drivers for each quadrant as high, medium or low for each scenario—framed by the two most critical uncertainties. When not unanimous, the group voted to determine this ranking. Quadrant III, or the potential scenario framed by low hydrocarbon demand and low international cooperation, was not developed as it most reflected current conditions and, thus, would be least valuable as a tool—it could simply be “forecasted from the present in linear fashion.

Identifying drivers and critical uncertainties

One of the bigger drivers we had in mind for these scenarios was the Northern Sea Route (NSR). This Arctic shipping route transits the Barents Sea to the Pacific Ocean. As of today, this route is free of ice for only two months of the year, but, if this time frame expands, it will be interesting to see how it will affect the area. However, we believed that the global environment would not change enough within a 15-year time frame to have critical impact.

The scenarios

Let's get rich together! (High cooperation and high extraction) The High North is flourishing; the development in the area has seen a tremendous level of cooperation and investment. In the 15 years that have passed since 2016, the area has changed in ways that could not be foreseen. Once preliminary drilling for hydrocarbons started, the industrialization of the area boomed, although by 2030 most of the projects had yet to enter the energy market at full production levels due to the timelines needed for these complex projects.

Serve yourself! (Low cooperation and high extraction) Cold War version 2.0 was rebooted in the High North. It is often said that money is the root of all evil, and that proved to be the case in this scenario. All the Arctic countries decided to explore in the High North, but they never found common ground. World War Three did not break out, but global relations reached a low. Russia and the USA once again moved towards an arms race, impacting the whole globe. What else could have happened in a world with an oil price of over 250\$/bbl and little to no global friendship? Russia was again out of money. All nations across the globe began focusing much more on their own issues and their own businesses. Cooperating with other countries became a low priority.

All you need is love! (High cooperation, low extraction) The world is growing bigger; we have seen a major rise in population all over the world, and this has contributed to the exploration of the High North. The hydrocarbon reserves in these areas were not at all as forecasted; some drilling was conducted, but only a few viable hydrocarbon reserves were found. The area has been preserved to a very large extent when it comes to natural habitat, and the indigenous peoples of the different Arctic regions have largely been left alone.

This is where we started from: Not developed due to exercise instructions. Note: This quadrant is essentially where we judged that we are at present.

Wild cards

Within this assignment, we identified the "wild cards": those drivers that have a very low probability of happening but if they were to occur would have a devastating effect. The general norm is to exclude these low-probability high-impact events. The wild cards we defined included:

- **Massive oil spill:** Whenever there is hydrocarbon-extraction there is the risk of a spill, and if this spill is big, the consequences will be major. The famous BP oil-spill Deepwater Horizon shows us this.
- **World war:** Although this is very unlikely as of today, the prospects of a very devastating world war would absolutely destroy the possibilities for developing the Arctic (or any other area for that matter).
- **Change in global currents:** Our Earth consists mainly of water, water that flows with currents and winds. The Gulf Stream, for example, affects both the eastern parts of the USA and the western parts of Europe, and it is generally accepted that this stream has contributed to the affected parts of the world being warmer than otherwise. If these currents were to suddenly change, as was feared not that long ago, it would impact the climate in the High North quite dramatically.
- **Atmospheric disaster:** There are many dormant volcanoes around the world; if one of these suddenly erupted, we would potentially face a global change in climate. If this kind of eruption happened on a large scale, this would have sudden, global and devastating effects, and developing in the High North would probably be last on our list of priorities.

Exercise concluding thoughts

In conclusion, the course workshop provided a good opportunity to apply the tools in scenario design that might best fit the desired objective. It was not constrained by theory but, rather, allowed the use of the methodological tools that best fit that objective.

Kara Sea outcomes

For comparative purposes, the four scenarios derived for this researcher’s dissertation are provided in the following Figure 2. This framing also used the GBN method.

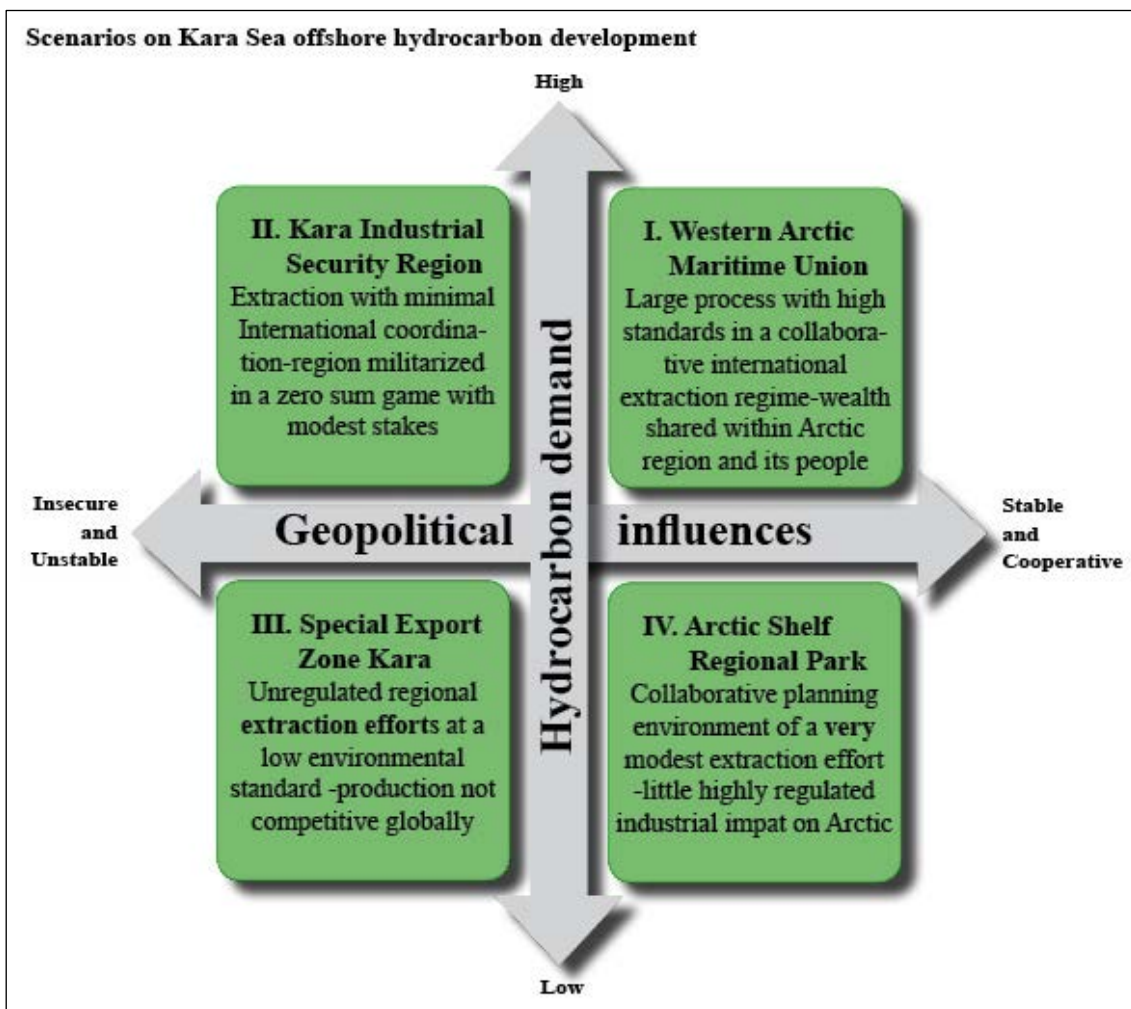


Figure 2 Scenarios on Kara Sea offshore hydrocarbon development

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ARCTIC SHIPPING ACTIVITIES AND IMPLICATIONS FOR LOCAL GOVERNANCE SYSTEM

Julia Olsen

Abstract

This paper is the final assignment of a PhD course in “Governance in the High North: Implications for Arctic Private and Public Sector”. It starts with a presentation of the problem statement, the existing and missing knowledge and the choice of theoretical approach to address the problem statement. In the background, I present the existing knowledge on the complexity of relations between three main variables that are used in this work: multiple stressors in the Arctic, increasing shipping activities and local communities. Given the socio-economic heterogeneity of the Arctic region, I choose two cases (two port communities: one in Russia, one in Norway) in order to understand those connections. Two theoretical approaches (adaptive capacity and governance) will help unpack those relations. Then, I will provide some reflections on how co-management as a governance approach can be applied in this work; and discuss the importance of “cross-Arctic” governance arrangements. Since I am at the beginning of my PhD project, I will not provide any preliminary results but, rather, argue for the choice of the theoretical approach and its limitations.

Introduction

The Arctic is facing multiple and rapid changes in socio-economic and environmental conditions (e.g. ACIA, 2005; Arctic Council, 2013). The interaction of those changes will have cascading effects on the well-being of indigenous and non-indigenous communities and will challenge local adaptive capacity (West and Hovelsrud, 2010). Increasing shipping activities in the Arctic are a result of changes in climatic and market conditions and, at the same time, a contributor to the changes in local communities (PAME, 2009).

A limited number of studies indicate that this development will have both positive and negative impacts on the adaptive capacity of local coastal communities that are already experiencing a number of changes in their social, political, economic and environmental systems (i.e. Meier et al., 2014; Davydov and Mikhailova, 2011). The studies from the Canadian Arctic indicate that this development is perceived as both an additional stressor and a source of new opportunities for community development (e.g. Stewart et al., 2015; Dawson et al., 2016). The same studies stress the importance of detailed understanding of the impact of Arctic shipping on the coastal communities and their adaptive capacity.

Given the rate and the amplitude of change in the Arctic, shipping development will require an appropriate governance system in order to increase the benefits, mitigate the negative impact from shipping activities for local communities and strengthen local adaptive capacity (Dawson et al., 2014). By applying a co-management approach, I will test the assumption made by scholars that the degree of local community participation in the decision-making process has a direct impact on local adaptive capacity (i.e. Keskitalo et al., 2011).

Thus, the main objective of this work is to assess the governance of shipping activities in the Arctic and to understand how co-management as a governance approach can contribute to mitigating the risks and strengthening local adaptive capacity. I will refer to the course literature

and lectures in order to understand the governance of the shipping activities in the Arctic region from the perspective of local communities. One of the many ideas to which we were introduced on the course is the interconnection of different variables and the process in the Arctic (i.e. Young, 2010). Thus, in this work, shipping development is discussed in the context of those factors or main drivers.

Then, particular focus will be given to the role of local communities' engagement and participation in the decision-making. Later, I will discuss whether the concept of co-management can be applied as a possible governance approach for local community adaptation to a number of stressors in the Arctic, including increasing shipping activities.

With the help of Fig. 1, I will describe the structure of this paper, such as the state of knowledge, data gaps and the theoretical concepts for the research topic. The figure illustrates four connections of three main research elements: multiple stressors, shipping activities and local communities.

Firstly, I will start my analysis by mapping out the links between multiple stressors and local communities (1a) and between multiple stressors and shipping (1b). I will use an existing body of literature to guide my work and help me understand those connections. Secondly, I will look closely at link number two between shipping and local communities (2). There is a lack of scientific literature describing these connections, but some studies indicate that increased shipping activities in the Arctic bring both challenges and opportunities to the local communities. The third connection is an assumption that shipping activities have implications for the adaptive capacity and governance system of local communities. This will provide a basis for discussion.

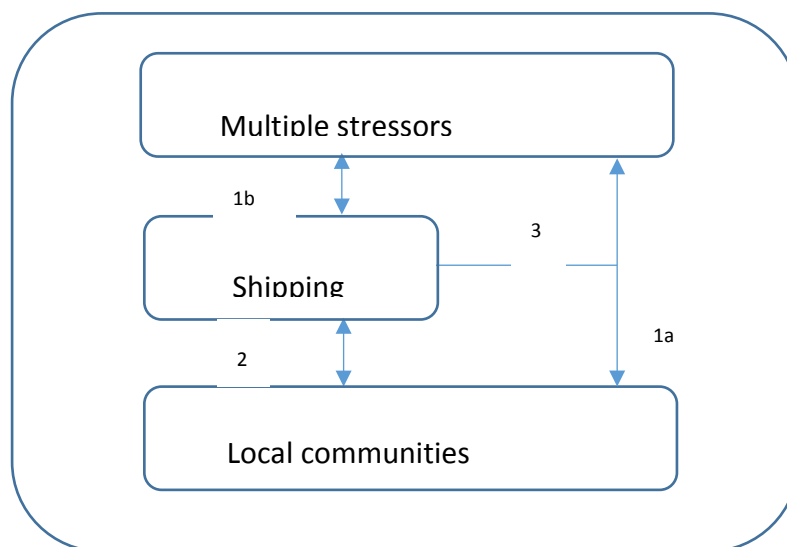


Fig.1. Research plan.

