

## Russia and the Arctic - Analysis and Discussion of Russian Strategies

Russia faces an emerging new Arctic. The region has entered a dynamic state, and several major factors are in the process of changing the region's geostrategic set-up. Russia, the country with the longest coastline towards the Arctic Ocean, thus faces a number of challenges which require the development of national strategies in several relevant fields, as well as considerable investment in new and upgraded resources. Transport, energy and national security are three areas that are central to the national policy development.

In this study, the Russian strategies are analysed and the development of the assets needed for operations in Russia is discussed. There is a clear gap between Russia's plans and their implementation. Lastly, a discussion on the implications for further research leads to the conclusion that the emerging new Arctic will present a formidable set of challenges for Russia that it will not be able to ignore for the foreseeable future.



Russia and the Arctic  
Märta Carlsson & Niklas Granholm

# Russia and the Arctic

Analysis and Discussion of Russian Strategies

Märta Carlsson & Niklas Granholm

Märta Carlsson and Niklas Granholm

# Russia and the Arctic

Analysis and Discussion of Russian Strategies

Title	Russia and the Arctic: Analysis and Discussion of Russian Strategies
Report no	FOI-R--3596--SE
Month	March
Year	2013
Pages	46 p
ISSN	1650-1942
Customer	Ministry of Defence
Project no	A11301
Approved by	Maria Lignell Jakobsson
Responsible department:	Department of Defence Analysis

Cover photo: Denis Sinyakov. By permission, [www.denissinyakov.com](http://www.denissinyakov.com). Greenpeace organized the Arctic reserve at the gates of 'Gazprom', 5 September 2012

This work is protected under the Act on Copyright in Literary and Artistic Works (SFS 1960:729). Any form of reproduction, translation or modification without permission is prohibited.

## Preface

The importance of the Arctic has increased as climate change and the melting of the ice is gradually making the area more accessible. The main goals of Russia's Arctic policy are to use Russia's Arctic as a resource base, use the Arctic Ocean as a transport route in Russia's interests, and ensure that it remains a zone of peace and stability. The Northern Sea Route is of particular importance to Russia for transport. Russia also conducts extensive oceanographic surveys in the Arctic region, partly to back up its territorial claims, in particular those related to Russia's claim to an exclusive economic zone in the Arctic Ocean. It has plans to exploit the large offshore energy and mineral deposits in the Arctic. Russia currently maintains a military presence in the Arctic and has plans to modernize it, as well as to strengthen the presence of its Border troops there.

This report on Russia's policy in the Arctic is to a substantial degree based on Russian sources such as the Security Council's Arctic Strategy up to 2020. The report links to and complements other studies undertaken at FOI on the changing Arctic.

I would like to express my gratitude to Dr Katarzyna Zysk, Associate Professor at the Norwegian Institute for Defence Studies (IFS), who acted as opponent at the seminar organized by FOI on February 1<sup>st</sup> 2013. Her insightful comments on the draft manuscript indeed improved the finalized report. I would also like take the opportunity to thank Per Wikström at FOI in Umeå, who provided us with an excellent map and Ebba Lundin, who did the layout.

Stockholm February 2013

Jakob Hedenskog, Programme manager of the FOI Russia Studies Programme

## Abstract

The Arctic with its vast expanse, severe climate and rich natural resources is a challenge and an opportunity for Russia. The political ambition is to increase the extraction of oil and gas and to make the Northern Sea Route an international shipping channel. The natural resources are seen as the foundation for Russia's future economic and social development. However, the exploitation of the continental shelf involves high risks and will require major investment, and Russia lacks the necessary technology and is dependent on international cooperation.

The absence of infrastructure constitutes a challenge to the development of the Arctic. The Northern Sea Route and the improvement of infrastructure on land – for example deep-sea ports – are two essential components to overcome this. In order to open the Northern Sea Route for extensive shipping Russia needs a modernized ice-breaker fleet and border and rescue stations. But the construction of ports and border stations has encountered problems and it is an open question whether or not the ice-breaker fleet is being renewed at such a pace that Russia can promote economic activity in the area after 2020 when the majority of the ice-breakers will be decommissioned.

The Arctic is also vital from a military perspective because the area is essential for Russia's missile defence and some of its strategic submarines are based there. This creates an inner contradiction as Russia on the one hand wants to open up the region in order to realize its potential, but on the other hand wants to keep it under close control due to its military importance. Russia has, however, only limited military assets to protect its interests in the Arctic and these may be further reduced due to the decommissioning of naval ships and difficulties to renew the fleet.

This report examines Russia's Arctic policy and the developments in the fields it concerns. In a final section four themes for further research are suggested;

- How effective will the Russian system be in providing the capability for producing and operating the assets for the Arctic in relation to the stated aims?
- How will Russian naval efforts develop in the Barents Sea, in the North-western Pacific and along the Northern Sea Route?
- How much of the Russian plans to develop the Russian Arctic can be implemented given what is known of current trends in energy prices?
- How will climate change in the Arctic region affect the Russian strategic view on the Arctic and the country's future efforts regarding security there?

Keywords: Russia, Arctic, Northern Sea Route, energy, Armed Forces

## Sammanfattning

Arktis med sina enorma vidder, hårda klimat och stora naturrikedomar utgör både en utmaning och möjlighet för Ryssland. Den politiska ambitionen är att öka utvinningen av olja och gas samt att göra Nordostpassagen till en internationell farled. Naturresurserna ses som grunden för Rysslands framtida ekonomiska och sociala utveckling, men utvinningen av dem medför stora risker och kräver stora investeringar. Dessutom saknar Ryssland den erforderliga tekniken och är beroende av internationellt samarbete för att få tillgång till denna.

Frånvaron av infrastruktur utgör en utmaning för att utveckla Arktis. Möjligheten att i större utsträckning använda Nordostpassagen och förbättring av infrastruktur på land - till exempel djuphavshamnar - är två viktiga komponenter för att övervinna detta. För att öppna Nordostpassagen för mer omfattande sjöfart behöver Ryssland en robust flotta med isbrytare samt gräns- och räddningsstationer längs kusten. Men byggandet av hamnar och gränsstationer har stött på problem och det är en öppen fråga om den ryska isbrytarflottan kan förnyas i en sådan takt att Ryssland kan främja den ekonomiska aktiviteten i området efter 2020, då merparten av de existerande isbrytarna kommer att utrangeras.

Arktis är också viktigt ur ett militärt perspektiv då området är vitalt för Rysslands missilförsvar och en del av de strategiska ubåtarna är baserade där. Detta skapar en inre motsättning för Ryssland som å ena sidan vill öppna upp området för att förverkliga dess potential, men å andra sidan, vill hålla det under kontroll med anledning av dess militära betydelse. Ryssland har dock endast begränsade militära resurser för att skydda sina intressen i Arktis vilka kan reduceras ytterligare till följd av utrangering av ytfartyg och svårigheter att förnya fartygsflottan.

Rapporten granskar den ryska Arktispolitiken och utvecklingen inom de områden den berör. I en avslutande diskussion föreslås fyra teman för fortsatta studier;

- I vilken grad kan det ryska systemet leverera och driva de kapaciteter och förmågor som angivits i de övergripande strategierna?
- Hur kommer ryska marina system, basering av resurser och operationskoncept utvecklas i Barents hav, Nordvästra Stilla havet samt utmed Nordostpassagen?
- Till vilken grad kommer de ryska planerna för utveckling av Arktis att kunna förverkligas givet vad som är känt om energiprisutvecklingen?
- På vilket sätt kommer klimatförändringen i Arktis att påverka Rysslands strategiska synsätt på regionen och landets fortsatta satsningar på säkerhet där?

Nyckelord: Ryssland, Arktis, Nordostpassagen, energi, Väpnade Styrkorna



# Contents

<b>1</b>	<b>Introduction</b>	<b>9</b>
1.1	Definitions of the Arctic.....	10
<b>2</b>	<b>Russia’s Role in the Emerging “New Arctic”</b>	<b>12</b>
<b>3</b>	<b>The Arctic Strategy</b>	<b>15</b>
<b>4</b>	<b>Territorial Claims</b>	<b>17</b>
<b>5</b>	<b>Natural Resources</b>	<b>19</b>
<b>6</b>	<b>The Northern Sea Route</b>	<b>22</b>
<b>7</b>	<b>Military Assets</b>	<b>26</b>
7.1	The Army.....	26
7.2	Air Assets .....	26
7.3	The Navy.....	28
7.3.1	The Northern Fleet .....	29
7.3.2	The Pacific Fleet.....	30
7.4	Exercises.....	31
<b>8</b>	<b>Conclusions</b>	<b>32</b>
<b>9</b>	<b>Discussion and Implications for Further Research</b>	<b>34</b>
	References .....	38
	<b>Figures</b>	
	<b>Figure 1</b> Map over the Russian Arctic	11
	<b>Figure 2</b> Arctic Sea Ice Extent 1979-2012	13



## **Acronyms and Abbreviations**

CLCS	Committee on the Limits of the Continental Shelf
EEZ	exclusive economic zone
GDP	gross domestic product
LNG	liquefied natural gas
SLoC	sea line of communication
UNCLOS	United Nations Convention on the Law of the Sea (1982)

# 1. Introduction

The Arctic and its vast amount of natural resources are perceived by the Russian government as one of the key sources for the country's future wealth. Russia has great ambitions to increase the extraction of oil and gas and intends to make the Northern Sea Route one of the major transport routes in the world. At the same time the Arctic constitutes a challenge due to the severe climate, the lack of infrastructure and low population density. In addition, Russia has military interests in the region, as the area is essential for the Russian missile defence and some of the strategic submarines are based there. Russia therefore wants to keep the area under close control. This report aims to give an overview of Russia's policies regarding the Arctic to see how the country intends to develop the region. Hence, the report attempts to answer the questions: What are Russia's policies for developing the Arctic? How are attempts to develop the area progressing? What are the obstacles?

The report describes the Russian strategies that are essential for the development of the Arctic. First of all, the Arctic Strategy, where the Russian national interests in the Arctic are defined, is outlined. These interests are four in total and concern energy, transport, security and the environment. To provide a deeper understanding of Russian policies and plans regarding the Arctic, the strategies in these areas which were in force in November 2012 will be described, except for the strategy concerning the environment, which is outside the scope of the report. Hence, the National Security Strategy will be studied to see how the Arctic is linked to the country's security, as will the Energy Strategy, to see how the natural resources which are so decisive for the role that Russia ascribes to the Arctic, will be exploited, and the Transport Strategy, to see how Russia aims to solve the problem which the absence of infrastructure presents to the development of the Arctic. Here the Northern Sea Route is seen as an important part of the solution. In between the descriptions of the official documents the development of certain aspects in these areas will be studied. We have chosen to concentrate on Russian territorial claims, the exploitation of oil and gas deposits, primarily in the Barents and the Kara seas, the Russian ice-breaking capability, the establishment of border control and search and rescue and, finally, Russia's military assets. In the description of these areas the major obstacles to progress will be identified.

The report begins with an outline of a new Arctic that is emerging due to climate change and the possibilities and challenges it presents to Russia. This is followed by a description of the Arctic Strategy and of the Russian territorial claims in the region. The National Security Strategy, the Energy Strategy and the attempts to exploit oil and gas deposits in the Barents and Kara seas are then covered. After that the Transport Strategy and the development of the Northern Sea Route are described. This is followed by a description of Russia's military assets in the

Arctic. The report ends with conclusions and a section where possible implications for the Russian Arctic are discussed and, as a consequence, for the country's neighbours. Four themes for further research are suggested.

## 1.1 Definitions of the Arctic

The Russian Arctic is defined in the Arctic Strategy as a region which includes the whole or parts of the Republic of Sakha (Yakutia), the provinces of Murmansk, Arkhangelsk, Krasnoiarsk, Nenets, Yamal-Nenets and Chukotka, islands in the Arctic Sea, the territorial sea, the exclusive economic zone (EEZ) and the continental shelf.<sup>1</sup>

The sources used in the study are mainly the Russian official strategic documents central to the Arctic area. Other sources are research papers and books by international analysts and articles published in well-known Russian newspapers such as *Izvestiia*, *Kommersant* and *Nezavisimaia gazeta*. Lastly, studies undertaken at FOI in recent years form a basis for the discussion regarding the current strategic dynamic in the Arctic.

Internationally, there are several definitions of the Arctic region in use. Some are based on geography, others on the existence of natural resources, average temperature, population, the existence of a coastline towards the Arctic Ocean, or simply latitude. The definitions are used to include some factors or actors or exclude others.<sup>2</sup> For the purposes of this study, we have opted for simplicity to try and include the factors we wish to discuss here. A more narrow geographical definition, which is commonly used, could be set using the Arctic Circle at approximately 66.33 degrees north. This would have the advantage of focus, but would exclude the most of the White Sea and the entire Kamchatka Peninsula, which are relevant in this context. It would also have the significant drawback of differing too much from the Russian definition. A wider geographical definition for the whole of the Arctic could be set at 60 degrees north. This has the advantage of including more of the relevant areas, although still not the whole of the Kamchatka Peninsula, but would not be too wide. This is what we have chosen: the Arctic is defined in this study as the area north of the 60th Parallel.

---

<sup>1</sup> Sovet bezopasnosti Rossiiskoi Federatsii (2009) 'Osnovy gosudarstvennoi politiki Rossiiskoi Federatsii v Arktike na period do 2020 goda i dalneishuio perspektivu' [Foundation of the state policy of the Russian Federation on the Arctic for 2020 and in the longer perspective], *Sovet bezopasnosti Rossiiskoi Federatsii*, on the internet: <http://www.scrf.gov.ru/documents/98.html> (retrieved 4 July 2012), article 2.

<sup>2</sup> As an example, the National Snow and Ice Data Center (NSDIC) has three different definitions: the 10-centigrade isotherm in July, the tree-line and the Arctic Circle. See [http://nsidc.org/arcticmet/basics/arctic\\_definition.html](http://nsidc.org/arcticmet/basics/arctic_definition.html) (retrieved 13 February 2013).

Figure 1 Map over the Russian Arctic



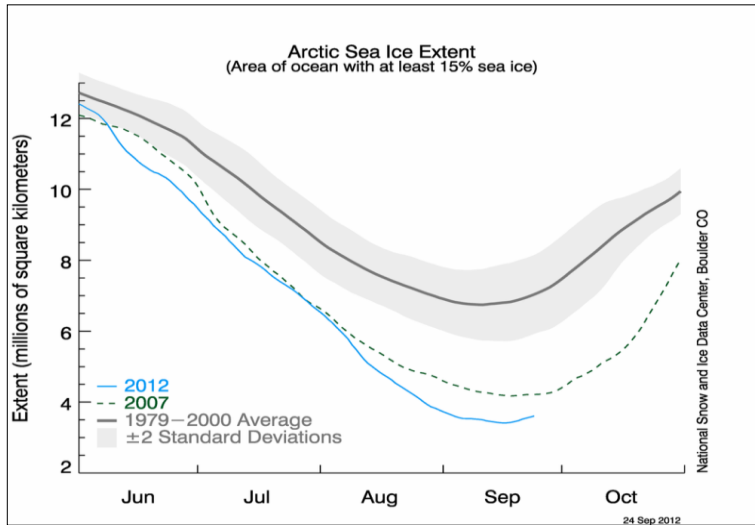
## 2. Russia's Role in the Emerging "New Arctic"

The geopolitical importance of the Arctic is changing due to the warming climate. Russia, as the country with the longest coastline in the Arctic Ocean, will have a central role in determining how the emerging new Arctic will develop.<sup>3</sup> The country has a long tradition of operating in the Arctic, has strong economic and security interests in the region. Moreover, it has a tendency towards a geopolitical outlook on the world as a zero-sum game. This influences Russia's policies and affects the dynamic of the region. The main driving force behind the emergence of the new Arctic is climate change, leading to a melting of the sea ice in the Arctic Ocean and the glaciers on land and a thawing of the permafrost.

The warming is proceeding about twice as fast in the Arctic region as in the rest of the world. The ice-melt in the Arctic region is leading to several second-order effects in different fields. First, new transoceanic sea lanes of communication (SLoCs) will become available for commercial shipping. The Northern Sea Route, from North Cape eastwards through the Barents and Kara seas and further along the Siberian coast to the Bering Strait, is about to become available for longer and longer periods during the Arctic summer.

---

<sup>3</sup> This introduction is primarily based on studies undertaken at FOI in recent years: Granholm, Niklas (ed.) (2008) *Arktis – Strategiska frågor i en region i förändring* [The Arctic – strategic issues in a changing region], FOI-R--2469-SE (Stockholm, FOI); Granholm, Niklas (2009) *Delar av ett nytt Arktis. Utvecklingar av dansk, kanadensisk och isländsk arktispolitik* [Parts of a new Arctic: developments of Icelandic, Canadian and Danish Arctic policies], FOI-R--2861-SE (Stockholm, FOI); Granholm, Niklas and Kiesow, Ingolf (2010) *Olja och gas i ett nytt och förändrat Arktis. Energifrågans utveckling mot bakgrund av regionens strategiska dynamik* [Oil and gas in a new and altered Arctic: development of the energy issue against the background of the regional strategic dynamic], FOI-R--2971-SE (Stockholm, FOI); Granholm, Niklas and Malminen, Johannes (2011) *Islands strategiska ställning. En probleminventering* [Iceland's strategic position: an inventory of the issues], FOI-R--3227-SE (Stockholm, FOI); Granholm, Niklas (2011) *USA och Arktis. Ett amerikanskt dilemma i väntläge?* [The USA and the Arctic: An American dilemma on hold?], FOI-R--3286-SE (Stockholm, FOI); Granholm, Niklas (2011) 'A New Arctic – Strategic Issues in a Dynamic Region' in Laura Salmela (ed.) *Nordic Cooperation and the Far North* (Helsinki, National Defence University, Department of Strategic and Defence Studies); and Granholm, Niklas (2012) 'The Arctic and the North Atlantic – Strategic Significance for Sweden' in Bo Hugemark (ed.) *Friends in Need* (Stockholm, Royal Swedish Academy of War Sciences). All studies can be accessed via the FOI website at <http://www.foi.se/arctic>. Studies in Swedish all have an executive summary in English.

**Figure 2** Arctic Sea Ice Extent 1979-2012

Source: National Snow and Ice Data Center (NSIDC), Boulder, Colorado.

The two other SLoCs, the Northwest Passage (northwards west of Greenland, westward through the Canadian archipelago and north of the Alaskan coast through the Bering Strait) and the North Polar route (a so far mostly theoretical great circle through the North Pole, starting in the Bering Strait and ending in the Denmark Strait), will most probably be opened later, mainly for climatological, technical and political reasons. This places the emphasis on the Northern Sea Route, most of which runs through Russia's territorial waters and EEZ.

Second, the potentially vast energy and mineral resources in the Arctic will gradually become available for exploitation as the ice melts. In conjunction with Russia's economic profile, where energy exports are central to the country's economy and strategic outlook, the importance of the Arctic is increased.

Third, in terms of military security, the changing Arctic presents new challenges. The post-cold war set-up, with a low priority given to the military-strategic role of the Arctic, is now changing. The melting of the ice provides scope for more military activity, and security forces will be needed to monitor and regulate the increasing human activity there. Parts of the strategic submarine forces, which operate continuously to provide a nuclear second-strike capability, are based in the Arctic and will be affected by this. The ice sheet in the Arctic Ocean provides a cover for operations with these submarines, making them difficult or even impossible to detect. But with the melting and thinning of the ice sheet this may change fairly soon. The implications are hard to predict and may impact on the future direction of these systems. The development of a ballistic missile defence

(BMD) system could also lead to deployment of BMD system components to the region as the Arctic waters become increasingly accessible. This in turn might cause friction. The military-strategic role of the Arctic is changing, but this will not mean an automatic return to the cold-war set-up. Developments will in all probability be context-dependent and will over time produce a set-up different from today's.

Fourth, a number of overlapping territorial claims in the Arctic might place strain on the existing international legal regimes – mainly the United Nations Convention on the Law of the Sea (UNCLOS) – over the longer term.<sup>4</sup> The melting of the ice increases the hope of new SLoCs opening through the region. In combination with potential future energy and mineral extraction make the issues of who owns what territory more important. Can the notifications on extensions of states' EEZs (of which there are currently about 60 globally) be managed in such a way that the international legal regime is not put under strain? How can the overlapping claims in the Arctic be settled, given the backdrop of strong strategic, economic and commercial interests? Will important states such as the United States accede to the convention instead of, as today, merely regard it as customary law? While institutional development is now taking place with some success, mainly within the Arctic Council, several important questions remain to be answered. In sum, the question is whether this institutional framework is sufficient to meet the many and far-reaching changes leading to the new Arctic.

There are several strong indications of an emerging “new Arctic” which is fast becoming geopolitically more important. The region can no longer be regarded in isolation from the rest of the world. Moreover, the main factors of change – the list above can be made longer – are developing according to their own speed and inner logic, making predictions of how the Arctic will function as a whole more difficult. What seems clear is that the new Arctic is a dynamic region that will present us with analytical as well as practical challenges in the years to come.

---

<sup>4</sup> The arguments over the future of UNCLOS are developed in Granholm, Niklas (2013) ‘Some Implications of the Emerging New Arctic’ (to be published in 2013).

### 3. The Arctic Strategy

The principles of the Russian policies in the Arctic are outlined in the *Foundation of the State Politics of the Russian Federation on the Arctic for 2020 and in the Longer Perspective* (henceforward, the Arctic Strategy) from 2008. The Russian national interests are defined as: first, to use the natural resources in the region, primarily oil and gas, to facilitate Russia's own economic and social development; second, to have the Northern Sea Route acknowledged as a national transport route; third, to preserve the ecological system; and, fourth, to contribute to ensuring that the Arctic remains peaceful. Russia expresses the ambition to reach an agreement with the nations bordering to the Arctic regarding the demarcation of the sea and increase cooperation among them in regional forums on issues such as search and rescue, research, the environment and the exploitation of natural resources. To support its contention that its claims regarding the national boundaries of the Arctic zone are in line with UNCLOS, Russia is attempting to conduct surveys regarding the extension of the continental shelf. According to the strategy, Russia intends to make the Northern Sea Route an international transport route. In order to accomplish this Russia will build new infrastructure, purchase new ice-breakers, and form search and rescue teams as well as a control system to be able to monitor the waters. To defend and protect its borders Russia will establish units from the Armed Forces and the Border Troops to improve its border control at certain points. The emphasis is mainly on the Border Troops and the resources and investments of infrastructure needed in order to achieve a functioning border control. Finally, Russia intends to make investments in schools, hospitals and housing in the region.