Background

Multiple stressors and local communities (Link 1a)

Climate change is one of the concerns currently facing Arctic communities (ACIA, 2005). The Arctic is warming much faster than the rest of the globe (IPCC, 2013; ACIA, 2005; Porfiriev, 2008; Roshydromet, 2011; Tsalikov, 2009; Vorobiev et al., 2011), with higher expected temperatures,

precipitation and storm activities (IPCC, 2013). The changes in the environment caused by climate change are felt first by communities whose livelihoods are connected to the nature (AMAP, 2011, pp. 10-18). A finding from the Intergovernmental Panel on Climate Change (IPCC) underlines that changes in the environment have cascading effects on Arctic communities (IPCC, 2007). A number of studies have found that local communities do not respond to the impact of climate change in isolation from other changes in socio-economic and political conditions (e.g., O'Brien et al., 2004; Hovelsrud et al., 2010; West and Hovelsrud, 2010).

In addition to climate change, a number of trends challenging community viability and adaptation were identified in the first Arctic Human Development Report (AHDR, 2004): urbanization, commercialization, globalization and privatization. This list was expanded in the second report (AHDR-II, 2014) with the following trends: global risks, industrialization based on extractive industries, the mobility of goods, people, and ideas (TemaNord, 2014, p. 466). Therefore, the Arctic region is exposed and sensitive to changes in socio-economic, cultural, political and environmental (including climatic) conditions (e.g. Arctic Council, 2013; West and Hovelsrud, 2010, p. 343). Differences in power relations and the broader political context will influence people's ability to cope with changes across the region (TemaNord, 2014, p. 434).

Shipping activities in the Arctic (Link 1b)

According to some of the Arctic scenario studies (e.g. Loe et al., 2014; Overland et al., 2015), shipping activities in the Arctic will increase and the North East Passage will be used as a transit corridor to the global market. Already in 2004 (a snapshot year for the Arctic Marine Shipping Assessment (AMSA) report), about 3000 vessels were operating in the Arctic waters (PAME, 2009, p. 72). Since that time, maritime activities in the Arctic Ocean have become more extensive. It is impossible to predict the ice conditions and how much of the Arctic will be navigable and for how long (Mière and Mazo, 2013, p. 17), but some studies project nearly ice-free summer conditions by the mid-21st century (Stephenson et al., 2013). The Arctic Ocean and especially Russian, Greenlandic and Norwegian coastal areas are becoming more and more accessible to different kind of vessels such as cargo and cruise ships and those involved in exploration, fishing and military activities (Vold et al., 2013; Stephenson et al., 2013; Østreng et al., 2013).

Sea-ice retreat, globalization and the growth of the international market, in addition to increasing interest in the Arctic as a tourism destination, are just some of the trends that fuel shipping development (Lemelin et al., 2010). In total, approximately 120 factors will affect the future of Arctic shipping, among them governance issues, geopolitical factors, socio-economic factors, climate change and wild cards (PAME, 2009, p. 93).

This development will require new infrastructure, better monitoring and weather forecasting, the opening of new-side industries, search and rescue facilities, etc. Daily sea-ice variability and unpredictable weather conditions, coupled with the Just-In-Time features of the delivery system (press for time to deliver), increase the probability of shipping accidents (Farré et al., 2014, p. 5), presenting new challenges for local communities and the environment.

Given the context of dynamic development, the need for improvements in operational conditions and a better understanding of the impacts of the shipping activities will require a new type of governance to mitigate the possible negative impacts and to secure sustainable socio-economic development in the Arctic region.

Shipping as a new stressor for local communities (Link 2)

Certain types of shipping activities “simultaneously contribute to and [are] influenced by wider forces of change” (Stewart et al., 2015, p. 403). The impacts of Arctic navigation on local coastal communities that are already exposed to climatic, environmental and economic changes is poorly discussed in the scientific literature, and there is a lack of information on local community involvement in the governance system.

A limited number of studies identify that shipping activities may have both positive and negative impacts on the Arctic coastal indigenous and non-indigenous peoples (e.g. Davydov and Mikhailova, 2011, p. 8438; Brattland, 2012; and examples from the Canadian Arctic: Stewart et al., 2015; Dawson et al., 2016). See Table 1.

Table 1. Examples of potential impacts, on areas of heightened cultural significance, from various types of vessel traffic in the Arctic (Adopted from AMAP/CAFF/SDWG, 2013).

Increased shipping activity	Effects	Potential negative effects	Potential positive effects
Shipping activity in general	Oil spills, waste water, rubbish, development of harbours and other infrastructure, ice breaker activity	Negative visual effect and impact on archaeological sites Workforce influx resulting in demographic and cultural change Social and health issues Change or loss of natural resource base Loss of traditional knowledge	Improved access to goods and services, including medical Economic opportunity
Cruise tourism	Increased number of visitors to heritage sites	Impact on surface, rubbish, vandalism, amateur surveys and excavations, unauthorized memorial plaques, etc.	Employment/income opportunities Increased awareness about heritage in the wider society Stimulus to research and financial support
	Increased number of boat and helicopter landings	Impact on surface and increased erosion	
	Infrastructure on the shore	Visual impact, site destruction	
	On-site accidents	Destruction of sites and objects	
	Use of underwater equipment, building of platforms, pipes, ports, etc.	Direct impact on shoreline and submerged sites Loss of heritage sites and historic properties on land	Discovery of underwater sites Funding for cultural resource surveys
	Bottom trawling	Damage to underwater heritage and historic properties	
Shipping associated with prospecting and exploration	Building of infrastructure	Direct impact on shoreline and underwater sites	Employment Infrastructure
Fishing activity	Operations	Damage to and destruction of underwater sites Disruption of coastal fisheries by large-scale fisheries	New opportunities for fishing, selling fish
Military activity	Operations	Restriction on local use	

Among the potential positive effects noted is the fact that the extension of the navigable season brings new economic opportunities to the region in terms of resource development, trade and new tourist destinations (Rasmussen, 2011). The increase in various types of vessel traffic and the extension of the navigable season open a vital link for goods' delivery to local communities that may reduce costs (AMAP/CAFF/SDWG, 2013). The increasing cruise-tourism activities may benefit Arctic communities through greater awareness of cultural values and heritage (e.g. Stewart et al., 2015) and improve employment and income opportunities (AMAP/CAFF/SDWG, 2013, p. 102). The study from Canada shows that cruise tourism presents a range of opportunities such as the showcasing to visitors of Inuit culture and traditions, the sharing of local history, the opportunity to meet new people and participate in joint activities and the generation of seasonal income for the community (Stewart et al., 2015).

The example from the Russian Arctic assumes that shipping associated with cruise tourism, prospecting and exploration results in the development of Arctic town-ports, transport and coastal infrastructure, and search and rescue facilities. In addition, it may, but does not necessarily, lead to socio-economic improvements (e.g. Grushenko, 2014; Plisetskiy, 2016; Zalyvsky, 2015).

Despite the positive impacts, increased Arctic shipping activities may create concerns about the social, cultural and environmental effects on Arctic coastal residents (AMAP/CAFF/SDWG, 2013, p. 101) that maintain many aspects of a traditional way of life (AMAP, 2011, pp. 10-20). For coastal indigenous peoples, the marine environment continues to play a central role as a source of food, in settlement patterns, as a source of income, and in cultural practices and boundaries (AMAP, 2011, pp. 10-2). Remote coastal communities are vulnerable to impacts from increasing shipping activities that may harm their natural resources through disturbance and pollution and hamper access to such resources. Shipping lanes, especially those for cruise vessels adjacent to the village coasts (AMAP/CAFF/SDWG, 2013, p. 101), bring a great number of visitors to small coastal communities. This may be a source of revenue but also a challenge (Stewart et al., 2015) and may place cultural heritage areas at greater risk (AMAP/CAFF/SDWG, 2013, p. 101).

Examples from the Canadian Arctic indicate other potential risks associated with cruise tourism, such as ship pollution, impact on marine mammals, potential accidents, a lack of local capacity to cope with the intensity of visits and lack of port infrastructure (Stewart et al., 2015).

Methodological framework

In order to assess the governance system, it is necessary to understand the local communities' responses to ongoing changes and to assess whether they are able to adapt to them. I believe that the use of an abductive research strategy (bottom-up approach), described by Blaikie (2010), helps us to understand the social life, perceptions and response to change of communities. That research strategy incorporates "meaning and interpretations, the motives and intention, that people use in their everyday lives, and which direct their behavior – and elevates them to the central place in social theory and research" (Blaikie, 2010, p. 89).

Data collection

A case study approach will guide the research methodology of this work. For this work I choose two port communities in the European part of the Arctic: one Russian and one Norwegian. The main criteria for selection are: (1) shipping development has been a part of the community's

development, (2) port activities have increased over the last two decades, (3) change in climate is one of the drivers for development, and (4) the local community is affected by shipping development.

Longyearbyen on Svalbard is a unique—and the world’s northernmost—settlement with a small but mobile community of about 2100 people from 40 nations. The town experiences high turnover and there are almost no residents over 66 years old. Historically, shipping activities have played a significant role in the Archipelago’s development and, since the 1990s, cruise activities have increased substantially. Other changes, such as reduced coal production by the local coal mining company, Store Norske Spitsbergen Kullkompani, and the growth of other sectors have shaped the socio-economic development and community viability in Longyearbyen (Bjørnsen and Johansen, 2013; Forskning.no, 2014). The recently published white paper on Svalbard (St. Meld 32) stresses the importance of investment in research and higher education, tourism and other businesses in order to facilitate Longyearbyen as a viable family community (St. Meld, 2015-2016; Regjeringen.no, 2015). Thus, shipping activities associated with tourism, cargo, search and rescue, research and fishing activities (Misund et al., 2016) may continue to grow in the coming years (Jørgensen-Dahl and Wergeland, 2013).

Arkhangelsk is usually called the gateway to Arctic Russia, due to its geographical location in the mouth of Dvina River. During the Soviet period, the main economic income came from the timber trade, the paper industry and the commercial and fishing port. During recent years, Arkhangelsk has become an attractive tourism and education destination. The recent change in port visa regulation allows international visitors to experience the city for 72 hours without extra visa requirements. Now, according to one local resident, the city is trying to find its ‘new face’, in which shipping, including cruise activities, may have a great share. Arkhangelsk is one of the dominant ports along the Northern Sea Route (NSR) with a well-developed infrastructure.

The unit of analysis in this case will be a community (Pomor village), which is located in the delta of the river. The criteria for choosing the village will be its tourism attractiveness based on the history of Pomor and its location as one of the neighbours to Arkhangelsk Island, which means it may experience the impact of increasing shipping activities.

I use secondary data for this paper. This includes a scientific literature and media review. Secondary data collection and analysis help me to develop a baseline and a general understanding of how shipping affects the local community’s well-being/adaptive capacity.

Theoretical and conceptual framework (Link 3)

Adaptation and adaptive capacity

Multiple stressors in the Arctic, including climate change, pose both challenges and opportunities for socio-economic development. It is likely that local Arctic communities will bear the costs of these opportunities such as impacts from exploration and shipping activities, infrastructure building, and oil and gas activities. Even though some studies (e.g. Forbes et al., 2009) argue that the Arctic’s social-ecological system is highly resilient, a number of on-going changes and interests (i.e. commercial, political, economic, legal, conservation) can create new challenges for adaptation (Plummer and Baird, 2013) and flexibility in coping with climatic variability (ACIA, 2005, p. 665).

In this work, we will use the analytical concept of adaptation and adaptive capacity to analyse the community responses to multiple changes. Adaptation has been described by many scholars

and is applied to general societal change, specifically to address climate change (Amundsen, 2012, p. 47). Smit and Pilifosova (2001) define adaptation as “adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts” (Smit and Pilifosova, 2001, p. 881). The broadly used definition of adaptation does not consider the impacts of multiple stressors. However, as was described in the background, local communities do not respond to the impact of climate change in isolation from other changes or ongoing processes (O’Brien et al., 2004; West and Hovelsrud, 2010). Here adaptation is applied as the process of adjustment to the past, present and future climate and its consequences, in combination with societal changes (IPCC, 2007; West and Hovelsrud, 2010; Amundsen, 2012). I analyse and approach adaptation to multiple factors; in most cases, it is not climate change that is the main challenge to communities and sectors. Climate perturbations interact with socio-economic challenges, to which society responds. Climate change impacts may also exacerbate current challenges in society. Adaptation can be divided into reactive and proactive, or planned, measures to reduce the negative effects and impacts or to take advantage of positive consequences.