The Arctic Strategy is planned to be realized in three stages. During the period 2008–2010 surveys were to be made to collect proof regarding the outer borders of the Russian Arctic zone, international cooperation regarding the extraction of natural resources was to be expanded and a strategy for the development of the Arctic region up to 2020 was to be drafted. In the second stage, the period 2011–2015, the international borders of the Russian Arctic zone will be determined and the economy of the region will be restructured to facilitate the extraction of natural resources. Exactly what this includes is not clear in the strategy. The infrastructure and a control system for the Northern Sea Route will be created and improved. In the third stage, 2016–2020, the Russian Arctic will be transformed into “a leading strategic resource base for the Russian Federation”.<sup>5</sup> What this process entails is not clarified in the strategy.

So what is the likelihood that Russia will be able to implement the Arctic Strategy according to the timetable? In what follows it is evident that there are

---

<sup>5</sup> Sovet bezopasnosti Rossiiskoi Federatsii (2009) ‘Osnovy gosudarstvennoi politiki Rossiiskoi Federatsii v Arktike na period do 2020 goda i dalneishuio perspektivu’.



delays in conducting surveys of the extension of the continental shelf, and the international borders of the Russian Arctic might therefore not be decided until after 2015. A strategy for the development of the region up to 2020 was adopted in February 2013 (which is outside the scope of this report). Regarding the Northern Sea Route, attempts are being made to improve the infrastructure, but due to delays it does not seem probable that they will be completed by 2015. As described in the section on natural resources below, Russia has established international cooperation to exploit the continental shelf, but the geological surveys to find new deposits are progressing slowly and the extraction of gas involves difficulties. It therefore seems unlikely that the extraction of new deposits of oil and gas will turn the Arctic into a Russian core resource base as early as 2020, which is the end state of the strategy.

## 4. Territorial Claims

Russia's territorial claims in the Arctic Ocean can be separated into two parts: an extended EEZ in the Arctic Ocean and the status of the Northern Sea Route. The rules for demarcating sea territory are regulated in UNCLOS, adopted in 1982. A state's territorial waters extend from an agreed baseline out to 12 nautical miles (22 km),<sup>6</sup> and the coastal state has the same jurisdiction in its territorial waters as on land. From the baseline, an EEZ extends out to 200 nautical miles (370 km)<sup>7</sup> and in this zone the coastal state has the exclusive right to living and non-living resources.<sup>8</sup> The EEZ is set to correspond with the extension of the continental shelf. If the continental shelf extends further, the coastal state can apply to have it included in its EEZ, out to a maximum of 350 nautical miles (648 km), according to article 76 of the convention. In the extended EEZ, the rights of the coastal state are limited to control over the non-living resources on and under the seabed. A claim has to be supported by scientific evidence of seabed samples and charting of the seabed with sonar. The applicant coastal state has ten years to submit its claims to the Committee on the Limits of the Continental Shelf (CLCS) after it has acceded to UNCLOS. In the case of the Arctic Ocean, a number of overlapping claims have been made, and Russia's claims to an extended EEZ overlap with those of Denmark, Canada and the United States.

The Svalbard Treaty of 1920 (or Spitsbergen Treaty) placed the islands (including the island of Björnøya) under Norwegian sovereignty, while granting access to citizens of the signatory parties for the extraction of natural resources, and also effectively demilitarized the islands. In 1977 Norway unilaterally established a 200-nautical mile fisheries zone around the islands. The basis for this, according to Norway, is that international law has developed so that the treaty only applies to the Svalbard Islands and out to the 4-nautical mile limit. Outside this area, the sea is part of the Norwegian continental shelf, and Norwegian law should therefore apply there. This is disputed by several of the signatory nations, including Russia, which hold the view that the rights of exploitation of the natural resources are subject to the Svalbard Treaty. Of the signatory nations, Canada is the only one that has openly supported Norway's claim.<sup>9</sup>

---

<sup>6</sup> United Nations, 'United Nations Convention on the Law of the Sea', *United Nations*, 10 December 1982, on the internet:

[http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/closindx.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm) (retrieved 20 September 2012), article 5.

<sup>7</sup> *Ibid.*, articles 76 and 77.

<sup>8</sup> *Ibid.*, articles 56 and 57.

<sup>9</sup> Nationalencyklopedien, 'Spetsbergenstraktaten', on the internet:

<http://www.ne.se/spetsbergenstraktaten>. (retrieved 12 February 2013).

The Russian claim to jurisdiction of the Northern Sea Route is based on article 234 of UNCLOS. The article states that the coastal state has the right to adopt and enforce non-discriminatory laws in the EEZ if it is characterized by ice cover and a severe climate, which could make navigation difficult. The claims on the Northern Sea Route are complicated by the fact that it consists not of a single shipping lane but of many, some of which are partly on the high seas.<sup>10</sup> The Russian demands also involve the North Pole, which has great symbolic value.<sup>11</sup> If its claims were to be met the Russian Arctic continental shelf outside the EEZ would be 1.2 million square kilometres.<sup>12</sup>

In 2001 Russia submitted its claims regarding the Arctic to the CLCS, but was informed that the application was not supported by enough scientific evidence. In 2007 Russia conducted a deep water expedition to collect material to prove that the Lomonosov and Mendeleev underwater mountain ridges are prolongations of the Siberian continental shelf. Russia planned to present new evidence to the CLCS in 2010<sup>13</sup> but this was postponed until 2013–14. Russia has, however, not been able to conduct additional surveys since it has not had ships and equipment suitable for conducting surveys in Arctic conditions at its disposal in recent years, due to accidents and the leasing of the only available ship to other countries (Norway and Vietnam). There have also been uncertainties regarding the drilling technique and, as a consequence, as to whether the results would meet UN standards.<sup>14</sup> However, in the summer of 2012 the company Sovmorgeo made an expedition to the Mendeleev ridge to conduct drilling.<sup>15</sup> The Ministry of Natural Resources and Environment announced afterwards that the samples of the ocean floor matched the composition of the landmass.<sup>16</sup> If this view is shared by the CLCS it will improve Russia's position regarding its territorial claims in the Arctic.

---

<sup>10</sup> Zysk, Katarzyna (2010) 'Russia's Arctic Strategy', *Joint Force Quarterly*, Issue 57 2nd quarter 2010, p. 107.

<sup>11</sup> IISS Strategic Comments (2012) 'Russia in the Arctic: Economic Interests Override Military Aspirations', Vol. 18, Comment 43, November 2012.

<sup>12</sup> Khranchikhin, Aleksandr (2011) 'Kholodnaia voina nakrivaet Arktiku' [A cold war covers the Arctic], *Nezavisimaia gazeta*, 18 November 2011, on the internet: <http://nvo.ng.ru/printed/262134> (retrieved 3 July 2012).

<sup>13</sup> Apanasenko, V. M. and Oznovishchev, C. K. (2011) 'Konvensionalnye voprosi bezopasnosti v Arktike' [Conventional security issues in the Arctic] in A. V. Zagorskii (ed.) *Arktika: zona mira i sotrudnichestva* [The Arctic: an area of peace and cooperation] (Moscow, IMEMO RAN), p. 95.

<sup>14</sup> Zonn, Igor and Zhiltsov, Sergei (2012) 'Zakhvatit i razburit' [Capture and drill], *Nezavisimaia gazeta*, 10 April 2012, on the internet: <http://www.ng.ru/printed/267577> (retrieved 5 July 2012).

<sup>15</sup> Arctic Info (2012) 'The Expedition "Arctic-2012" Collected Enough Material to Expand the Borders of the Continental Shelf Belonging to the Russian Federation', *Arctic Info*, 1 November 2012, on the internet: [http://www.arctic-info.com/News/Page/sobrannogo-ekspedicii--arktika-2012--materiala-dostatocno-dla-rassirenia-granic-sel\\_fa-rossii](http://www.arctic-info.com/News/Page/sobrannogo-ekspedicii--arktika-2012--materiala-dostatocno-dla-rassirenia-granic-sel_fa-rossii) (retrieved 28 November 2012).

<sup>16</sup> IISS Strategic Comments (2012) 'Russia in the Arctic: Economic Interests Override Military Aspirations'.

## 5. Natural Resources

As stated in the Arctic Strategy, the natural resources in the Arctic are of great importance as they are seen as the foundation for future Russian economic and social development. The 2009 *Strategy for National Security of the Russian Federation until 2020* ties the development of the Arctic to national security. It also states that the possession of energy resources in the long-term perspective will be the focus of Russian international policies, and the Arctic is mentioned as one of the key areas in this regard. As in the Arctic Strategy, the need to improve the protection of the borders and the related infrastructure in the Arctic is stressed.<sup>17</sup>

The importance of the Arctic in relation to natural resources is underlined again in the 2009 *Russian Energy Strategy up to 2030* (henceforward the Energy Strategy), in which the region is one of the key areas for future extraction of oil and gas. The development of Russia's natural resources is envisaged in three stages: during the first phase (up to 2015) geological surveys will be made in order to find new deposits of oil and gas on the continental shelf and on the Yamal Peninsula in the European part of Russia. This has, according to the strategy, progressed slowly and is described as problematic. In the second phase (2015–2022) the deposits will start being extracted.<sup>18</sup> This is necessary, the strategy states, to balance the decline in extraction of oil and gas in Western Siberia in the period 2015–2030.<sup>19</sup> In the third phase (2022–2030) the gas deposits in the eastern part of the Arctic Ocean will be exploited.<sup>20</sup>

The Arctic region is extremely rich in natural resources, the bulk being natural gas.<sup>21</sup> According to the US Geological Survey study from 2008, referred to by Caitlyn Antrim, 60 per cent of the undiscovered oil and gas in the Arctic is on Russian territory and amount to the equivalent of 412 billion barrels of oil. The

---

<sup>17</sup> Sovet bezopasnosti Rossiiskoi Federatsii (2009) 'Strategiia natsionalnoi bezopasnosti Rossiiskoi Federatsii do 2020 goda' [National Security Strategy of the Russian Federation up to 2020], *Sovet bezopasnosti Rossiiskoi Federatsii*, on the internet: <http://www.scrf.gov.ru/documents/99.html> (retrieved 4 July 2012), articles 11, 42 and 62.

<sup>18</sup> Ministerstvo energetiki Rossiiskoi Federatsii (2009) 'Energeticheskaiia strategiia Rossii na period do 2030 goda' [Russian Energy Strategy up to 2030], *Ministerstvo energetiki Rossiiskoi Federatsii*, 13 November 2009, on the internet: [http://www.minenergo.gov.ru/activity/energostrategy/full.php?sphrase\\_id=268229](http://www.minenergo.gov.ru/activity/energostrategy/full.php?sphrase_id=268229) (retrieved 10 December 2012), pp. 20 and 42.

<sup>19</sup> *Ibid.*, p. 38.

<sup>20</sup> *Ibid.*, p. 54.

<sup>21</sup> Malysheva, Maria (2012) 'Zapasy, kotorye trudno izvlech' [Reserves which are difficult to extract], *Gazeta.ru*, 26 May 2012, on the internet: [http://www.gazeta.ru/science/2012/05/26\\_a\\_4602393.shtml](http://www.gazeta.ru/science/2012/05/26_a_4602393.shtml) (retrieved 20 September 2012).

major part of these resources is located on-shore or in the Russian EEZ.<sup>22</sup> They are concentrated in the West Siberian Basin, which includes the Yamal Peninsula and the Kara Sea, and the eastern part of the continental shelf in the Barents Sea.<sup>23</sup> Russia has focused the production of oil and gas on the Yamal Peninsula and the Timan-Pechora oilfield. The ambition is to expand extraction in the Shtokman field in the Barents Sea, the Prirazlomnoe oilfield,<sup>24</sup> which is a part of the Timan-Pechora oilfield, and the Kara Sea (see map on page 10).

There are a number of difficulties connected with the exploitation of oil and gas in the Arctic. First of all, as noted in the Energy Strategy, the exploration of the continental shelf is going slowly.<sup>25</sup> Second, the harsh climate makes the exploitation of the resources a technological challenge for the petroleum industry and, together with the long distances to the necessary infrastructure,<sup>26</sup> extraction involves considerable investments and high risks.<sup>27</sup> As a result potential for further exploitation depends on the price of energy, which is set on the global market and is determined by international demand and supply, including the production of oil and gas in other regions and the prospects for alternative fuels, such as shale gas.<sup>28</sup> Fourth, Russia does not have the technology to exploit the continental shelf by itself, but is dependent on international cooperation.<sup>29</sup> The ambition to cooperate with international companies on difficult and risky projects is also stressed in the Energy Strategy, as well as in the Arctic Strategy.<sup>30</sup>

According to Russian law the state-owned companies Rosneft and Gazprom are the only enterprises allowed to exploit the continental shelf. To remedy the lack of technology to exploit the shelf the two companies have signed contracts with foreign counterparts. In 2012 Rosneft came to agreements with ExxonMobil, Eni and Statoil regarding exploitation of oil in the Kara Sea (ExxonMobil) and the Barents Sea (Eni and Statoil). The agreements stipulated that the international

---

<sup>22</sup> Antrim, Caitlyn L. (2011) 'The Russian Arctic in the Twenty-First Century' in James Kraska (ed.) *Arctic Security in an Age of Climate Change* (United States of America, Manchester University Press), p. 111.

<sup>23</sup> Zazimko, Vadim (2012) 'Arktika: proekt veka' [The Arctic: project of the century], *Krasnaia Zvezda*, 13 March 2012, on the internet: <http://www.redstar.ru/index.php/daty/item/1069-arktika-proekt-veka?tmpl=component&print=1> (retrieved 26 September 2012).

<sup>24</sup> Zysk, Katarzyna (2011) 'Military Aspects of Russia's Arctic Policy' in James Kraska (ed.) *Arctic Security in an Age of Climate Change* (United States of America, Manchester University Press), p. 96.

<sup>25</sup> Gerasimova, Tatiana (2012) 'Partnerstvo radi shelfa' [Partnership for the sake of the shelf], *Kommersant Business Guide*, 19 June 2012, on the internet: <http://www.kommersant.ru/doc/1957672> (retrieved 3 September 2012).

<sup>26</sup> Zysk, Katarzyna (2011) 'The Evolving Arctic Security Environment: an Assessment' in Stephen Blank (ed.) *Russia and the Arctic* (Carlisle, US Army War College Strategic Studies Institute), p. 98.

<sup>27</sup> Zonn and Zhiltsov (2012) 'Zakhvatit i razburit'.

<sup>28</sup> Zysk (2011) 'Military Aspects of Russia's Arctic Policy'.

<sup>29</sup> Gerasimova (2012) 'Partnerstvo radi shelfa'.

<sup>30</sup> Ministerstvo energetiki Rossiiskoi Federatsii (2009) 'Energeticheskaia strategii Rossii...', p. 35.

partners would receive a third of the joint venture, which is the maximum according to Russian law.<sup>31</sup> In return for access to the oilfields they would finance and conduct exploration in the Arctic. The deals also include technology transfer and staff exchange, since Rosneft lacks the necessary technology and knowledge to extract oil offshore in the Arctic. The agreements did not, however, guarantee that production would begin.<sup>32</sup> In 2007 and 2008 Gazprom entered into a similar agreement with Statoil and Total to extract gas in the Shtokman field. Like the Rosneft deals, the contracts entailed technology transfers in areas where Gazprom had shortcomings, i.e. drilling platforms and production plants for liquefied natural gas (LNG). The Shtokman field is ranked as one of the richest gas deposits in the world and holds confirmed reserves of 3.9 trillion cubic metres of natural gas and 53 million tons of condensate.<sup>33</sup> In August 2012, however, exploitation was brought to a pause.<sup>34</sup> With the considerable costs for extracting gas, the boom in LNG being exported from the Middle East and North Africa to Europe, and new methods for extracting shale gas, the Shtokman field's business rationale had come into question. Commercial production, which was supposed to have started in 2013, was postponed to 2018. Given the high costs involved and the lack of foreign expertise, the future of the Shtokman field is uncertain.<sup>35</sup>

---

<sup>31</sup> Gerasimova (2012) 'Partnerstvo radi shelfa'.

<sup>32</sup> Wisniewska, Iwona (2012) 'Natural Resources on the Russian Continental Shelf: Foreign Investors Sought...on Russian Terms', *Centre for Eastern Studies*, 9 May 2012, on the internet: <http://www.osw.vaw.pl> (retrieved 28 May 2012).

<sup>33</sup> Socor, Vladimir (2012) 'Gazprom's Shtokman Project: Relic of a Past Era', *Eurasia Daily Monitor*, 10 August 2012, Vol. 9, Issue 153.

<sup>34</sup> *Interfaks* (2012) "'Gazprom" ne vidit smysla vkladyvatsia v Shtokman' [Gazprom does not see the point in investing in Shtokman], 29 August 2012, on the internet:

<http://www.interfax.ru/print.asp?sec=1447&id=262869> (retrieved 6 February 2013).

<sup>35</sup> Socor, Vladimir (2012) 'Gazprom's Shtokman Project: Relic of a Past Era'.

## 6. The Northern Sea Route

The biggest obstacle to economic development in the Arctic is considered to be the absence of infrastructure. The development of the Northern Sea Route and the infrastructure on land are seen as the most vital components for overcoming the situation.<sup>36</sup> In order to open the Northern Sea Route for commercial shipping, Russia has to be able to control the waters and provide services such as search and rescue and ice-breaking.<sup>37</sup> These circumstances are well reflected in the 2008 *Transport Strategy of the Russian Federation up to 2030* (henceforward the Transport Strategy) and the Arctic Strategy. The Transport Strategy emphasizes the need to develop the Northern Sea Route, the shipping along it and the infrastructure on its shores, for example the ports, in the period up to 2030.<sup>38</sup> In 2011 it was announced that over the following three years 21 billion roubles would be spent for this purpose.<sup>39</sup> The goal is to make the Northern Sea Route an international transport route.<sup>40</sup> A system for monitoring the shipping along it would be developed and a global communications system would be introduced to facilitate rescue operations and to ensure safety along the Northern Sea Route and at the entries into the harbours.<sup>41</sup>

One of the first priorities in the development of the Northern Sea Route is to renew the ice-breaker fleet.<sup>42</sup> In 2011 Russia had six nuclear-powered ice-breakers,<sup>43</sup> four heavy ice-breakers of the Arktika class and two smaller ones of the Taimyr class, the former to operate along the entire Northern Sea Route and the latter along certain parts of the route and to escort ships into ports and

---

<sup>36</sup> Krivoshapko, Yulia (2012) 'A my poidem na Sever' [We are going to the north], *Rossiiskaia Gazeta*, 5 April 2012, on the internet: <http://www.rg.ru/printable/2012/04/05/arktika.html> (retrieved 20 September 2012).

<sup>37</sup> Saiganov, Iliia (2012) 'Vse zapasy korennykhalmazov sosredotocheny v Rossiiskoi Arktike' [All reserves of solid diamonds are concentrated in the Russian Arctic], *Gazeta.ru*, 12 April 2012, on the internet: [http://www.gazeta.ru/science/2012/04/20\\_a\\_4557613.shtml](http://www.gazeta.ru/science/2012/04/20_a_4557613.shtml) (retrieved 20 September 2012).

<sup>38</sup> Ministerstvo transporta Rossiiskoi Federatsii (2008) 'Transportnaia strategiiia Rossiiskoi Federatsii na period do 2030 goda' [Transport Strategy of the Russian Federation up to 2030], *Ministerstvo transporta Rossiiskoi Federatsii*, on the internet: [http://www.mintrans.ru/upload/iblock/3cc/ts\\_proekt\\_16102008.pdf](http://www.mintrans.ru/upload/iblock/3cc/ts_proekt_16102008.pdf) (retrieved 13 November 2012), pp. 98-99.

<sup>39</sup> Saiganov (2012) 'Vse zapasy korennykhalmazov sosredotocheny v Rossiiskoi Arktike'.

<sup>40</sup> Ministerstvo transporta Rossiiskoi Federatsii (2008) 'Transportnaia strategiiia Rossiiskoi Federatsii na period do 2030 goda', p. 84.

<sup>41</sup> *Ibid.*, p. 79.

<sup>42</sup> *Ibid.*, p. 84.

<sup>43</sup> *Izvestiia* (2011) 'Predstavliaem grazhdanskii atomnyi flot Rossii' [Presenting Russia's civilian nuclear-powered ice-breaker fleet], 2 December 2011, on the internet: <http://izvestia.ru/news/508469> (retrieved 27 November 2012).

rivers.<sup>44</sup> However, only two (the *50 let Pobedy* and *Yamal*) of the larger ice-breakers were in service.<sup>45</sup> The greater part of the fleet was built in the 1970s and 1980s, and by 2020 all except one will be decommissioned.<sup>46</sup> According to the Transport Strategy, three new nuclear-powered ice-breakers are planned to be built<sup>47</sup> to replace the Arktika class nuclear-powered ice-breakers.<sup>48</sup> A number of diesel-electric ice-breakers (not specified in the strategy; possibly six),<sup>49</sup> which would serve the gas and oilfields on the continental shelf, are scheduled to be built.<sup>50</sup> In July 2012 the Ministry of Transport ordered three nuclear-powered and three diesel-electric ice-breakers.<sup>51</sup> The first will be in service by 2016 or 2017<sup>52</sup> in the western part of the Russian Arctic and in the gulfs of Yenisei and Ob (see map in page 10).<sup>53</sup> An unknown number of rescue ships were to be purchased to further support activities along the Northern Sea Route. In the period up to 2015, 90 support ships are scheduled for construction, which seems ambitious given the time frame and the limited capacity of the Russian shipyards. In the period 2016–2030 additional support ships are to be built and modernized.<sup>54</sup> Russian enterprises, such as Norilsk Nickel, have begun to acquire their own ice-breaking cargo ships. Similar ships for the transport of oil and gas are being designed.<sup>55</sup>

As the Transport Strategy and the Arctic Strategy state, it is a high priority for Russia to build a functioning border control and rescue service along the Northern Sea Route. Over a period of ten years, 134 billion roubles will be

---

<sup>44</sup> Zysk (2010) ‘Russia’s Arctic Strategy’, p. 106; and Antrim (2011) ‘The Russian Arctic in the Twenty-First Century’, pp. 114 and 117.