The analytical concept of adaptation may also help us to identify the local adaptation strategies to multiple stressors and to analyse their integration in the governance system. As the AMAP report (2011) states, “If proper adaptive guidelines and regulations that anticipate further climate scenarios are not in place for industrial development and resource use, then local communities become more vulnerable” (AMAP, 2011, pp. 10-18). The International Maritime Organization (IMO) has drafted an international framework for navigators operating in the polar waters (Polar Code). The Polar Code sets standards for safety and reporting (Brigham, 2014) and thus may serve as a form of proactive adaptation (AMAP, 2011, pp. 10-18).

While adaptation refers to social adjustment to change (Kofinas et al., 2013), the adaptive capacity is an individual’s or the community’s ability to cope with, adjust to or recover from particular changing conditions (Smit et al., 2010). The capacity to adapt to climate and other changes varies between communities and depends on subjective and objective dimensions, suggested by Wolf et al. (2013). The subjective dimensions include perceived risk and feasibility and self-efficacy, while objective dimensions present determinants/sources of adaptive capacity.

Keskitalo et al. (2011, p. 580) recently summarized those sources or determinants of adaptive capacity (adopted from Smit and Pilifosova, 2001): economic resources, access to technology, information and skills, infrastructure, social institutions and management capacities, equity, flexibility and governance. Governance will differ between nations and may “serve to limit the vulnerability of particular sectors and communities to market mechanisms or encourage participation of different stakeholder groups in decisions over natural resource management and regulations” (Eakin and Lemos, 2006 in Keskitalo et al., 2011).

Systematic analysis of adaptive capacity determinants is useful for aiding and comparing how the case study communities adapt to changes posed by multiple stressors (Keskitalo et al., 2011, p. 579). Keskitalo et al. (2011) conclude that the determinants of adaptive capacity may result in both the development of and limits to local adaption (Keskitalo et al., 2011, p. 580). The availability of resources does not guarantee that they are equally distributed within the society, making certain community groups more vulnerable (Keskitalo et al., 2011, p. 589).

An example from the Canadian Arctic stresses the need for appropriate adaptation and management strategies that allow local communities to benefit from climate-induced development (Dawson et al., 2016). In the same paper, the authors describe the use of the

bottom-up approach for engaging local stakeholders in the development of adaptation strategies in order to address a concern: “We are promoting economic development in Canada, but we are not prepared for its consequences” (Dawson et al., 2016 p. 14).

Governance in the Arctic context

The term ‘governance’ is defined in a number of ways and has different meanings in the scientific literature (e.g. Stoker, 1998). Governance, according to Stoker (1998), refers to “the development of governing styles in which boundaries between and within public and private have become blurred” in order to achieve common goals. Some aspects of Arctic governance (adopted from Stoker’s propositions) should be considered before talking about the Arctic shipping governance.

Firstly, given the dynamics and the amplitude of change in geopolitical, economic, social and environmental systems in the Arctic region, no single actor alone can respond to those changes or govern the course of action. However, the rapid development in the Arctic governance system raises questions about the legitimacy of stakeholders (Young, 2010), especially when new stakeholders enter the Arctic or have an impact on the development process.

Secondly, according to Young (2010), the processes occurring in the Arctic are interrelated and have strong connections to the global system. This will challenge the traditional governance mechanisms and arrangements and will require new forms of governance in order to maintain sustainable development in the region (Young, 2010). This may result in a responsibility shift between the actors and the blurring of boundaries between the private and public sectors. However, it is still unclear as to who takes responsibility “when things go wrong” (Stoker, 1998).

Thirdly, the interconnection and interdependency of actors in the governance system makes it impossible for one actor to command or deal with the problem or challenge. However, one organization may dominate a certain process (Stoker, 1998).

Discussion: Co-management as an approach for local shipping governance

The governance of Arctic shipping is a “complicated mosaic” (PAME, 2009) of a set of global, regional, national and local conventions, laws and regulations (Dawson et al., 2014).

Global maritime governance is facilitated by the International Maritime Organization (IMO) and formed by four main conventions (Dawson et al., 2014; Pashkevich et al., 2015):

1. The International Convention for Safety of Life at Sea (SOLAS), which presents standards for the construction, equipment and operation of ships.
2. The International Convention for the Prevention of Pollution from Ships (MARPOL).
3. The Convention on Standards of Training of Seafarers (STCW).
4. The United Nations Convention on the Law of the Sea.

National governance is a very complex and dynamic system and varies among the Arctic nations (i.e. Pashkevich et al., 2015). In the Russian context, the number of institutions included in cruise tourism alone is around 30 and continues to increase (Pashkevich et al., 2015). Some studies indicate that this slows down the decision process (Aleksandrov, 2012). According to Plisetskiy (2016), the establishment of a single governing body for the strategic management of Russian shipping activities is among the priorities for the development of the Northern Sea Route.

The studies from the Canadian Arctic indicate a need for a more appropriate management regime for different types of Arctic maritime shipping, especially for the rapidly growing cruise industry, which represents an increasing proportion of ship traffic (Dawson et al., 2016). As is argued by Dawson et al. (2016), “The region [Canadian Arctic] is struggling to keep pace with recent growth and to effectively manage industry development”.

Local shipping governance includes a number of local- and port-level institutions and permitting process. In addition, a number of services and industries such as search and rescue (Arctic Council, 2011), communication and port infrastructure play an important role in Arctic navigation. In some cases, local governance system follows the top-down model, which, to a certain extent, limits local communities’ involvement. However, the inclusion and engagement of local actors may be a crucial element, since the impact of shipping activities is usually felt at the local level, and the local actor has valuable knowledge of local conditions that may be important in the decision-making process and for safe navigation.

In addition to the described governance levels, the recent emphasis on navigation in the Polar areas has resulted in the establishment of so-called Polar (in our case, Arctic) shipping governance: represented by a set of frameworks, institutions, guidelines, etc.

Safe navigation in the vulnerable Arctic ecosystem is a crucial component in the development. It relies on well-developed standards in respect of health, safety and environment (Vold et al., 2013, p. 7), land-based infrastructure, including search-and-rescue facilities, the availability of reliable maps and charts, traffic control, communication capacity, and further developed weather forecasting (Farré et al., 2014, p. 16; PAME, 2009, p. 133).

Those elements are recognized in the International Maritime Organization (IMO), which is a main institution for international shipping governance. This agency has drafted the Polar Code, an international framework for navigators operating in polar waters (IMO, 2015). The Polar Code presents a set of mandatory safety and environmental protection regulations and “covers the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in the inhospitable waters surrounding the two poles” (IMO, 2015). The ratification of a mandatory Polar Code is expected by 2017. The recently adopted Polar Code’s environmental component (May 2015), which came after an adoption of the safety section (November 2014), may strengthen the protection of the marine environment (Brigham, 2014).

Another example of successful governance arrangements in the Arctic may be the self-regulated institution of a particular industry. In the case of cruise tourism activities in Svalbard, Jan Mayer and Greenland, The Association of Arctic Expedition Cruise Operators (AECO) is an agency that represents the concerns and views of Arctic expedition cruise operators (AECO.no, 2016). However, the organization is not able to support the development of the Arctic cruise industry, since a number of operators are not considering becoming AECO members.

In addition, local development is strongly connected to the global market trends and requires the flexibility of the local governance system. This flexibility may be achieved by the involvement of different groups of stakeholders (Westskog et al., in press).

Given the complexity of the shipping governance system in the Arctic, I will argue that co-management may be a suitable approach for local shipping governance. I was inspired by the study of Westskog et al. (in press), who applied an adaptive co-management approach for Norwegian climate adaptation. There is no single definition of the concept of co-management and it is applied in an increasing number ways (Folke et al., 2005). It emphasizes the importance

of “user participation in the decision-making and linking communities and government managers”. The potential benefits of this approach, according to Armitage et al. (2007, p. 3), are “more appropriate, more efficient and more equitable governance.”

According to Westskog et al. (in press), it presents a suitable framework for multi-level governance to ensure pro-active adaptation actions and secure the presence of local knowledge and collaboration between relevant actors (Fitchett, 2014).

As was previously mentioned, an existing top-down approach to shipping governance (global, regional and local) shows a clear gap in local engagement (e.g. IMO frameworks, cruise industry guidelines, national laws). Despite the UN’s requirement for indigenous input, the IMO still has no indigenous representatives (ILO Convention 169, 1989). In contrast, the adaptive co-management approach can “create space for local context” on other governance levels and secure proactive adaptation (Westskog et al., in press).

Aaja Chemnitz Larsen, Member of the Danish Parliament (Greenland) started her presentation at the High North dialogue by proposing that the human dimension is a key element in sustainable development in Greenland and in the Arctic in general. She argues that it is of increasing importance to understand the local communities’ needs and challenges. There are about four million people living in the Arctic (AHDR, 2004) and they are a central component for future development. Using the co-management as a governance approach may help us to understand how it is applied and to assess the extent to which the local population is engaged in shipping governance.

The importance of local engagement can be presented in one of the case areas: Longyearbyen. Just some weeks ago, the last coal ship left Svalbard and took a third of the local economy away from the community. The reduction in coal production has a significant impact on local adaptive capacity and community well-being. In order to secure community viability, the economic focus has been switched towards more sustainable industries such as tourism, education and research (St. Meld. 32, 2015-2016). However, the transition requires flexibility in the local governance system for shipping activities, the development of new types of institutional arrangements and the engagement/participation of broader groups of stakeholders in local decision-making. However, this approach has some limitations. It might be difficult to adopt in practice due to a “higher degree of contextualized policy practice” and the possibility of misrepresentation of certain relevant groups (Westskog et al., in press).

Conclusion

Maritime activities in the Arctic are becoming more extensive. The impact of shipping activities on local adaptive capacity is not broadly discussed in the scientific literature. Some studies from the Canadian Arctic indicate that this development poses a number of challenges for the local adaptive capacity of coastal communities that are already experiencing a number of changes in their social, political, economic and environmental systems. Therefore, an appropriate governance system is required in order to increase the benefits and mitigate the negative impact from shipping activities for local communities and to strengthen local adaptive capacity (Dawson et al., 2014).

In this paper, I have reflected on the complexity and interconnection of three main variables for this study. They are: multiple stressors in the Arctic, shipping activities and local communities. These interconnections of variables represent an important argument for theoretical choice. In

line with Westskog et al. (in press), I will argue that adaptive co-management can be a possible governance approach to handling the effects of Arctic shipping activities.

Although, in this paper, I argue for the choice of theoretical framework, more empirical data is needed to support the arguments. Two case areas in the High North are chosen to address the assumptions: Longyearbyen (Svalbard) and a local community in the Russian North, which is affected by Arkhangelsk port activities. From the presented discussion points, I open the discussion for further work that a flexible governance system may serve as a source of adaptive capacity. Adaptive co-management may be an appropriate governance approach for local shipping activities. The specially designed Polar (Arctic) shipping governance presents an innovative solution for marine activities.

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VALUE CREATION AND GOVERNANCE FOR A FUTURE ARCTIC: A VIEW FROM CANADA

Mark Stoller

This paper addresses issues arising from speculation about future governance for the High North in conjunction with growing interests in advancing Arctic research and education. These two topics, which were dominant themes of this year's High North Dialogue conference, are connected by the evident need for continuous improvement in methods of forecasting future growth, as well as anticipating modes of value assessment. With respect to established managerial practices and research methodologies, these hold distinct implications for questions of governance at both practical and theoretical levels. In the following sections, I address three features of the conference and workshop relating to these questions. These include a discussion of future planning and scenarios; the growing emphasis on uses of environmental regulation in the development of value-creating industries; and the potential for ongoing cooperative relations among Arctic nations.

Lessons are drawn from my own doctoral research, which examines questions relating to resource extraction and commercial development in the foreseeable future in Canada's Arctic. In particular, I address questions related to the extraction of petroleum and non-renewable energies, how these relate to future planning and the governance of Canada's northern territories, and the implications for international environmental law and future Arctic development. In the course of my experience at the High North Dialogue conference in Bodø, and my role as a group facilitator with a number of Master's students in attendance, I have come to reflect on several aspects of Arctic future developments and their relevance to my own research. In particular, I examine the role of Canada in the context of the future Arctic and focus upon some aspects of the Canadian experience of trying to exploit Arctic resources. I then incorporate these into discussions of futures forecasting, value creation, and governance for the High North. Before going into these, however, I will provide an overview of my research.

Overview: Canada's experience in the Arctic

As Professor Oran Young has argued recently, the growth of interest in numerous fields and disciplines confirms that the Arctic has arrived as an area of global concern. In terms of both scholarship and matters of national and global politics, researchers and politicians are increasingly interested in the High North as the frontline of climate change, as a potential source of future energy, mineral, and food resources, and as a region requiring increasingly specialized forms of diplomatic cooperation (Young, 2010). As a result, dialogue frequently focuses on the future of the Arctic and on the possibilities for its development over short and long-term horizons. Much of this attention is overwhelmingly positive and hopeful in nature, and it bodes well for future governance of the Arctic regions.

There are, however, many lessons to be learned from Canada's experience of trying to develop the Arctic as a stable and reliable source of industrial and commercial enterprise. Unlike the success experienced by Norway, Canada's efforts to locate offshore petroleum resources, and to establish proven supplies of oil and gas for transport to markets in southern Canada and the United States, have roundly failed. In fact, much of the hopeful language and rhetoric heard today about the Arctic's future potential is remarkably similar to that emanating from Canadian

politicians more than 50 years ago, when Canada first launched its own national programme to examine the resource potential of the High North. Many of these failures are attributable to historical circumstances (namely, deficiencies in offshore technologies and a highly polarized political landscape), but they have a bearing on any anticipated developments. In particular, Canada's experience offers insights into the relationship between Arctic research and development that have important implications for questions of governance, both regionally and in the circumpolar Arctic.

My own research examines Arctic development in Canada and the implications for future development, but, owing to Canada's Arctic experience, it also investigates the role of future planning, which is central to this process. As such, I have studied how various experts and politicians have approached the subject of research in the High North and, to a lesser extent, where they went wrong. In particular, I explore how petroleum extraction proposals and pipelines came into conflict with economic and political factors. As I will detail below, I see great potential for linking issues of environmental change, resource development, and regional governance in the years to come. Moreover, there is much room to extend the dialogue concerning the High North beyond the European and Russian context to be inclusive of matters arising through experiences in the North American Arctic. As numerous presenters at the High North Dialogue conference noted, there are many different Arctics to be considered when imagining the Blue Future. I see great value in drawing from Canada's Arctic history and experience to contribute to these discussions.

Scenario-building and futures-forecasting

Numerous aspects of the High North Dialogue conference, as well as the Master's and PhD courses, addressed the use of scenarios as an instrument of futures forecasting. On the Master's course, scenario-building exercises were an effective means of conducting mixed-methods research involving both qualitative and quantitative analyses (Amer et al., 2013; Overland et al., 2015). Scenario exercises were also illustrative of the range of possibilities and challenges for future development and helpful in introducing young researchers to the complexities of Arctic development.

In addition to being a highly scientific process, planning for Arctic futures is in many ways a creative undertaking. After all, to envision where the Arctic will be in the year 2030, one must also have a strong sense of where it has been before that and where it will be going after. Of particular interest during the High North Dialogue workshop was the recurrent theme of imagining the Arctic—both as a natural and political landscape—over the next decade and a half. Workshops devoted to scenario-building were effective reminders that nothing is guaranteed for the future and that many people share very different ideas, not only about what that future will look like but how best to achieve it. The ability to adapt to unforeseen developments—whether they be social, political or environmental—depends largely on the ability of the existing structure of governance to be responsive to contemporary and future needs. With regard to the High North, shared regional interests, as well as common challenges to continuous resource development, enable us to imagine governmental institutions, traditionally operating at the level of the nation-state, now operating across multiple states at the regional level.

Two things were both informative and instrumental in the process of imagining scenarios and their implications for governance for the High North. Firstly, scenario exercises required a base knowledge of an assortment of social, political, economic, environmental and cultural issues. From the perspective of education, research, and pedagogy, this dimension of the Arctic

environment was a critical reminder that no one area of the High North can be studied in isolation; in the same way, problems of governance cannot be resolved according to any single doctrine of political will or preference. Rather, issues ranging from social development, energy production, to resources extraction must all be seen within networks of the knowledge, values, hopes, and abilities of the many actors involved. This fact is a reminder of the need to articulate clear and wide-ranging standards for training younger people to work in the High North. As it pertains to broader themes of governance addressed throughout the course, there is clearly greater need for recognition of the diversity and possibilities of High North development and for a deep background knowledge and understanding of the complex issues required to adapt quickly to changes that may occur. Here, the volatility of Arctic development is central.

As it relates to my own research, I was struck by the importance of Canada's experience of trying, and ultimately failing, to develop a strong and sustainable northern research programme. While the High North Dialogue largely focused on the relationship between Norway and Russia, with some attention extended to Finland and Sweden, I see great value in bringing young people together from around the circumpolar regions to share knowledge of their understanding of the High North and its future. Ensuring a strengthening of education at both undergraduate and graduate levels would go a long way to strengthening the future research network that will be needed to ensure responsive and adaptive policy-making in the years ahead. The scenarios, particularly as they were effectively presented as a collection, made clear the need for enhanced understanding of the many different issues facing the future of High North development.

A second observation concerning future development relates to the use of the past to reflect on the future. To understand how future developments will evolve, it remains necessary to anticipate the ends of development. For instance, the subject of abandonment of industrial projects was not pursued at the conference, even though it is a topic that has dramatic implications for the environmental integrity of the High North. Mining, in particular, offers an excellent example of the need to imagine a future beyond the mere starting of new development activities—to their conclusion or termination. What happens when a mine closes? What would be the local consequences if a major fish farm were to collapse? Issues related to abandonment and closure require a closer understanding of the social consequences of High North development and the need to see beyond the initial period of innovation and start-up. Greater incorporation of social indicators into the planning of future Arctic development highlights the need for a continuous commitment to growing the diverse knowledge base of the High North.

In light of Canada's experience and struggles to develop sustainable economies in the High North, there is a strong need for training and education in the fields of socio-economic monitoring throughout the lifespan of commercial development projects. Much like the scenario-building exercises, training and education require a thorough understanding of the issues and challenges of working in the High North. The scenario model could even be adapted to address social challenges, bringing together research and information from industry with regional demographic statistics and indicators. Combining industry and commercial scenarios with those specifically related to social development would allow for a sounder project selection process and expand the time horizon through the entire tenure of the project. In areas of abandonment, delay, and termination, Canadian researchers could contribute greatly to scenarios linking the concerns and interests of industry with social factors and local concerns.

The very practice of imagining Arctic futures thus opens a range of possibilities for High North development. These possibilities reveal the enthusiasm and shared interest in Arctic growth, but they also underscore the inherent uncertainty of futures forecasting.

Environmental regulation as a regional imperative

In posing questions of future growth and development, we encounter the growing influence of ecological and biophysical matters as they relate to questions of value creation, management, and governance. A second area of interest joining my own research with the materials and lessons of the High North Dialogue conference lies in the political value associated with environmental legislation. As is now clear, concerns for shared ecosystems have widened the array of stakeholders with legitimate interests in regional development. In addition, environmental concerns—and the scale at which they operate—require closer coordination between government and corporate managers (Näsi et al., 1997). Within the current context of Arctic dialogues and joint-planning, ecological concerns present perhaps the strongest argument for extending conventional state-oriented notions of governance to the regional level. As communicated in the lectures by numerous presenters, economic designs must be oriented to accommodate environmental best practices. This is a key component of what accountants now refer to as the triple-bottom-line. In the context of global climate change and the particular effects on governance in the High North, policies related to environmental, ecological, and biophysical knowledge could assist in the shift from state to regional modes of governance. How will this knowledge be shared in the future? What will its implications be for resolving conflicts that emerge or for jointly and cooperatively developing Arctic resources? Certainly, these are important questions that were raised in both the context of Norwegian-Russian relations as well as those concerning Nordic countries more generally. Here again are some lessons from Canada, which may hold some broader implications for the conduct of international relations among Arctic and non-Arctic states with interests in the High North.

Canada's ongoing territorial dispute with the United States in the Beaufort Sea exemplifies the diplomatic value of scientific and environmental knowledge. In some respects, scientific knowledge is seen to facilitate diplomatic cooperation between the two countries, despite disagreement on the boundary line between them. The collection of data concerning the mapping of the seabed, for instance, is conducted jointly by both the Canadian and American coastguard and research vessels. While the matter of adjudicating the dispute is ultimately a legal question, the fact that scientific knowledge gathering serves as a common objective between the two nations clearly compels them to work together, most likely to find a bilateral solution. As is now widely recognized among Arctic actors—and secured through various agreements by the Arctic Council concerning search and rescue, as well as oil spill clean-up—states cannot act alone in the Arctic. The shared commitment to scientific knowledge and integrity in the Arctic potentially has a role in international relations. In the High North, the free flow of scientific knowledge, data, and best practices could be used as a safeguard against the potential for escalating conflict and play an important role in mitigating tensions. In doing so, it can also help moderate and facilitate an equitable rate of commercial and socio-economic growth.

Therefore, expansion of the 'stakeholder' category, and the trans-national imperatives presented by ecological challenges, demand close cooperation in researching and sharing vital information related to developing best practices. Environmental issues must continue to be conceived as a regional imperative and require coordination of development programmes between nations. If taken seriously, this can be a source of long-term cooperation among Arctic actors and stakeholders.

High North governance and cooperation of Arctic states

In the contemporary research and development environment, there has been increased emphasis on the adoption of a stakeholder approach to strategic management. In the literature, this applies mostly to the management of businesses and organizations. As Freeman suggests, the value of this approach can be discerned by a closer understanding of the 'logic' of stakeholder theory, rather than a narrow adherence to a particular methodology (Freeman, 2004, p. 230). In any discipline there remains the potential for the methodology to shape the logic—and thus the outcome—of practices related to research, management, and governance. This insight is integral to how value is assessed and ultimately created in the High North, where there has been a recent surge in academic research and discussion around managerial practices. In particular, it highlights the need to develop and articulate the objectives and concerns regarding future Arctic development. As outlined throughout this paper, High North cooperation and development depends greatly on the coordination of governmental, corporate, and academic interests, and thus on the adoption of methods of research and organization specifically suited to this purpose. Methodologies of Arctic management and research must reflect the 'logic' of High North governance.

A strict adherence to methods designed within one discipline, but not cognizant of or responsive to the concerns of others, undermines and threatens the broader aims of regional governance. The research and collection of environmental data, for instance, requires expanding the knowledge base available to policy-makers and diplomats beyond the conventional bounds of the national interest. In creating value for the High North in the future—whether this concerns the Arctic Ocean or land-based development—there is clearly a greater need to approach development with knowledge of the transnational implications of climate change. The immediate effect of this *should* be the inclusion of non-state agents and actors in the dialogue of northern development. New opportunities for the growth of High North and Arctic studies, with a focus on international research, could then lead to the development of stronger post-secondary and graduate training and research programmes. Certainly, in North America, there is a lack of research opportunities that focus specifically on the unique aspects of Arctic research. The fact that there is a strong interest in both Norwegian and Russian education centres, as well as those of Finland and Sweden, indicates the potential for strong research networks to emerge throughout the circumpolar region. As a form of soft diplomacy, the sharing of research and educational opportunities could hold positive implications for the future of the High North.

Another aspect of High North environmental scientific knowledge and cooperative development concerns the pace of growth and regional change. As was made clear with the scenario-building exercises, if cooperation is to continue as the norm of regional relations, it is essential that Arctic states develop the shared capacity to respond to unpredictable changes. Where research can play a role in this is in helping to moderate an equitable pace of development among all Arctic states, ensuring that no nation is isolated from this process. Shared standards of technology and innovation, for instance, are essential for ensuring the most effective search and rescue response rate. The logical extension of this form of technological diplomacy is the creation of a strong pollution prevention regime, one that takes into account the common interests in protecting the High North's marine ecosystem, in particular.

In these ways—the extension of the northern research network to be more inclusive of non-state actors and researchers, and the sharing of technology and knowledge to ensure a high standard of response to unforeseen changes—research in the High North can play a pivotal role in the future of High North growth and development. Where Canada and the United States have

worked closely in recent years to jointly develop techniques for mapping the Arctic seabed and exchanging essential information related to ice-conditions and rates of climate change, there is clearly a great opportunity to extend this network to circumpolar neighbours. In doing so, a strong Arctic knowledge regime can be assured an important role in the future of High North international relations.

Conclusion

In his exploration of governance and its relevance to research, Marc Hufty elaborates the need for mechanisms of governance to act as an analytical tool that is not “specific to a particular time and space...It should be possible to use the same tool to analyse social dynamics at various levels, in different societies and times” (Hufty, 2011, p. 178). Based upon the history of development in the High North, and with regard to stated ambitions for its future, I must disagree with this point. The many presentations and exercises at the High North Dialogue conference confirm the importance of aspiring to modes of governance, dialogue, research and education that are specifically suited to the unique conditions of the circumpolar Arctic. While this entails a range of diverse situations and factors requiring solutions at different levels, it should, nevertheless, be a principle of future governance and development. Although this fact should not be the basis for excluding participants from or including them in serious discussions about the future of the High North, it must be established as the basis for any serious efforts to prepare for this future.