<sup>45</sup> *Ria Novosti* (2011) ‘Rossia dolzhna aktivnee ispolzovat Severnyi morskoi put – Patrushev’ [Russia must use the Northern Sea Route more], 7 August 2011, on the internet: [http://ria.ru/arctic\\_news/20110807/413154123.html](http://ria.ru/arctic_news/20110807/413154123.html) (retrieved 5 July 2012).

<sup>46</sup> Zysk (2010) ‘Russia’s Arctic Strategy’, p. 106.

<sup>47</sup> Ministerstvo transporta Rossiiskoi Federatsii (2008) ‘Transportnaia strategiia Rossiiskoi Federatsii na period do 2030 goda’, p. 79.

<sup>48</sup> Saiganov (2012) ‘Vse zapasy korennykhalmazov sosredotocheny v Rossiiskoi Arktike’.

<sup>49</sup> *Ibid.*

<sup>50</sup> Ministerstvo transporta Rossiiskoi Federatsii (2008) ‘Transportnaia strategiia Rossiiskoi Federatsii na period do 2030 goda’, p. 79.

<sup>51</sup> Chernov, Ivan (2011) ‘Stavki na ldu’ [Rates on ice], *Vzgliad*, 22 September 2011, on the internet: <http://vz.ru/society/2011/9/22/524454.print.html> (retrieved 26 September 2012).

<sup>52</sup> Serov, Mikhail (2012) ‘OSK postroit dlia “Rosatoma” novoe sudno’ [The state united shipbuilding company builds a new ship for Rosatom], *Kommersant Sankt-Peterburg*, 24 August 2012, on the internet: <http://www.kommersant.ru/doc/2007116> (retrieved 3 September 2012); and Saiganov (2012) ‘Vse zapasy korennykhalmazov sosredotocheny v Rossiiskoi Arktike’.

<sup>53</sup> Panov, Pavel (2012) ‘Rossia postroit krupneishii v mire atomnyi ledokol’ [Russia builds the largest ice-breaker in the world], *Izvestiia*, 3 July 2012, on the internet: <http://izvestia.ru/news/529147> (retrieved 4 September 2012).

<sup>54</sup> Ministerstvo transporta Rossiiskoi Federatsii (2008) ‘Transportnaia strategiia Rossiiskoi Federatsii na period do 2030’, p. 79.

<sup>55</sup> Antrim (2011) ‘The Russian Arctic in the Twenty-First Century’, pp. 115 and 117.



allocated to accomplish this.<sup>56</sup> The Ministry of Emergency and Ministry of Transport plan to establish ten rescue stations along the Northern Sea Route<sup>57</sup> – in Murmansk, Arkhangelsk, Narian-Mar, Vorkuta, Nadym, Dudinka, Tiksi, Pevek and in the bays of Providenia and Anadyr (see map on page 10).<sup>58</sup> They will be responsible for the subarctic territories, the Russian Arctic sector including the territorial sea and the Northern Sea Route.<sup>59</sup> The rescue stations will have air assets at their disposal amounting to ten helicopters (Mi-8s or Ka-27s) and an unspecified number of aircraft (Il-76s and An-74s).<sup>60</sup> According to plans the Border Troops will be based at the stations and form another ten border stations along the coast. Their future location is not fully known, but two will be based on the islands of Wrangel and Srednii. At these stations 15–20 servicemen from the Border Troops will serve and monitor the situation in the Arctic and rescue people in emergencies.<sup>61</sup> It will also be possible to base fighting ships from the Navy there.<sup>62</sup> In August 2012, however, the Chairman of the Russian Security Council, Nikolai Patrushev, announced that the establishment of the Arctic stations would be delayed.<sup>63</sup> It should also be noted that only a few of the Border Troops' ships are suitable for Arctic operations, and in November 2012 their ability to monitor the coast and the EEZ, and enforce regulations, was limited.<sup>64</sup>

According to the Transport Strategy the legislative framework regarding the use of the Northern Sea Route has to be improved.<sup>65</sup> In July 2012 the Duma adopted a new law concerning shipping along the route. According to the law, ships

---

<sup>56</sup> Gritsenko, Olga (2012) 'Vtoraia kholodnaia voina' [The second cold war], *Vzgliad*, 6 August 2012, on the internet: <http://www.vz.ru/politics/2012/8/6/592055.html> (retrieved 26 September 2012).

<sup>57</sup> Antoshko, Daria (2012) 'Rossiia zadelaet arkticheskie dyry' [Russia will close holes in the Arctic], *Izvestiia*, 16 April 2012, on the internet: <http://izvestia.ru/news/522020> (retrieved 4 September 2012).

<sup>58</sup> Gritsenko (2012) 'Vtoraia kholodnaia voina'.

<sup>59</sup> *Gazeta.ru* (2010) 'MChS sozdast v Arktike 10 pozharно-spasatelnykh tsentrov' [The Ministry of Emergency will create 10 fire and rescue centres in the Arctic], 7 June 2010, on the internet: [http://www.gazeta.ru/news/lenta/2010/06/07/n\\_1504351.shtml](http://www.gazeta.ru/news/lenta/2010/06/07/n_1504351.shtml) (retrieved 26 September 2012).

<sup>60</sup> *Vzgliad*, 'MChS sozdaet aviagruppa v Arktike' [The Ministry of Emergency establishes an air group in the Arctic], 19 March 2012, on the internet: [http://vz.ru/news/2012/3/19/569388\\_print.html](http://vz.ru/news/2012/3/19/569388_print.html) (retrieved 26 September 2012).

<sup>61</sup> Antoshko (2012) 'Rossiia zadelaet arkticheskie dyry'.

<sup>62</sup> *Kommersant* (2012) 'Rossiia sozdast v Arktike bazy boevykh korablei VMF' [Russia will create bases for fighting ships of the Russian Navy in the Arctic], 6 August 2012, on the internet: <http://www.kommersant.ru/news/1996420> (retrieved 3 September 2012).

<sup>63</sup> *RiaNovosti* (2012) 'Russia to Set Up Naval Infrastructure in the Arctic – Patrushev', 6 August 2012, on the internet: [http://en.rian.ru/military\\_news/20120806/175015455.html](http://en.rian.ru/military_news/20120806/175015455.html) (retrieved 26 September 2012).

<sup>64</sup> IISS Strategic Comments (2012) 'Russia in the Arctic: Economic Interests Override Military Aspirations'.

<sup>65</sup> Ministerstvo transporta Rossiiskoi Federatsii (2008) 'Transportnaia strategiia Rossiiskoi Federatsii na period do 2030 goda', p. 114.

entering the Northern Sea Route are obliged to use an ice-breaker escort or a pilot specialized in icy conditions. The law stipulates the construction and equipment of the ships and the obligation to have insurance.<sup>66</sup>

There are other difficulties with development of the Northern Sea Route. The severe weather conditions make it difficult to foresee the time needed for transport,<sup>67</sup> and for the shipping industry a time guarantee for transits is very important. In March 2012 the Office of the Northern Sea Route could not give such guarantees. A further obstacle to increasing the usage of the Northern Sea Route is that Russia cannot supply the shipping with reliable services, for example, pilots when they are required.<sup>68</sup> Icebergs make navigation in Arctic waters hazardous, which slows shipping down. The sea ice breaks up at a different date every spring, forcing shipping companies to estimate during which period the Northern Sea Route can be used.<sup>69</sup> Taken together, these factors make other options more attractive. In addition, according to information in the Russian media there are problems with the development of the infrastructure on land, for example, with the establishment of deep-sea ports.<sup>70</sup> What these problems comprise in detail is not clear.

---

<sup>66</sup> Ministerstvo transporta Rossiiskoi Federatsii, ‘18 iulia Sovet Federatsii FS RF odobril Federalnyi zakon “O vnesenii izmenenii v otdelnye zakonodatelnye akty Rossiiskoi Federatsii v chasti gosudarstvennogo regulirovanie torgovogo moreplavanie v akvatorii Severnogo morskogo puti”’ [On 18 July the Federation Council, Federal Assembly, of the Russian Federation passed the law ‘On the insertion of alterations in individual legislative acts of the Russian Federation in part of the state regulation concerning commercial shipping in the waters of the Northern Sea Route’], *Ministerstvo Transporta Rossiiskoi Federatsii*, 19 July 2012, on the internet: [http://www.mintrans.ru/news/detail.php?ELEMENT\\_ID=18517&phrase\\_id=804650](http://www.mintrans.ru/news/detail.php?ELEMENT_ID=18517&phrase_id=804650) (retrieved 19 September 2012).

<sup>67</sup> Kulikov, Sergei (2012) ‘Severnyi morskoi put uplyvaet ot Rossii [The Northern Sea Route is floating away from Russia], *Nezavisimaia gazeta*, 29 March 2012, on the internet: <http://www.ng.ru/printed/267126> (retrieved 5 July 2012).

<sup>68</sup> Zazimko (2012) ‘Arktika: proekt veka’.

<sup>69</sup> Lasserre, Frédéric (2009) ‘High North Shipping: Myths and Realities’ in Sven G. Holtmark and Brooke A. Smith-Windsor (eds) *Security Prospects in the High North: Geostrategic Thaw or Freeze?* (Rome, NATO Defence College), pp. 194-195.

<sup>70</sup> Zonn and Zhiltsov (2012) ‘Zakhvatit i razburit’.

## 7. Military Assets

Russia has strong military interests in the Arctic since it is a staging ground for the strategic aviation, and the missile trajectories to and from the United States cross the region. Furthermore the Northern Fleet's strategic submarines are based there. The Russian Armed Forces are, however, based solely in the European part of the Arctic; hence there are vast expanses with no military presence. In the east the first military base belongs to the Pacific Fleet in Petropavlovsk on the Kamchatka Peninsula.

### 7.1 The Army

The 200th Motor Rifle Brigade in Pechenga will constitute the foundation of an Arctic brigade, which should be established by 2015.<sup>71</sup> Its task will be, in cooperation with the Border Troops, to monitor the borders and future commercial shipping routes in the Arctic. According to the plans the Arctic brigade would be light and mobile, partially serviced by air transport.<sup>72</sup> By 2020 airborne forces and Navy vessels would be added to the Army component.<sup>73</sup> This would increase the usability of the Arctic brigade since it would operate over vast territories without roads.<sup>74</sup>

### 7.2 Air Assets

Russia's air assets in the Arctic consist mainly of the naval aviation belonging to the Northern and Pacific fleets. Many aircraft do not have the capacity to operate over long distances, but there are a number of Tu-142 anti-submarine warfare aircraft and Il-38 maritime patrol aircraft in the two fleets (the Northern Fleet possesses 13 Tu-142s and 14 Il-38s, and the Pacific Fleet 14 Tu-142s and 15 Il-38s)<sup>75</sup> which do.<sup>76</sup> There are 18 Su-33 fighter aircraft<sup>77</sup> and two surface-to-air missile (SAM) regiments based on the Kola Peninsula. Another missile regiment is based in Severodvinsk, close to Archangelsk. All three regiments are equipped

---

<sup>71</sup> *Kommersant* (2012) 'Rossiiskaia armii sozdst arkticheskie brigady k 2015 gody' [The Russian Army will create Arctic brigades until 2015], 21 February 2012, on the internet: <http://www.kommersant.ru/news/1878332> (retrieved 3 September 2012).

<sup>72</sup> Norberg, Johan (2012) 'Russia's Western Military District in Times of Military Reform' in Shinji Hyodo and Carolina Vendil Pallin (eds) *Neighbourhood Watch: Japanese and Swedish Perspectives on Russian Security* (Stockholm, FOI), p. 63.

<sup>73</sup> *RiaNovosti* (2012) 'Russia to Set Up Naval Infrastructure in the Arctic – Patrushev'.

<sup>74</sup> Norberg (2012) 'Russia's Western Military District in Times of Military Reform', p. 63.

<sup>75</sup> IISS (2012) *The Military Balance 2012* (Abingdon, Routledge for the International Institute for Strategic Studies, IISS), pp. 198 and 201.

<sup>76</sup> Wezeman, Siemon T. (2012) *Military Capabilities in the Arctic*, March 2012, SIPRI Background Paper (Stockholm, Stockholm International Peace Research Institute), p. 9.

<sup>77</sup> IISS (2012) *The Military Balance 2012*, p. 198.

with S-300P SAMs.<sup>78</sup> The strategic aviation (16 Tu-160s, 32 Tu-95MS6s and 31 Tu-95MS16s)<sup>79</sup> is not based in the Arctic but uses the region as a transit channel. Since 2007 its level of activity has increased greatly.<sup>80</sup>

There are plans to start using airfields which were abandoned with the dissolution of the Soviet Union. Experts believe that the Armed Forces will not be based there permanently, but will use them while conducting air policing or taking part in exercises or operations.<sup>81</sup> The airbases will most probably require major investment since they have not been in use for many years, and it will take considerable time before they can be operational again. In August 2012 the Chairman of the Russian Security Council announced that there were many unresolved questions tied to the airbases and that there would probably be delays.<sup>82</sup> It should, however, be noted that the strategic aviation has continuously used the airfield in Tiksi for its operations.<sup>83</sup>

In 2012 the Ministry of Defence decided that a group of interceptor MiG-31s would be deployed to the Rogachevo airfield on Novaia Zemlia by the end of 2013. The aircraft would be a part of the missile defence system and protect Russia from attacks from the north,<sup>84</sup> and escort the strategic submarines from their base to the open ocean.<sup>85</sup> They would operate from the Barents Sea to the Laptev Sea. In addition an air defence unit would be deployed to Novaia Zemlia and the Northern Fleet would patrol the waters. Their purpose, according to Russian media, was to protect economic and military interests, including the nuclear test range on Novaia Zemlia.<sup>86</sup> The planned deployment of the MiG-31s to Novaia Zemlia should probably partly be seen in the light of the fact that 2,500 kilometres of the coast is not covered by radar. During the time of the Soviet Union there were about 40 radar stations located along the route to control the northern border, but lack of maintenance during the 1990s and 2000s led to breakdowns and they have not been replaced.<sup>87</sup> A new radar chain would mean

<sup>78</sup> Khranchikhin (2011) 'Kholodnaia voina nakrivaet Arktiku'.

<sup>79</sup> IISS (2012) *The Military Balance 2012*, p. 192.

<sup>80</sup> Zysk (2011) 'Military Aspects of Russia's Arctic Policy', pp. 86 and 91.

<sup>81</sup> Rotshtein, Danil (2012) 'Razmorazhivanie aerodromov v Arktike budet nosit simvolicheskii kharakter' [De-icing airfields in the Arctic will be symbolic], *Kommersant*, 31 May 2012, on the internet: <http://www.kommersant.ru/doc/1947639> (retrieved 3 September 2012).

<sup>82</sup> Gritsenko (2012) 'Vtoraia kholodnaia voina'.

<sup>83</sup> Gordon, Yefim (2009) *Russian Air Power: Current Organization and Aircraft of all Russian Air Forces* (Hersham, Midland Publishing), p.148.

<sup>84</sup> Mukhin, Vladimir (2012) 'Yadernyi zontik dlia Arktika' [Nuclear umbrella for the Arctic], *Nezavisimaia gazeta*, 28 September 2012, on the internet: <http://www.ng.ru/printed/273791> (retrieved 28 September 2012).

<sup>85</sup> Mikhailov, Aleksei and Balbuurov, Dmitrii (2013) 'Zapoliarie ostalos bez postoiannogo vozdušnogo prikrytia' [The polar regions remain without constant air cover], *Izvestiia*, 2 February 2013, on the internet: <http://izvestia.ru/news/544070> (retrieved 4 February 2013).

<sup>86</sup> Mukhin (2012) 'Yadernyi zontik dlia Arktika'.

<sup>87</sup> Antoshko (2012) 'Rossiia zadelaet arkticheskie dyry'.

very high costs and this might be the reason why Russia planned to deploy the MiG-31s. The ongoing refurbishment of the only aircraft carrier, *Admiral flota Sovetskogo Soiuza Kuznetsov*, may also have contributed to this plan. This leaves the Northern Fleet without both forward-deployable fighter aircraft and radar coverage in the area where the strategic submarines pass to the North Atlantic.

In the beginning of February 2013, however, there was information in the Russian media that the new Minister of Defence, Sergei Shoigu, had reversed the decision to deploy the MiG-31s. The reasons for this would be (a) that Russia does not have enough modernized MiG-31s to deploy sufficient numbers to Novaia Zemlia, (b) that the airstrip at Rogachevo would be too short for a fully fuelled and equipped aircraft to take off, (c) that the lack of radar coverage would require between two and four MiGs to be in the air to support the active aircraft during operations, which would wear them down quickly, and (d) the condition of the housing there and the lack of social infrastructure made it impossible.<sup>88</sup> The operational effect of the absence of the MiG-31s in the Arctic is, however, limited. The disadvantages of Rogachevo outweigh the disadvantages of other airfields, but if other airfields are used it will take longer to get the aircraft into the air over the Arctic. The Su-33s, based on the Kola Peninsula, can protect the strategic submarines on their way to the open ocean. The lack of radar, however, continues to be a problem.

### 7.3 The Navy

Since the dissolution of the Soviet Union the Russian Navy has been underfinanced and its capability has diminished as a result. In the State Armament Programme for the period up to 2020, however, the Navy has been allotted 4,700 billion roubles to purchase about 51 new surface ships, mainly frigates and corvettes, eight Borei class (955) strategic submarines and 16 multi role submarines, probably 10 Yasen class nuclear-powered attack submarines and six Kilo class diesel-electric submarines.<sup>89</sup> According to plans the Northern Fleet will receive an unknown number of frigates and nuclear-powered attack submarines of the Yasen class. It is not known whether further surface ships are assigned to the Northern and Pacific Fleets, since the State Armament Programme is secret, but it should be noted that the Black Sea Fleet has been given a degree of priority in this regard as it is undergoing the more ambitious re-equipment of the fleets.

---

<sup>88</sup> Mikhailov and Balburov (2013) 'Zapoliarie ostalos bez postoiannogo vozdušnogo prikrytia'.

<sup>89</sup> Prezident Rossii 'Soveshchanie po vypolneniiu gosprogrammy vooruzheniia v oblasti osnashcheniia flota' [Conference on the implementation of the State Armament Programme in the naval field], *Prezident Rossii*, 30 July 2012, on the internet: <http://news.kremlin.ru/news/16086/print> (retrieved 6 September 2012).

The first priority of the 2020 State Armament Programme is the strategic submarines.<sup>90</sup> The strategic submarines currently in service are expected to be decommissioned within the next few years and need to be replaced.<sup>91</sup> The eight Borei class strategic submarines are planned to be based in the Northern and Pacific fleets. In January 2013 the first strategic submarine, *Yurii Dolgorukii*, became a part of the Northern Fleet and the second, *Aleksandr Nevskii*, will follow later in the year.<sup>92</sup> In 2006 the strategic submarines resumed operations near or under the Arctic ice after a break of 11 years.<sup>93</sup> According to one expert it is likely that, with new, more active strategic submarines of the Borei class, more surface ships and aircraft will be required. In the longer perspective the demand for escort ships, attack submarines and patrol aircraft will increase as the Arctic ice melts and the opportunities for the submarines to hide under it diminish.<sup>94</sup>

It is unlikely that the 2020 State Armament Programme will be entirely fulfilled since it depends on the development of the Russian gross domestic product (GDP), the procurement system, which is deficient, and production capacity which is low in parts of the defence industry, including the shipbuilding industry. These problems may also make it difficult to meet future increasing needs. In this context it has to be noted that in 2011 the majority of the ships in the Navy were planned to be decommissioned within the next 15–20 years. Hence, if the Navy does not receive enough new ships within this time frame, its capability might diminish<sup>95</sup> and its ability to operate may be affected in the Arctic as well. This might result in the Navy finding it difficult to meet additional operational requirements for the protection of the strategic submarines.

### 7.3.1 The Northern Fleet

The Northern Fleet consists of the headquarters in Severomorsk close to Murmansk, the flotilla on the Kola Peninsula and the White Sea base. The fleet has six strategic submarines of the Delta IV class,<sup>96</sup> whose second modernization was initiated in December 2010.<sup>97</sup> It also has three strategic submarines of the Typhoon class, which are no longer in active combat service. In 2010, special commands were established for the nuclear-powered attack submarines in the Northern and Pacific fleets. The Northern Fleet has 17 nuclear-powered attack

---

<sup>90</sup> Carlsson, Märta (2012) *De ryska marinstridskrafterna* [The Russian Navy], May 2012, FOI Memo 3770 (Stockholm, FOI), p. 3.

<sup>91</sup> Zysk (2011) 'Military Aspects of Russia's Arctic Policy', p. 92.

<sup>92</sup> *RiaNovosti* (2013) 'Podvodnyi kreiser "Yurii Dolgorukii" voshel v sostav VMF' [Submarine cruiser *Yurii Dolgorukii* has joined the Navy], 10 January 2013, on the internet: [http://ria.ru/defense\\_safety/20130110/917563580-print.html](http://ria.ru/defense_safety/20130110/917563580-print.html) (retrieved 10 January 2013).

<sup>93</sup> Zysk (2011) 'Military Aspects of Russia's Arctic Policy', pp. 93-94.

<sup>94</sup> Wezeman (2012) *Military Capabilities in the Arctic*, p. 10.