Based upon my own research into environmental politics and northern development, I have addressed several areas of overlap and lessons acquired from the High North Dialogue conference and workshops. The conclusions can be summarized as follows. Firstly, through scenario development and future forecasting, it is clear that High North governance entails a very wide range of complex and interrelated issues. This makes it necessary to adopt methods that are both flexible and responsive to the specific conditions of the High North. Rather than treating the inherent unpredictability of the Arctic future as a source of concern and anxiety, futures forecasting should be embraced as a means to promote enduring cooperation between stakeholders and to simultaneously commit to long-term educational and research programmes that focus on the specific and changing dimensions of High North governance. Secondly, and with this in mind, the environment itself can be viewed as an increasingly active agent in how value is determined and in what form of governance is best-suited to meet the ever-changing needs of ecological concerns. How environmental challenges are assessed is critical to the evolution of value creation in the Arctic and must therefore be forefront in the minds of planners, managers, and stakeholders. As before, the ecological issues present new opportunities to encourage regional cooperation and sustainable modes of governance. Finally, research and management must always be cognizant of the ‘logic’ of governance in the High North. Questions of governance cannot be reduced to isolated methodologies but must also evolve. For this reason, it is imperative that educational programmes be continuously supported by governments and stakeholders, and that younger generations of researchers be encouraged to participate, to grow their knowledge of the region, and ultimately to contribute to dialogues regarding the High North’s future. The education of young researchers, and the extension of education and research networks, is absolutely essential to meeting this objective. It is my hope that a growing network of researchers will be encouraged to share their research at international forums, such as the High North conference and workshops, and that those working in the Nordic and Russian Arctics will be similarly encouraged to expand their networks to the North American Arctics.

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GOVERNANCE IN THE HIGH NORTH: FROM THE HIGH NORTH to SMALL ISLAND DEVELOPING STATES (SIDS)

Neil Oculi

Introduction

The subject of climate change is so broad that its impact has been described as more than just the greatest ecological issue of our time: it is also the most significant political and moral issue of our time. Expert groups such as the United Nations Development Program (UNDP) and the United Nations Department of Economic and Social Affairs (DESA) have noted that:

“Climate change and associated sea-level rise have disproportionately greater impacts on SIDS, particularly atolls, and other small island states that have high vulnerability but low adaptive capacity. Damage from extreme events, including salinization of freshwater and agricultural land, increased flooding and forced migrations are among the challenges that SIDS are already confronting. Given the trajectory of global greenhouse gas emissions, these events will continue to adversely affect the environment and socio-economic development in SIDS.”¹¹

This paper focuses on areas in which my research has benefited from the High North Dialogue. In the assignment, I will first provide a brief background of my research. I will then underscore the importance of scenario analysis as a tool and methodological approach for my research, by demonstrating how various theoretical and practical approaches in the course can be incorporated in my own research. Thirdly, I will connect the issues of the Arctic to that of the Small Island Developing State (SIDS) to demonstrate how sea-level rise and melting ice in the Arctic region affect SIDS. Fourthly, I will discuss adaptation policies in the High North, drawing from lessons learnt / success from fisheries and other relevant industries as possible sustainable economic solutions for SIDS.

Background

One of the most dominant schools of thought in international relations is that small states do not matter because of their lack of military and economic capabilities. This realist worldview assumes that Small Island Developing States (SIDS) are irrelevant in international negotiations. As Thorhallsson and Wivel (2006) indicate, the most conventional definition of small states would be in terms of their “capabilities, that is, the possession of power resources in absolute or relative terms.” Meanwhile, climate change and the outcomes of international climate negotiations will determine their survival. However, SIDS are independent nations and have a right to sovereignty. Therefore my research question is this: How can SIDS exert their interest in global climate change politics? In order to unpack this question, my research analyses SIDS’ vulnerabilities within a

¹¹ Outcome of the UNEP-UNDESA Workshop on SIDS Emerging Issues 14-16 MAY, 2013
Cambridge, United Kingdom (Preliminary Version)

socioeconomic, geophysical, and political framework to understand how they can exert their interest in global processes such as the United Nation Framework Convention on Climate Change. There are important themes governing my research: vulnerability assessment; sea-level rise; and adaptation and mitigation policies.

As Ashe et al. (1999) explain, “The geopolitical realities at the international level in general, and at the United Nations in particular, are such that the small states of the developing world have been lumped together with neighbouring continental states in regional groups.” Such classification or arrangement may make sense at the geopolitical level but negates or ignores the special circumstances of small-island and low-lying coastal states—with small populations, limited natural and human resources, and dis-economies of scale with single or few export goods—that make them vulnerable to external shocks. Because small states are historically grouped into all-encompassing developing countries (the Group of 77 and China) within the UN processes, they are at a disadvantage when competing for multilateral funds for country-specific programmes. The insularity and remoteness of these small states, as well as the fact that they must compete with continental developing countries for resources, made it clear to these small nation states: in order to survive, they must not stay on the sidelines but have legitimate and autonomous claims at the negotiations. These realities led to the formation of the Alliance of Small Island States (AOSIS).

AOSIS is a coalition of small-island and low-lying coastal countries (with a membership of 44 states and observers) that share similar development challenges and concerns about the environment, especially their vulnerability to the adverse effects of global climate change.¹² AOSIS represents the voice of SIDS within the UN processes.

SIDS are among the most vulnerable states as a result of many geopolitical factors such as size, location, systems of government and production. These countries are highly dependent on the ocean and its resources for their survival. However, current patterns of consumption, production, and development have triggered global climate change, resulting in sea-level rise, which in turn threatens the livelihood and sovereignty of these small and vulnerable island states. The shared vulnerabilities of SIDS have led to the formation of AOSIS, an important ad hoc coalition of nations, whose cultural heritage, languages and economies differ greatly. The overarching principle or goal that unites AOSIS is their shared vulnerability to climate change.

Scenario analysis

Scenario studies are becoming more useful, in both policy and academia. Amer et al. (2013) explain that, “In the present era characterized by uncertainty, innovation and change, increasing emphasis is being placed on the use of scenario-planning techniques because of its usefulness in times of uncertainty and complexity. Scenario-planning stimulates strategic thinking and helps to overcome thinking limitations by creating multiple futures.” This is a relevant approach in implementing strategies to deal with climate change. One of the important aspects of my research is to help formulate policies. In order to do that, it is important to try to predict the future as accurately as possible. There are many tools to help determine the future. One of those is science. Use of the best science that is available helps to formulate concrete policies extending into the future. Scenario analysis within my research will help with the governance of SIDS. In respect of governance, Stoker (1998) outlines five elements:

¹² About AOSIS <http://aosis.org/about-aosis/>

“Governance refers to a set of institutions and actors that are drawn from but also beyond government.

Governance identifies the blurring of boundaries and responsibilities for tackling social and economic issues.

Governance identifies the power dependence involved in the relationships between institutions involved in collective action.

Governance is about autonomous self-governing networks of actors.

Governance recognizes the capacity to get things done which does not rest on the power of government to command or use its authority. It sees government as able to use new tools and techniques to steer and guide”.

I argue that scenario analysis intertwines with governance. This argument is in line with Professor (Emerita) Salme Nasi’s lecture, in which she demonstrated that sustainable development and governance are critical elements for policy prescription. In his lecture, Professor Indre Overland argued that it is very difficult to predict the future because of many uncertainties. In climate research, a major uncertainty is the fact the process-based models cannot capture the full response of the Greenland and Antarctic ice sheet. This creates policy implications. However, my research seeks to better understand vulnerability. The assessment of vulnerability to climate change aims to inform the development of policies that reduce the risks associated with climate change (Füssel and Klein, 2006). Employing scenario analysis to the assessment of climate vulnerability provides a concrete and practical way to visualize the future, in order to try to mitigate the adverse effects of climate change.

By evaluating the impacts of climate change on SIDS, I can provide various scenarios to help guide policy within SIDS. The time-honoured methodologies, used by Overland et al. (2015) to describe three possible scenarios for Barents Sea oil and gas for 2025, provide a very useful approach to explore. As indicated by Overland et al. (2015), such scenario approaches do not attempt to forecast or make projections; instead, they find alternative possibilities that utilize the unpredictable nature between multiple factors. This is very important because of the multifaceted complexities of climate change and its many uncertainties. This approach understands the importance of human interaction by Norwegians and Russians in the Barents Sea and has crafted the scenarios to reflect these interactions. Human interaction cannot be overlooked when examining the implications of climate change within SIDS. Overland et al. (2015) provide a framework to include more human interaction in my own research. By utilizing a radar diagram as explained in both the various workshops and literature of the course (Overland et al., 2015), I can visually demonstrate the unique fingerprints of various scenarios and their uncertainties.

Sea-level rise

One of the biggest issues threatening the High North is sea-level rise. One reason for this is that the temperature in the Arctic is rising two to three times more than the global mean. However, much of the talk during the conference indicated that the Arctic is a treasure box of resources, if it is harvested sustainably. In her presentation, Grete Ellingensen, State Secretary, Norwegian Ministry of Local Government and Modernization, echoed these sentiments. As previously indicated, there are many uncertainties when predicting sea-level rise and what may be deemed

sustainable may present more challenges in the future. Even with the most robust climate model projection, there will still be many uncertainties when evaluating sea-level rise, on both a global and regional scale. While much work is being done to reduce these uncertainties, the Coupled Model Intercomparison Project Phase 5 (CMIP5), used in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, does not incorporate the dynamic response of the ocean to meltwater input or the glacial isostatic adjustment (GIA)/rotational/gravitational processes associated with this ice mass loss (IPCC, 2013). Whatever happens in the High North affects the realities of SIDS. For this reason, I am interested in the policies of the High North and how the ocean is managed.

One implication of sea-level rise is that it increases coastal vulnerability. Coastal vulnerability encompasses several constantly changing bio-geophysical, climatic, and non-climatic factors (Addo, 2013; Ramieri et al., 2011) (Table 1). Some of these include “height and direction, wind speed, water depth, sediment supply, removal and transport along the coast, strength of tides, rates of relative sea level change, as well as rainfall and the frequency and intensity of extreme meteorological and climate events, including storm surges” (Ramieri et al., 2011).

Bio-geophysical effect		Other relevant factors	
		Climate	Non-climate
Permanent inundation		Sea level rise	Vertical land movement (uplift and subsidence), land use and land planning
Flooding and storm damage	Surge (open coast)	Wave and storm climate, morphological change, sediment supply	Sediment supply, flood management, morphological change, land claim
	Backwater effect (river)	Run-off	Catchment management and land use
Wetland loss (and change)		CO ₂ fertilisation, sediment supply	Sediment supply, migration space, direct destruction
Erosion	Direct effect (open coast)	Sediment supply, wave and storm climate	Sediment supply
	Indirect effect (near inlets)		
Saltwater Intrusion	Surface waters	Run-off	Catchment management and land use
	Groundwater	Rainfall	Land use, aquifer use
Rising water tables/impaired drainage		Rainfall	Land use, aquifer use

Table 1 Bio-geophysical effects of sea level rise including relevant interacting climate and non-climate stresses. Source: Ramieri et al. (2011).

Adaptation

One of my personal highlights of the conference on The Blue Future of the Arctic was my dialogue with Aaja Chemnitz Larsen, Greenlandic Member of the Danish Parliament. We had a very intellectual and thoughtful conversation about the politics of the High North, especially regarding the Greenlandic/Danish relationship. Much of our conversation focused on climate change and adaptation, in the context of both the High North and SIDS. We expressed our concern in respect of the deglaciation of the Greenland ice sheets. There is strong evidence that total or partial

deglaciation of the Greenland and West Antarctic ice sheets may contribute to a large increase in sea-level rise (Nicholls et al., 2007; Parry, 2007). Such sea-level rise will negatively impact the adaptive capacity of both SIDS and Greenland.

Aaja Chemnitz Larsen explained that the two largest municipalities in the world are in Greenland. I agree that development in the Arctic should focus on the human dimension. A major part of my research examines social vulnerability and the human dimension of climate change adaptation. As with SIDS, the economic situation in Greenland is very fragile. Greenland is taking steps towards independence, which I can relate to my research, since most SIDS are former colonies and some are still colonies. An important area of adaptation is the idea that countries have the right to self-government.

Adaptation policies and actions are decided based on financial, technical and institutional resources. As indicated by Aaja Chemnitz Larsen, there is a growing international perspective in the Arctic region and Greenland, but the primary interest must be the people of the Arctic. A holistic approach to the human dimension of the Arctic is of paramount importance. The EU seal ban has affected the livelihood of Greenlanders, costing them millions of dollars. Fisheries, mining, tourism, and industries are the key drivers for economic growth, with fisheries playing the main role in food and the economy.