<sup>95</sup> Carlsson (2012) *De ryska marinstridskrafterna*, p. 4.

<sup>96</sup> *Ibid.*, p. 6.

<sup>97</sup> Zysk (2011) 'Military Aspects of Russia's Arctic Policy', p. 92.

submarines of the Oscar II, Akula I, II and II modified, Sierra I and II and Victor III classes. They are undergoing refurbishment, which will prolong their service life by three to five years. The cost of repair and the fact that this investment is seen as the best option despite the extension of their service life being so short gives a hint about the problematic situation in the area.

The Northern Fleet has 13 larger surface ships, of which seven are operational – two cruisers and five destroyers. The aircraft carrier *Admiral flota Sovetskogo Soiuza Kuznetsov* is currently undergoing refurbishment and the two cruisers are scheduled for repairs during the coming years. Afterwards the cruisers are planned to transfer to the Pacific Fleet, which would reduce the capability of the Northern Fleet.<sup>98</sup> It should be noted that the ships belonging to the Northern Fleet are not designed to ice-class standards, which limits their ability to operate in the Arctic waters. Even with ice-breaker escort it is considered hazardous to conduct operations.<sup>99</sup>

In a longer perspective the Northern Fleet will experience some structural changes, which possibly indicates the importance that Russia attaches to the Arctic. There are plans to establish an operational command, which would be responsible for the fringe areas of the territorial waters and the oceans, consisting of all larger ships. The flotilla on the Kola Peninsula would become an operational command for the Barents Sea and a command for special operations would be created. The White Sea base would keep its present duties: construction, refurbishment and testing of ships.<sup>100</sup> The 61st naval infantry regiment in Sputnik belongs to the Northern Fleet.<sup>101</sup>

### 7.3.2 The Pacific Fleet

The Pacific Fleet has its headquarters in Vladivostok, but has several bases, among others in Petropavlovsk, Kamchatka. The eastern naval part of the nuclear triad, in the form of five Delta III class strategic submarines from the 1970s, is based in Kamchatka. The fleet has 12 nuclear-powered attack submarines of the Oscar II and Akula I classes, out of which an unknown number are undergoing refurbishment. The Pacific Fleet also consists of ten larger surface ships – six of these are operational – and a number of diesel-electric submarines and smaller ships.<sup>102</sup> The 155th Naval Infantry Brigade and the 22nd Naval Infantry Regiment are based in Vladivostok and Kamchatka respectively.<sup>103</sup>

---

<sup>98</sup> Carlsson (2012) *De ryska marinstridskrafterna*, pp. 6-8.

<sup>99</sup> Antrim (2011) 'The Russian Arctic in the Twenty-First Century', p. 115.

<sup>100</sup> Carlsson (2012) *De ryska marinstridskrafterna*, p. 7.

<sup>101</sup> *Ibid.*, p. 11.

<sup>102</sup> *Ibid.*, p. 8.

<sup>103</sup> *Ibid.*, p. 11.

## 7.4 Exercises

The strategic aviation, which resumed patrolling of the Arctic Ocean and the North Atlantic in 2007, has increased its presence by training more in the area.<sup>104</sup> In July 2011 the strategic aviation, the Air Force and the Air Defence conducted an exercise to improve their ability to operate together. Strategic bombers (Tu-160s and Tu-95MSs), fighter aircraft (Su-27s and MiG-31s), and the Il-78 aerial refuelling tanker participated in the exercise.<sup>105</sup> Between 21 and 27 September 2012 the Western Military District conducted a joint exercise in the Arctic. It took place close to Pechenga, in the Barents and the Kara seas and on the Srednii and Rybachii peninsulas. The units were trained to repel an attack from the sea and air, to protect shipping from piracy in the Northern Sea Route and to conduct rescue operations. Seven thousand servicemen, more than 20 ships and submarines, 30 aircraft and 150 army vehicles participated.<sup>106</sup> There is no information available as to how the exercise went or any problems or weaknesses.

---

<sup>104</sup> Mikhailov, Aleksei (2012) 'Dalniaia aviatsiia vernulas na Severnyi polios' [The strategic aviation has returned to the North pole], *Izvestiia*, 27 September 2012, on the internet: <http://izvestia.ru/news/536260> (retrieved 1 October 2012).

<sup>105</sup> Tikhonov, Aleksandr (2011) 'Ucheniia nad Arktikoi' [Exercises over the Arctic], *Krasnaia Zvezda*, 25 July 2011, on the internet: <http://www.redstar.ru/index.php/2011-07-25-15-56-32/item/2914-ucheniya-nad-arktikoj?tmpl=component&print=1> (retrieved 27 November 2012).

<sup>106</sup> Ministerstvo oborony Rossiiskoi Federatsii (2012) 'Voiska (sily) ZVO uchatsia vypolniat boevye zadachi v Arktike' [Troops (forces) of the Western Military District exercises to fulfil combat assignments in the Arctic], *Ministerstvo oborony Rossiiskoi Federatsii*, 24 September 2012, on the internet: [http://function.mil.ru/news\\_page/country/more.htm?id=11373543@egNews](http://function.mil.ru/news_page/country/more.htm?id=11373543@egNews) (retrieved 15 November 2012).



## 8. Conclusions

The aim of this report has been to give an overview of Russia's policies regarding the Arctic in order to answer the questions: What are Russia's policies for development of the Arctic? How are attempts to develop the region progressing? And what are the obstacles? In the report four strategies – the Arctic Strategy, the National Security Strategy, the Energy Strategy and the Transport Strategy – have been presented to portray Russian policies in the Arctic. Russia's ambitions in the Arctic can be said to be twofold: to exploit the natural resources in the region and to make the Northern Sea Route an international transport channel. The natural resources are given central importance since they are defined as key for the future economic and social development of the country. The severe climate, however, makes it a very difficult area to exploit. Russia, furthermore, lacks the technology to extract oil and gas from the continental shelf and is dependent on international cooperation in this regard. The extraction of gas has encountered some difficulties because of the major investments and high risks involved, the competition from cheaper LNG from other parts of the world and the boom in shale gas. This has resulted in the postponement of exploitation of the Shtokman field. Together with the slow pace in exploring the continental shelf this contributes to making it likely that the development of the Arctic from an energy perspective may not progress as planned.

In order to make the Northern Sea Route an international shipping channel Russia needs to improve the underdeveloped infrastructure along the route, for example, deep-sea ports; to renew the ice-breaker fleet; and to be able to control the waters. The majority of the ice-breakers in the present fleet will be decommissioned by 2020 and the question is whether the three nuclear-powered and three diesel-electric ice-breakers ordered by the Russian government will be enough to support future economic activity in the Arctic. Furthermore, the construction of deep-sea ports along the route has encountered problems and the stations planned for the Border Troops, which are assigned to control the waters and conduct search and rescue operations, are delayed. The majority of the surface ships of the Border Troops and of the Northern Fleet are not suitable for icy waters, which limits their ability to operate in the Arctic. Together these factors are setting back the possibilities of opening the Northern Sea Route for commercial shipping to a greater extent.

Russia has military interests in the region due to the basing of the Northern Fleet's strategic submarines, the activities of the strategic aviation and the fact that the missile trajectories to and from the United States run across the area. A stronger commercial presence therefore requires a greater military presence to protect military installations and operational areas. Russia's military assets in the region are, however, limited. An Arctic brigade will be formed by 2015 and is

planned to be complemented with naval and airborne components by 2020. The Navy has suffered from a loss of capability due to a lack of funding after the dissolution of the Soviet Union. It is not likely that the rearmament programme will be entirely fulfilled and, in combination with the decommissioning of the majority of the Navy's ships within the next 15–20 years, this might result in a further reduction of capability. At present the Northern Fleet has a limited number of ships in service and they cannot operate in icy waters. New, more active strategic submarines and (in the longer perspective) decreasing ice coverage might lead to greater demands being made on the Northern Fleet, which might be difficult for it to meet if the number of its ships is falling.

To conclude, Russia has grand plans for the Arctic, but it is a region for which it is difficult to have great ambitions, very much due to the severe climate. Many of the Russian attempts to develop the Arctic have encountered delays and run into problems. It therefore seems unlikely that the region will be able to play the role that Russia wants it to as early as by 2020.

## 9. Discussion and Implications for Further Research

This section aims to take the analysis one step further. By its nature, such a discussion and its implications for the new Arctic and for further research can only be tentative and to a certain extent speculative. Nevertheless, such a discussion based on previous analysis can be useful in formulating questions for further research. We aim to formulate four research themes as an outcome of the discussion below.

The analysis in this study clearly indicates Russia's interest in and efforts to develop the emerging new Arctic. The region is seen as central to Russia's future economic development and security. The geopolitical perspective of how Russia would like to develop its policies shows throughout the strategy documents. Coupled with efforts to develop shipping through the Northern Sea Route, Russian perspectives on the wish to continue and further develop as one of the world leaders in energy and mineral exports are also clearly discernible.

Furthermore, the analysis shows that it will be difficult or even impossible to completely fulfill the aims stated in the strategy documents studied: plans and reality will in all likelihood not fully match. However, even if only parts of the very ambitious plans laid out were to be fulfilled on time, this would still change the set-up in the Russian Arctic, and thereby affect the Arctic as a whole. From this, a key theme for further research can be formulated:

How effective will the Russian system be in providing the capability for manufacturing and operating the assets needed to make use of the Arctic in relation to the stated aims?

As regards the security dimension, this can be divided in two parts. One is the direct support needed to manage the expected increase in shipping and human activity in the Russian Arctic. New and expanded coastguard assets, efforts to improve maritime safety and security, the prevention of illegal fishing and smuggling and so on fall into this category. The plans for these are also laid out in the Russian policy documents.

The other security aspect concerns the military-strategic field. Here, the geopolitical interest is also clearly visible. Russia's will to retain its great power status and, by implication, nuclear strategic parity with the United States, means that great efforts have already been put into refurbishing and renewing the submarine-based nuclear-strategic second-strike capability. To retain, operate and protect these strategic assets, it is likely that Russia will also undertake follow-on investment in and redeployment of military assets to the Arctic region. The importance the Russian government attaches to its strategic nuclear fleet will

in all probability lead to the setting up of a “cordon” to protect and, if necessary, defend these strategic assets. These dispositions in turn should indicate how Russia might focus parts of its future naval, air and underwater assets. As regards basing of these strategic assets, there seem to be two main options.

First, the base complex on the Kola Peninsula comes into focus. The geographic location of this base complex with its year-round ice-free ports, close proximity to the Arctic ice sheet and at one end of the Northern Sea Route makes this an important location in Russian military-strategic thinking. After more than a decade of neglect due to the economic crisis of the 1990s, efforts are now under way to redress these deficiencies. It seems likely that the number of bases will decrease, and as a result of this concentration the remaining ones will be refurbished. A key question is how this in turn will affect the neighbouring Nordic countries. What will the regional effects be on Russia’s stance when the country now modernizes its nuclear strategic submarine fleet and other naval assets? The melting of ice in the Arctic Ocean will also affect operational planning for the nuclear fleet over the longer term. Precisely how is difficult to determine, but if the Arctic Ocean ice sheet in the medium- to long-term perspective no longer effectively conceals the strategic submarines during operations, what other operational concepts might then be looked at?