Adaptation presents multiple challenges because it involves the nonlinear dynamic of socio-ecological systems. It also involves competition among multiple management goals at various levels. As indicated by Perry (2015), "Climate change adaptation is a wicked problem." Adaption policies and implementation for both SIDS and the High North, especially within coastal communities, is characterized as this "wicked problem" that is driven by physical, environment, and human drivers (Fig. 1). In describing a "wicked problem", Perry argued that a major constraint in dealing with climate change is that "There are no clear-cut solutions, and stakeholders at each site disagree on values, norms and first steps, making adaptation difficult. Yet, delaying action poses more risks than taking action under uncertainty."

There are many lessons that SIDS could learn from both research and policies within the High North. Countries like Norway have been able to successfully implement and modernize the fisheries industry as they adapt new technologies to deal with the growing demand for seafood. Like Norway, SIDS depend on the ocean or sea to foster economic stability. It is important that policy-makers within SIDS work with those in the High North, especially at the international level, through various treaties such as the United Nations Convention on the Law of the Sea (UNCLOS) and The United Nations Framework Convention on Climate Change (UNFCCC).

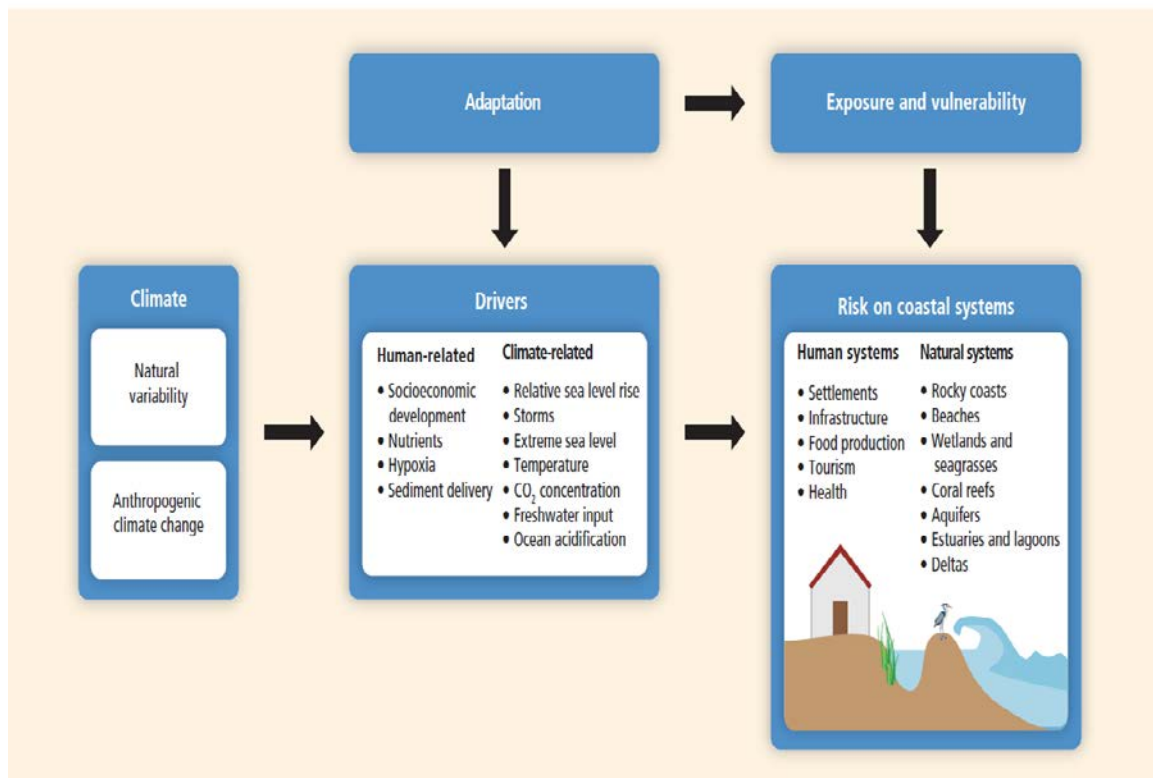


Fig. 1: Climate, just as anthropogenic or natural variability, affects both climatic and human related drivers. Risk facing coastal systems is the outcome of integrating drivers' associated hazards, exposure, and vulnerability. Adaptation options can be implemented to modify either the hazards or the exposure and vulnerability, or both. Source: Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) by Working Group II (2014)

Conclusions

Climate change is one of the biggest challenges facing mankind. The paper summarizes some of the implications of climate change for both the High North and SIDS. It is clear that, whatever happens in the High North in terms of sea-level rise or exploitation of natural resources, it will impact SIDS, both geophysically and socioeconomically. Sea-level rise in the High North is increasing much faster and affecting coastal communities. Adapting to these changes requires immediate actions. While it is extremely difficult to predict the future, scenario analysis provides one framework to help prepare for the challenges that climate change brings. This paper calls for greater synergies between the High North and SIDS at the international level, through global environmental treaties such as UNCLOS and UNFCCC.

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FEELING THE FUTURE: THE AMBIGUOUS POWER OF ANTICIPATORY STRATEGIES

Valeria Guerrieri

Abstract

Anticipatory strategies such as scenario-planning are increasingly employed in different sectors and considered valuable tools of governance. Drawing from my experience as a participant at the High North Dialogue 2016, I argue in this paper that these anticipatory practices, highly praised by both academics and businesses, often reveal particular and biased visions of the future, stressing some aspects and inevitably omitting others.

By connecting the presentation of scenarios to the development of energy infrastructures such as pipelines, I suggest that what these future plans have in common is the ability to exercise a rather ambiguous form of power by means of hope. Hope is in fact addressed here, not as an inherently passive feeling but, on the contrary, as profoundly dynamic and—because it is exposed to a more or less high degree of manipulation—also capable of mobilizing action.

I emphasize then that through anticipation, which is the very particular and productive temporal disposition set into motion by hope, the future is made alive in the present, thus not only creating a more intense awareness but also encouraging people to shape their behaviours, choices and aspirations, according to the future which has been anticipated for them.

The High North Dialogue 2016: A premise

During the High North Dialogue 2016, students and scholars of diverse disciplines, together with the representatives of the major Arctic industries, including oil and gas, mining, fishing and shipping, gathered in Bodø (Norway) “...to discuss and develop ideas for the future of the Arctic region”¹³. Before the two-day conference, where the main theme was ‘The Blue Future of the Arctic’, MA and PhD students, divided into groups, were assigned the task of building three scenarios for the development of the High North in the next 16 years, including the implications for a specific sector. Being one of the course participants, I was directly involved in the scenario-planning exercise, which resulted in a ten-minute presentation and was eventually evaluated by a very diversely composed jury. The group awarded the highest score was then given the opportunity to present their three scenarios during the conference, in front of a quite assorted audience of experts, academics, representatives of industries and think tanks. The High North Dialogue, which this year celebrated its 12th edition, is to be placed within a wider framework of public arenas focused on the Arctic (such as, for example, the Arctic Circle or Arctic Frontiers), where the recurring use of anticipatory strategies, and of scenarios in particular, is encouraged and supported.

Scenario-planning: Predicting or inventing the future?

Before analysing the kind of future that is proposed during public gatherings such as the High North Dialogue (HND), I would like to explain what scenario-planning is and in what fields it has been employed.

¹³ From the Program of the HND 2016, available at <http://www.highnorthdialogue.no/previous-conferences/2016-high-north-dialogue/> (Accessed 30 May, 2016)

First of all, it is worth stressing that scenario-building is one of the most commonly used methods in foresight. Differently from forecasting (Armstrong, 1985; Martino, 1983), which consists of estimating what the future might look like by means of mainly quantitative methods (calculations, statistics), foresight is the process “...of creating an understanding and appreciation of information generated by looking ahead” (Coates, 1985, p. 30). Through the use of mostly qualitative methods and the participation of different actors, foresight aims to generate visions of the future which—because of the communication effect produced by the pre-assessment of the future (Martin and Johnston, 1999)—will inevitably direct decisions in the present. In this sense, it is essential to emphasize that the communication aspect is itself considered to be at the basis of foresight (Cuhls, 2003) and, consequently, also of scenarios. Despite the various uses that have been made of them, scenario techniques are originally “firmly rooted in the military” (Bradfield et al., 2005, p. 797) and have been widely used by military strategists in so-called war game simulations. Back in the 1960s, Herman Kahn, nuclear strategist and one of the most famous futurists, defined scenario-planning as a “set of hypothetical events set in the future constructed to clarify a possible chain of causal events as well as their decision points” (Kahn and Wiener, 1967, p. 6). Kahn, who was the head of strategic planning at the US Research and Development Corporation, believed that scenarios could help “think the unthinkable” and find alternatives to otherwise already written futures. His methodology was soon also applied to public policy and since then has been broadly used in both the private and public sectors.

At a corporate level, the multinational oil and gas company, Royal Dutch Shell, is known for having been a pioneer in the exercise of foresight, thanks to the scenarios built by Pierre Wack and his colleagues (Wack, 1985a; 1985b). The approach developed by Shell, the so-called “intuitive logics school” (Coyle, 2004), consists firstly of identifying some key assumptions or driving forces, which will somehow influence the success or failure of a specific choice (e.g. an investment); the second step is aimed at determining some uncertainties, which, depending on whether they are given a higher or lower value, will also have an impact on the building of the scenarios. Combined together, driving forces and uncertainties will then produce a scenario, which, if assumed to turn into reality, will also have certain implications. Pierre Wack’s planning abilities are believed to have significantly helped Shell to foresee the 1973 global oil crisis and to consequently prompt the company to anticipate and adapt to the ensuing crises. However, it is worth emphasizing that scenarios are not developed by one person alone but are rather the outcome of a wider collaborative process involving different parts. As in fact highlighted by Willmore (1998, p. 2), “Most scenario planning takes place, initially, within a team context”. The presence of multiple participants is then seen as an essential element to test the consistency and plausibility of the scenario, which will also be more meaningful and relevant if it has been reviewed by different members.

During my involvement in the scenario exercise, my team was composed of nine people, all from very different cultural and academic backgrounds. One of the moments that I personally found most challenging was the initial phase, which I called “brainstorming”, which, as I explained to my team, consisted of identifying all together the core assumptions, i.e. the most relevant factors that would surely affect the development of the Arctic in the next 16 years. As we were told during the morning lecture, this step being unavoidable and necessarily the first one to take in order to begin our scenario-building, in the case of disagreements within the group, we should have considered the assumptions under dispute rather as uncertainties, which would then be further discussed in the second phase. However, the fierce objections expressed by some members of the team regarding the degree of certainty of some factors, such as for example the rise of non-Arctic states or unstoppable technological development, made the brainstorming

phase very long and often difficult to handle. Therefore, after a couple of hours, I began to realize that what was going on within those four walls was not simply a spontaneous generation of ideas meant to be communicated to me and written down on the blackboard but an actual negotiation, of which I was expected to be the moderator. Somehow, despite not being immediately aware of it, I had been placed within what Torre et al. call a “messy social space” (2008, p. 25), an arena where the interactions among the several participants are inevitably bound to be messy and often hostile but ultimately also productive. Throughout the brainstorming, I was often drawn into negotiating between conflicting views (Askins and Pain, 2011) or even pushed to end some persistent arguments, by stressing my (assumed) more authoritative/persuasive opinion as the only PhD student among eight Master’s students.

Now, although I am completely conscious that scenario-building is usually enacted within more ‘organized’ contexts, where the people who are involved can rely on a solid experience using this technique, nevertheless I found the exercise performed within the Nord University ‘microcosm’ incredibly interesting and quite revealing. I will try to explain here why.

It is important to know that, in spite of some criticism (Schoemaker, 1993; 1998), scenarios are generally considered useful tools to call attention to some—more or less realistic—possibilities and, by doing so, to strategically direct action in order to prevent or accelerate their realization (Amer et al., 2012; Hiltunen, 2009). Therefore, I do not intend here to assess the validity of this technique; rather, my intention is to investigate how scenario-planning inevitably ends up creating particular visions of the future. In this sense, participating in person in the contested building of a scenario and directly experiencing, hour after hour, the multiple disputes and the subsequent achievement of compromises, has encouraged me to reflect on how the visions of the future that emerge from the scenarios are discursively constructed. I argue in fact that, in the intersections of the multiple points of conflict which arose during our brainstorming, a more or less conscious power exercise was enacted by each of the group participants, who inevitably tried to make his/her vision of the future appear more plausible and relevant, by excluding or contesting the others. This attempt to focus the attention on particular and biased images of the future was, in my opinion, present also in the context of the HND conference, where—throughout the different presentations—some key factors or assumptions were highlighted and others were authoritatively neglected. Therefore, I suggest that gatherings like the HND, in which the future is continuously discussed and powerfully communicated to the audience, are also the settings in which certain discourses—and therefore truths—are produced and articulated.

I use the word ‘discourse’ here with clear reference to the French philosopher, Michel Foucault. According to Foucault, in fact, a discourse is “a limited number of statements” (1972, p. 117), which embody only a particular way of talking about and understanding a specific phenomenon, consequently ruling out other possible interpretations of the same. Discourses, which are the product of power, are, at their source, both constraining and productive at the same time, because if, on the one hand, they exclude some perspectives, on the other hand they also create and help circulate truth or, at least, what is believed (and accepted) as truth. Discourses thus “arrest the flow of differences” (Laclau and Mouffe, 1985, p. 112) and, by reducing the possibilities, exercise a control on what can be said and what cannot be said, what has to be perceived as true and what as false. In the same way, as I see it, scenario-building is a foresight strategy, which discursively selects some ‘truer’ visions of the future and consequently marginalizes others. In fact, although not completely excluding other possibilities—it is worth noticing in fact that often, including during the conference, different and contrasting scenarios are presented at the same time—the projections are always more or less explicitly influenced by

the goals of the actor who is in charge of them, whether it is a company, an organization or an individual.

In this sense, Management Professor Paul Raimond poses an interesting question in one of his articles, by asking: “Are we predicting the future or inventing it?” (1996). As he explains, if prediction is a forecasting strategy focused on evaluating the external market forces and conditions which might influence the development of the company and make predictions accordingly, invention is much more creative and relies more on the personal skills of the strategist, who believes that, since the future market cannot be predicted, it is then necessary “to create dominance” (p. 209). Although Raimond’s research interests lie mostly in strategic thinking applied to companies, I nevertheless find it quite interesting to question and investigate the nature of foresight and other anticipatory strategies. As a result, I am more inclined to think of these as not merely (or possibly not at all) aimed at predicting the future but, rather, at creating specific conditions and supporting specific discourses in the present.

The power of hope

In my research project, *The Productive Power of the Pipeline*, I analyse how energy infrastructures, specifically pipelines, even when they are still at a proposal stage and thus not physically built yet, nevertheless manage to trigger enormous transformations in the regions they are expected to cross.

The reason why this happens, as I suggest, is because pipelines are very powerful entities, which are capable of exercising a certain degree of control and influence by means of their potentiality. As potential objects—and by ‘potential’ here I mean something which, although not yet existing, does produce some manifestation in the actuality (Agamben, 1999)—these not-yet-built infrastructures become capable of producing very strong effects and of deeply affecting choices, behaviours and policies in the present.

As I see it, the same line of thinking can be applied to the scenarios which are proposed during public events such as the HND. Although, as I have previously explained, these anticipatory strategies have become a fundamental tool of modern governance and business development, I believe that the study of instruments of foresight should not stop at a mere description and review of their methods and different employments. It should first of all acknowledge their huge influence as tools, not to predict the future but to proactively move towards it. Like pipelines, anticipatory practices push people to envision a future which, although not yet there, feels extremely vivid in its present-ness.

At this point then one could easily ask: How do they succeed in doing so? How can pipelines or future scenarios actually manage to be so present in spite of their (concrete) absence? My answer is that they succeed in doing so, by instilling a very powerful and yet equally neglected feeling: hope. I will try to further elaborate on this.

In 1997, Sarah Franklin forged the expression “hope technology”, with reference to In Vitro Fertilization (IVT); what she meant was that, in the case of IVT, it was the hope that it instilled in the patients, more than its concrete (positive or negative) outcome, that made IVT always appear a desirable option (1997, p. 203). In my project, I argue that, in the case of energy technologies such as pipelines, although these have often been criticized as the least desirable option in comparison for example to greener energy sources, nevertheless, they have contributed to the generation of hope and, by doing so, they have structured people’s lives in anticipation of the future. ‘Hope’ then is here to be interpreted as a very pro-active feeling, endowed with the ability

to produce expectations and make a certain future appear in the present as tangible, possible to achieve (Lynch, 1965).

In the same way, I would argue that, when a scenario is built and particularly when it is communicated to a larger audience, in that moment it acquires a very peculiar promissory quality; a scenario does not promise that something will surely happen (given the probabilistic nature of this method) but, rather, that something will inevitably change in the future and we need to be prepared for that. It thus generates hope, which as we know can assume both a positive or negative connotation: one can hope that something materializes and then do everything possible to fulfil that goal or, conversely, hope that it never does and therefore make all possible efforts in order to prevent an undesired future from becoming reality. It is in this sense that, in my project, I describe pipelines as hope technologies, not because they actually embody the most desirable energy solution but because they have managed to persuade those relationally connected by them that transformation is possible and that the future cannot be passively accepted as inevitable.

The first result of this persuasion is an incredibly proactive attitude which, once it has been recommended and eventually embraced by the majority, is also extremely hard to give up. The power of persuasion, which I assume to be embedded in specific technologies, is a deeply ambiguous one and, as I intend to suggest, exercised also within scenario-building. Scenarios in fact need to be persuasive enough if they aim to be seriously taken into account and to stimulate a concrete response from those who listen to them. Thus, the more hope they succeed in instilling in their recipients, the more persuasion and, consequently, control they can expect to achieve.

What I want to hint at here is that hope, while being as equally powerful as powerfully manipulated, can be regarded as what Foucault called the “technology of power” (1988). In this sense, hope is instilled with the precise goal of directing people’s behaviour and thus producing certain desired effects (Rose, 1999). Technologies of power, according to Foucault, in fact, “...determine the conduct of individuals and submit them to certain ends or domination, an objectivizing of the subject” (Foucault 1988, p. 18). One can thus say that future scenarios—including those which might foresee the achievement of increasing oil and gas development, thanks to the building of new pipelines—exercise power through methods of developing, encouraging and sustaining hope. However, as previously stressed, far from being a passive feeling, hope, once generated, is also used to activate concrete anticipatory mechanisms, which allow the future scenarios to vividly—and strategically—materialize in the present.

Anticipating the future, in the present

This kind of inherently active temporal disposition that hope triggers is a rather interesting one and will be identified as anticipation (Bloch, 1986). Sara Ahmed, the main representative of the so-called emotional turn, characterizes anticipation as “affective as an orientation towards the future, as that which is ahead of us, as that which is to come” (2010, p. 181). This orientation, however, is not some form of ideal projection towards a future, which we hope will (or will not) materialize, but requires us instead to self-consciously direct our behaviour in the present. Anthropology Professor, Gisa Weszkalnys, who has conducted studies on oil futurities, emphasizes that “to anticipate is not to simply expect it; it is to realize that something is about to happen and, importantly, to act on that premonition” (2014, p. 212).

According to Weszkalnys, anticipation is therefore a deeply affective state, in the sense that it prompts people to not passively wait until the “not yet” becomes present but to proactively engage themselves in what she calls “a temporal politics of a disaster yet to come”. Although in Weszkalnys’s analysis, the temporal politics is explicitly directed to prevent the economic disaster associated with oil exploration in African states, I believe that it could be useful to also apply this particular temporal disposition to other contexts and especially those where resource extraction plays an important role. Hence, by drawing on this theoretical perspective, I suggest in my project that the Arctic, as a resource-rich region, has been the setting of a temporal politics based on the anticipation of a future yet to come (Sejersen, 2015): a future where pipelines are there, anchored to the ground, in all their tangible materiality. In this sense, I state that, by only potentially being there, pipelines have nevertheless succeeded in activating the mechanism of anticipation (Nuttall, 2007): this has encouraged people to come together, to take a position either in favour of or against their building and consequently to become pipeline stakeholders. There is then an inner aspect of productivity in this temporal process, which becomes evident if we think about how anticipation works. In this sense, during the HND 2016, Researcher Elana Wilson Rowe from the Norwegian Institute of International Affairs delivered a very insightful presentation on “Thinking About the Future”. Her talk, which presented examples from un-built (so-called ‘ghost’) energy projects, was centred on how predicting the future often ends up radically affecting the present we live in. In an article published a few weeks before the conference, Rowe wrote that “Expectations or ideas about the future then morph into concrete actions that make the predicted future more likely to come about” (2016). Hence, anticipating not only means talking about the future (as expected during events like the High North Dialogue) but also growing a deeper consciousness about it, thus prompting concrete action in the present. Anticipating entails being ready for whatever the future may bring and being ready now. In this sense then, I argue that preparedness is a complex, hectic and escalating process, resulting in a huge amount of documents, programmes and reports which surround different events—whether it is the construction of pipelines or the fulfilment of a future scenario—and contribute to making people (feel) ready.

In my project, in order to better illustrate this process, I have decided to focus my attention on the Mackenzie Gas Project negotiations in Northern Canada, during which a massive series of policy documents, environmental and social impact assessments, newspaper articles and books have been released as part of a specific anticipatory strategy. Then, quoting anthropologist Rebecca Bryant, one can argue that the temporal politics which is set in motion by the (potential) pipeline—as much as the (potential) scenario—is one that “brings the present into consciousness, creating an awareness or perception of present-ness that we do not normally have” (2016, p. 1). Bryant calls this sense of present-ness the “uncanny present” and refers to it as a state in which the present becomes “anxiously visceral to us as a moment caught between past and future” (p. 2). Quite interestingly, I notice that this “uncanny present” is one where the past, and not merely the future, also plays an important role. If we look at the indigenous testimonies made during the Berger Inquiry in Northern Canada, the past is continuously used as a strategic tool in order to emphasize how present choices will inevitably also have an impact on the continuity established in the past. So in this sense, a pipeline is often regarded as a new instrument of oppression that reiterates the old colonial relationships or threatens the traditional livelihoods and the land that indigenous peoples assert to have maintained for thousands of years. Again, as Bryant brilliantly points out, “We acquire a sense that what we do in this present will be decisive for both the past and the future, giving to the present the status of a threshold” (p. 2). Present hope and consequent present anticipation then manage to both keep the past alive and, at the same time, to promote specific visions of the future that will be.

Conclusion

I find it most fascinating and relevant to look at how, especially within resource-rich regions such as the Arctic, anticipation is set in motion and how hope appears to be inextricably linked with political activism (Ahmed, 2004; Roseneil, 1995; Roseneil and Seymour, 1999).

I have here used my experience at the High North Dialogue 2016 to investigate the nature of anticipatory strategies such as scenario-building and to combine it with my current work on pipelines' construction in Northern Canada. As I have tried to suggest, there are some technologies—whether these are energy infrastructures such as pipelines or foresight techniques like scenarios—which, through their inherently potential character, can be used to exercise control.

In this sense, I have argued here that scenario-building can also be addressed as a government technique, since, although portraying a future which is only potentially there, it nevertheless contributes to shaping conduct, by leveraging the aspirations and the desires of the actors who are the intended recipients of this anticipatory practice. Because of the opportunity to directly participate in the building and the communication of a scenario, I found the High North Dialogue—as one of the biggest gatherings specifically focused on Arctic governance and involving a very diverse set of Arctic stakeholders—a particularly revealing context. Here, the Arctic, constantly materializing in every presentation and debate, proved to be also the perfect setting, where hopes and visions of the future are now being strategically employed to influence choices in the present.

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ARCTIC GOVERNANCE: THE ROLE OF THE ARCTIC COUNCIL

Zhaklin V. Yaneva

Introduction

Considering the Arctic's great potential in natural resources, for most of the 20th century it has been seen as "a space for robust expressions of sovereignty so that the national security of the state might be secured" (Heininen, 2014, p. 244). During the Cold War, this remote region turned into an exceptionally militarized zone due to its geostrategic importance as a meeting point between two great powers. Nevertheless, the Arctic has always been part of the world's affairs, both politically and economically, and this importance is currently being reinforced: the region is rapidly changing as a consequence of the global process of climate change and "a suite of factors that we commonly group together under the rubric of globalization" (Young, 2010, p. 164).¹⁴

According to Skagestad (2010), these new circumstances served as a catalyst for the gradual opening of the High North¹⁵ to more intensive human activities, as the sea-ice is receding and creating a wide range of opportunities. These include increased commercial shipping through the maritime routes along the Russian and Canadian coasts—Northern Sea Route and Northwest Passage—and via the North Pole; further oil and gas extraction and exploitation; the possibility to extend continental platforms; new commercial fisheries; and ship-based tourism. It is certain that "These prospects are creating high expectations about the economic potential of the Arctic but also concern about this generating conflict between the Arctic countries" (Advisory Council on International Affairs, 2015, p. 54). In addition, it is difficult to be sure whether the potential could compensate for or even balance the associated risk for the fragile environment and traditional indigenous lifestyle, as the new prospects are, "in large measure, surface manifestation or symptoms of change rather than underlying drivers of change" (Young, 2010, pp. 167-8).

The role of the Arctic Council in the governance of the region is described generally by the present paper, which is part of a wider study that analyses a specific aspect of the council's activity: namely, its role as mediator between the different interests in order to maintain peaceful relations in the area and, ultimately, prevent greater conflicts.

The role of the Arctic Council in the governance of the region

With regard to the ongoing metamorphosis, the Arctic region has become an area with a complex legal and institutional structure, where the Arctic Council (hereinafter, the council or the AC)—the most prominent circumpolar institution and main political forum fostering cooperation

¹ Briefly, the globalization is characterized by power transition, rise of emerging markets and increased interconnection between actors on the international scene.

² Skagestad (2010) observes that the term "High North" was introduced as English equivalent of the Norwegian *nordområdene* (the northern areas) in the mid-1980s, eventually becoming adopted by the Norwegian authorities at the beginning of the 21st century. This term is mainly used by the Nordic countries to refer to their territory north of the Polar Circle, while the other Arctic states tend to refer to their "Arctic" regions, meaning the region north of the forest line or the 10°C isotherm for July.

among governments, indigenous peoples¹⁶ and the scientific community—brings together not only the Arctic states but also a growing number of observers on relevant Arctic topics. Nowadays, the council has become the primary intergovernmental forum in the region, as it was created to address the abovementioned challenges to the Arctic's future in recognition of the fact that policy-makers need scientific collaboration in envisioning appropriate solutions, while constantly adjusting to the changing environment.

An analysis of the council's role in the region supposes that some attention is paid to governance issues: the functioning of the AC is usually analysed through the lenses of international regimes and state-to-state relationships, often leaving aside analysis of the sub-state unit (Spence, 2014; Stoker, 1998).¹⁷ Since its introduction into political science, the concept of governance has enjoyed an impressive acceptance by academia as it “involves a shift in the analytical and theoretical focus from ‘institutions’ to ‘processes’ of rule and announces the eclipse or erosion of state sovereignty,” stressing that “There are important mechanisms of social regulation besides the state” (Lemke, 2007, p. 53; see also Hufty, 2011) that “do not rest on recourse to the authority and sanctions of government” (Stoker, 1998, p. 17).

Therefore, the governance theory searches for mechanisms that foster coordination, cooperation and harmonization, addressing all interested parties in promoting the consultation and/or implication of the whole variety of societal and economic actors (referred to as partners or stakeholders), while stressing the need for political consensus and collective problem solving. In this conceptual frame, conflicts are not regarded as a threat but rather as a means of social progress. Thus, according to Haftendorn (2013, p. 13), “In cases where both state and hierarchy are lacking, coordination has to be based on voluntary commitments and compliance” in the form of negotiation, accepting compromises, granting mutual concessions or simply bargaining. Accordingly, the Arctic Council should be understood as an alternative governance model that is successful in its own right.

Creation of the Arctic Council

The time at which the council was established was not just a fortuity. Rather, it resulted from the complex transition within the system of international relations after the end of the Cold War and the disappearance of the bipolarity, when the world was strictly divided between the United States and the USSR. Gorbachev's famous speech in Murmansk is often regarded as the starting point of the Arctic's metamorphosis. In this iconic discourse, the Soviet leader referred to the region as a “zone of peace” and called for improved cooperation, which eventually supposed “the opening of the Arctic to a variety of initiatives framed in circumpolar rather than global terms” (Young, 2010, p. 168).

The small Arctic states responded quickly and took the lead, launching a series of important initiatives aimed at promoting cooperation and collaboration between the regional stakeholders.

¹⁶ The founders of the AC provided unprecedented active participation of the Arctic indigenous communities, whose representatives became permanent participants who should be consulted before the adoption of any relevant decision. The indigenous representatives include: the Aleut International Association, the Arctic Athabaskan Council, the Gwich'in Council International, the Inuit Circumpolar Council, the Russian Association of Indigenous Peoples of the North and the Saami Council.

¹⁷ Stoker defines them as follows: “International regimes are systems of norms and roles agreed upon by states to govern their behavior in specific political context or issue areas ... a response to the challenge of governing without government.”

In this regard, Finland started the Rovaniemi Process, which culminated in 1989 with the adoption of the Arctic Environmental Protection Strategy (AEPS),¹⁸ from which, on a Canadian initiative, the Arctic Council evolved, after the adoption of the Ottawa Declaration in 1996. Meanwhile, Norway laid the foundations for cooperation in the Barents region.

Therefore, by the beginning of the 21st century, the wide network of cooperative activities in the region had turned the High North into a distinct area with a policy agenda of its own, in which the Arctic Council had acquired the status of the prime “linchpin of the Arctic governance” (Haftendorn, 2013, p. 15), as it was created to pursue partnerships between Arctic states and indigenous peoples as well as the harmonization of national agendas. Functioning in all spheres, the only exception was defence matters and military security, explicitly prohibited within the constitutive resolution.

On the other hand, over recent decades, the High North has started to attract increasing international attention, not only from the countries that surround it but also from a number of other state and non-state actors interested in influencing the decision-making process on the future of “the last frontier on Earth” (Stavridis, 2013). The region, thus, emerged from being a marginal periphery during the Cold War, when the two superpowers were confronting each other in a demonstration of muscle without serious conflicts, into a “centre of geopolitics, as melting Arctic ice transforms the region from one of primarily scientific interest into a maelstrom of competing commercial, national security and environmental concerns, with profound implications for the international legal and political system” (Ebinger and Zambetakis, 2009, p. 1215).

Functioning of the Arctic Council

As Nord (2106, p. 58) states, the Arctic Council is the “product of a number of necessary compromises between those countries and groups that have combined to bring it into operation” and, thus, its member states, permanent participants and observers act together to represent the whole variety of perspectives and priorities within the circumpolar region. In its activity, the council is assisted to provide anticipatory evidence for the ongoing changes by the following working groups:

- *Arctic Contaminants Action Plan (ACAP)*: provides information and encourages states to take preventive actions relating to contaminants and other pollutants.
- *Arctic Monitoring and Assessment Programme (AMAP)*: provides information on the status of, and threats to, the Arctic environment.
- *Conservation of Arctic Flora and Fauna (CAFF)*: addresses the conservation of biodiversity and sustainability of Arctic living resources in cooperation with governments and residents.
- *Emergency Prevention, Preparedness and Response (EPPR)*: deals with the prevention of, preparedness for and response to environmental emergencies in the Arctic.
- *Protection of Arctic Marine Environment (PAME)*: addresses pollution prevention and control measures related to the protection of the Arctic marine environment through coordinated action programmes and guidelines complementing existing frameworks.

¹⁸ The AEPS focused on fostering international cooperation in scientific research, data sharing, and environmental impact assessment. The initiative was unique as it reunited the former adversaries, while including representatives from the Arctic indigenous people.

- *Sustainable Development Working Group (SDWG)*: pursues initiatives that provide practical knowledge and contributes to building the capacity of indigenous peoples and Arctic communities to respond to the challenges and benefit from the emerging opportunities.

In addition, there are several temporary task forces operating in the following areas: Institutional Issues; Arctic Marine Oil Pollution Preparedness and Response; Short-Lived Climate Forcers (black carbon, methane, and tropospheric ozone); and Search and Rescue. In this regard, an important milestone in the Arctic Council's activity was the conclusion of the first internationally binding agreement under its auspices: the 2012 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue,¹⁹ followed by the 2013 Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, the council's second ever binding agreement. Accordingly, the AC has been gradually expanding its own institutions over the years and since 2013 has a permanent secretariat at Tromsø, financed by members' contributions. Despite these advances, its organizational structure remains rather weak as it cannot advance in areas which its members are not willing or ready to include.

Nevertheless, the council has surpassed the expectations with which it was created, as it has not only served as a forum which brings together former adversaries in a cooperative environment but has also been able to attract the attention of other important actors. As for how the participation of these new actors affects the AC's functionality, it is obvious that diversifying the stakeholders in the Arctic governance will eventually suppose a more complicated process of decision-making as there will be many and different interests that need to be reconciled.²⁰ Compromises will be needed as the traditional Arctic states will not be able to forever keep other powers out of what they believe is a zone of their influence and, thus, they will not remain for much longer the sole and primary stakeholders in the region.

As Haftendorn (2013, p. 18) states, "For some years in the 2000s, however, the Arctic Council found itself being marginalized in high-political and procedural terms," as the five Arctic coastal states – Canada, Denmark, Norway, Russia and the United States – reasserted their control over the region with the conclusion of the Ilulissat Declaration in 2008. Nevertheless, the declaration is an important achievement for the governance of the region, as the commitment to international law—specifically, the Law of the Sea—put an end to the perception of the Arctic as a lawless region. Meanwhile, the Ilulissat Declaration also raises questions as to the current and future role of the council.

Until now, within the Arctic governance, the council "has played an important role in developing and disseminating the discourse of ecosystem-based management as applied to Arctic affairs" (Young, 2010, p. 175), clarifying the major environmental changes occurring in the region. In this regard, Young implies that "[b]ecause the Council is not embroiled in the complexities and

¹⁹ The main inconvenience of the Agreement, however, is its closed nature, which means that it is binding only for the eight Arctic states. However, as pointed out by Haftendorn (2013, p. 23), "They might call on EU, NATO and other capabilities in addition to their own Coast Guard units in order to discharge their duties under the S&R Agreement. This issue highlights the tension between the sovereign rights of the AC members and the idea of a cooperative, non-zero-sum multilateral system for which the Arctic Council stands."

²⁰ At the beginning, there were no concrete criteria for becoming an observer at the AC. However, at the 2011 Nuuk Ministerial Meeting, its members reached consensus that observers must respect the principles that govern the region as laid down by the Council, recognize the Arctic States' sovereignty and sovereign rights, and share the values, interests, culture and traditions of the Arctic indigenous peoples and other Arctic inhabitants. Because the AC acts by consensus, each of its members can block such applications. Basically, non-Arctic countries should be pure observers and not meddle in Arctic affairs, even though their political and financial support to the work of the AC will be welcome.

inevitable antagonisms of regulatory politics, it is comparatively free to engage in generative activities whose influence takes the form of shaping the underlying discourse on Arctic policy rather than making decisions about specific issues [which] comes at a price in terms of political connections that raises serious questions about the future of the Council” (Young, 2010).

It is highly probable that the AC’s functionality will be reinforced to increase its influence in managing emerging issues. There is an ongoing debate about strengthening its institutions to make them more effective, but it is doubtful whether it will eventually fully transform into a comprehensive treaty-based international organization. There are also analysts who are sceptical that there is enough political will to empower the AC with the necessary treaty-making and enforcement authority required to make such a transition, as the region is currently covered by other legal frameworks which possess the authority the council lacks (Koivurova, 2010). Nevertheless, the more informal character of this institution is what enhances trust, as states feel free to act in a more flexible way: a fact that eventually anticipates their readiness to cooperate on a great variety of topics. That is why the best option might be to adapt the existing and well-established institutions and legal frameworks to the specific conditions of the Arctic and its demands, rather than creating a new one that might lack credibility and legitimacy.

Conclusion

In the short term, the changing climate conditions will not lead to further large-scale oil and gas extraction or busy shipping traffic, as improved infrastructure and deeper knowledge are needed. For that reason, existing minor discrepancies seem unlikely to escalate into military or other serious conflict in the foreseeable future, because of the presence of mutual interests and interdependence among the Arctic states. Therefore, despite some economic appetites, the future of the High North’s development will likely continue to be based on cooperation, commitment to international law (the one in force and possible future adjustments) and joint regional management and governance.

Undoubtedly, in the words of Axworthy and Hurley (2010), in future years “The solutions to the complex challenges of the ‘New Arctic’ will lie in the intricate games—strategic dances—among states, companies, indigenous peoples, NGOs, international organizations and other dynamic interests”,²¹ which makes their commitment to mutual understanding and assistance as well as their ability to cooperate, build consensus and reduce competitiveness a vital factor for the future of the High North. Research and science, together with the promotion of low tension, stability and respect for international regulations will be essential for the development of sustainable solutions for the Arctic.

Thus, a great variety of factors—the pace and predictability of environmental changes; demand for and pricing of natural resources; extraction, processing, and transportation costs to markets; decisions or indecision of the Arctic leaders—will eventually determine the future strengthening or weakening of the Arctic Council and its role in the governance of the High North.

²¹ Axworthy and Hurley (2016) advocate for the implementation of the so called “network governance” that will enable all stakeholders to be part of the decision-making process on a variety of shared global problems, e.g. climate change-induced transformation of the Arctic.

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