Second, the Russian Pacific Fleet, with its base in Vladivostok, has also in recent years been operationally more active. On the Kamchatka Peninsula, the naval base of Petropavlovsk is being refurbished and modernized. Russian official and semi-official statements have been made to the effect that parts of the new strategic submarine capabilities are to be based there. If these statements prove to be correct, a similar development to the one outlined above for the Arctic Ocean could also be under way in the north-western Pacific, where protection of the strategic assets leads to a need for more units – air, sea and land – for support and protection to be based there. Basing nuclear strategic submarines on the Kamchatka Peninsula offers the advantage of ice-free ports and close access to the deep sea of the Pacific Ocean, making submarine operations comparatively easier.

Basing the new strategic submarines and supporting assets in the Barents Sea as well as in the north-western Pacific also makes sense for other reasons. First, from an operational perspective it makes sense to keep a future possible opponent guessing as to where Russia’s strategic assets are located and how they might be deployed, thus placing the opponent in a dilemma in a scenario involving open conflict. Second, the supporting units that maintain a safe “cordon” for the strategic submarines would be well placed to control and, if deemed necessary, prevent unwanted access to the Northern Sea Route from both west and east. The supporting units on the Kola and Kamchatka peninsulas would then be given dual tasks and it would be easier to justify their existence and upkeep. In the case of the north-western Pacific region, the added factors of

the territorial disputes with Japan over the Kuriles, the growing naval and military might of China and the United States' declared renewed interest in the western Pacific region all provide added impetus for such an operational stance. Finally, the Northern Sea Route could also provide a viable option for the transport of military units and resources to Russia's Far East in the event of a contingency.

In Russian geopolitical thinking, the Russian Arctic's central role for economic development and the perceived need to control the region's sea lanes could well be used to support the case for operational set-ups as outlined here. It could also function as a driver for future development and procurement of systems. A second theme for research can then be formulated:

How will Russian naval developments, deployments and operational set-ups develop in the Barents Sea, in the north-western Pacific and along the Northern Sea Route?

For these plans to come to fruition, economic development that can support these long-term and costly efforts is necessary. The current economic trends, especially when it comes to the price of natural gas, are not in Russia's long-term favour, mainly due to the increase in extraction of shale gas and the current international economic downturn. On the other hand, Germany's decision to phase out nuclear power and Japan's plan not to expand its nuclear power generation, perhaps even phase it out entirely, could both point to a long-term increase in demand for natural gas, which Russia would be well placed to fill (or at least to take advantage of price developments). In the autumn of 2012, it was decided that the Shtokman gas and oilfield in the Barents Sea was not to be developed due to the fall in the price of natural gas in relation to the relatively high cost of extraction. Currently, regional development for the energy sector seems to be shifting towards the Yamal Peninsula. If Russia's revenues from the energy sector are not sufficient, its main plan for developing the Arctic might run into serious trouble. The importance of the energy sector for Russia is underlined by the fact that over the past decade oil and gas accounted for about 18 percent of Russia's GDP, around 60 percent of its exports and 50 percent of revenues coming to the Russian federal budget. Thus, it is possible to formulate a third theme for further research:

How much of the Russian plans to develop the Russian Arctic can be implemented given what is known of current trends in energy prices?

A final theme for further research concerns the effects of climate change on economic development. Climate change will gradually alter the conditions under which it is possible to operate in the Arctic. As mentioned above, temperatures in the Arctic region are increasing about twice as fast as those in the rest of the

world, which will affect the ice sheet and the permafrost on land. The disappearance of the sea ice will probably result in a greater number of smaller and larger icebergs as well as an increase in the number of severe storms, complicating access to the region. The thawing permafrost affects the infrastructure and pipelines on land. Taken together, these changing factors will probably have an impact on the possibilities of extracting oil and gas in the Arctic and on potential use of the Northern Sea Route. The former constitutes one of the national interests in the Arctic Strategy and is seen as essential for the economic and social development of the country. The fourth and last theme for further research can be formulated:

How will climate change in the Arctic region impact on future Russian economic development? How will it affect the Russian strategic view on the Arctic and the country's future efforts regarding security there?

\*

The analysis in this study has shown that Russia's policies on the Arctic are evolving to meet the emerging new Arctic. It has also shown that there are delays and problems in the implementation of the plans and that they will probably not be completed within the time frame intended. The combination of a number of factors all developing according to their respective inner logics and speeds further complicates the problem of the Russian strategy-making process. It therefore seems likely that surprises and shifts of emphasis will occur in Russian policy vis-à-vis the Arctic region. Priorities may change and choices of cooperation with other actors (state and non-state, regional and external) could shift within the framework of a given strategy. What will not change is the powerful combination of interests and factors in the Arctic, seen by Russia as central to its long-term development: the "triad" of energy extraction, efforts to maintain nuclear strategic parity with the United States, and new transoceanic sea lanes about to open. This ensures that the new Arctic will remain a central part of Russian strategic plans and policies for a long time to come.

## References

- Antoshko, Daria (2012) ‘Rossiia zadelaet arkticheskie dyry’ [Russia will close holes in the Arctic], *Izvestiia*, 16 April 2012, on the internet: <http://izvestia.ru/news/522020> (retrieved 4 September 2012).
- Antrim, Caitlyn L. (2011) ‘The Russian Arctic in the Twenty-First Century’ in James Kraska (ed.) *Arctic Security in an Age of Climate Change* (United States of America, Manchester University Press), pp. 107-128.
- Apanasenko, V. M. and Oznovishchev, C. K. (2011) ‘Konvetsionalnye voprosi bezopasnosti v Arktike’ [Conventional security issues in the Arctic] in A. V. Zagorskii (ed.) *Arktika: zona mira i sotrudnichestva* [The Arctic: an area of peace and cooperation] (Moscow, IMEMO RAN), pp. 87-102.
- Arctic Info (2012) ‘The Expedition “Arctic-2012” Collected Enough Material to Expand the Borders of the Continental Shelf Belonging to the Russian Federation’, *Arctic Info*, 1 November 2012, on the internet: [http://www.arctic-info.com/News/Page/sobrannogo-ekspeditsii--arktika-2012--materiala-dostatocno-dla-rassirenia-granic-sel\\_fa-rossii](http://www.arctic-info.com/News/Page/sobrannogo-ekspeditsii--arktika-2012--materiala-dostatocno-dla-rassirenia-granic-sel_fa-rossii) (retrieved 28 November 2012).
- Carlsson, Märta (2012) *De ryska marinstridskrafterna* [The Russian Navy], May 2012, FOI Memo 3770 (Stockholm, FOI).
- Chernov, Ivan (2011) ‘Stavki na ldu’ [Rates on ice], *Vzgliad*, 22 September 2011, on the internet: <http://vz.ru/society/2011/9/22/524454.print.html> (retrieved 26 September 2012).
- Gazeta.ru* (2010) ‘MChS sozdst v Arktike 10 pozharno-spasatelnykh tsentrov’ [The Ministry of Emergency will create 10 fire and rescue centres in the Arctic], 7 June 2010, on the internet: [http://www.gazeta.ru/news/lenta/2010/06/07/n\\_1504351.shtml](http://www.gazeta.ru/news/lenta/2010/06/07/n_1504351.shtml) (retrieved 26 September 2012).
- Gerasimova, Tatiana (2012) ‘Partnerstvo radi shelfa’ [Partnership for the sake of the shelf], *Kommersant Business Guide*, 19 June 2012, on the internet: <http://www.kommersant.ru/doc/1957672> (retrieved 3 September 2012).
- Gordon, Yefim (2009) *Russian Air Power: Current Organization and Aircraft of all Russian Air Forces* (Hersham, Midland Publishing).
- Granholm, Niklas (2012) ‘The Arctic and the North Atlantic – Strategic Significance for Sweden’ in Bo Hugemark (ed.) *Friends in Need* (Stockholm, Royal Swedish Academy of War Sciences).

Granhholm, Niklas and Malminen, Johannes (2011) *Islands strategiska ställning. En probleminventering* [Iceland's strategic position: an inventory of the issues], FOI-R—3227-SE (Stockholm, FOI).

Granhholm, Niklas (2011) *USA och Arktis: Ett amerikanskt dilemma i väntläge?* [The USA and the Arctic: an American dilemma on hold?], FOI-R—3286-SE (Stockholm, FOI).

Granhholm, Niklas (2011) 'A New Arctic – Strategic Issues in a Dynamic Region' in Laura Salmela (ed.) *Nordic Cooperation and the Far North* (Helsinki, National Defence University, Department of Strategic and Defence Studies).

Granhholm, Niklas and Kiesow, Ingolf (2010) *Olja och gas i ett nytt och förändrat Arktis. Energifrågans utveckling mot bakgrund av regionens strategiska dynamik* [Oil and gas in a new and altered Arctic: development of the energy issue against the background of the regional strategic dynamic], FOI-R—2971-SE (Stockholm, FOI).

Granhholm, Niklas (2009) *Delar av ett nytt Arktis: Utvecklingar av dansk, kanadensisk och isländsk arktispolitik* [Parts of a new Arctic: developments of Icelandic, Canadian and Danish Arctic policies], FOI-R—2861-SE (Stockholm, FOI).

Granhholm, Niklas (ed.) (2008) *Arktis – Strategiska frågor i en region i förändring* [The Arctic – strategic issues in a changing region], FOI-R—2469-SE (Stockholm, FOI).

Gritsenko, Olga (2012) 'Vtoraia kholodnaia voina' [The second Cold War], *Vzgliad*, 6 August 2012, on the internet: <http://www.vz.ru/politics/2012/8/6/592055.html> (retrieved 26 September 2012).

IISS Strategic Comments (2012) 'Russia in the Arctic: Economic Interests Override Military Aspirations', Vol. 18, Comment 43, November 2012.

IISS (2012) *The Military Balance 2012* (Abingdon, Routledge for the International Institute for Strategic Studies, IISS).

*Interfaks* (2012) "'Gazprom" ne vidit smysla vkladyvatsia v Shtokman' [Gazprom does not see the point in investing in Shtokman], 29 August 2012, on the internet: <http://www.interfax.ru/print.asp?sec=1447&id=262869> (retrieved 6 February 2013).



*Izvestiia* (2011) ‘Predstavliaem grazhdanskii atomnyi flot Rossii’ [Presenting Russia’s civilian nuclear-powered ice-breaker fleet], 2 December 2011, on the internet: <http://izvestia.ru/news/508469> (retrieved 27 November 2012).

Khramchikhin, Aleksandr (2011) ‘Kholodnaia voina nakrivaet Arktiku’ [A cold war covers the Arctic], *Nezavisimaia gazeta*, 18 November 2011, on the internet: <http://nvo.ng.ru/printed/262134> (retrieved 3 July 2012).

Krivoshapko, Yulia (2012) ‘A my poidem na Sever’ [We are going to the north], *Rossiiskaia Gazeta*, 5 April 2012, on the internet: <http://www.rg.ru/printable/2012/04/05/arktika.html> (retrieved 20 September 2012).

*Kommersant* (2012) ‘Rossiia sozdast v Arktike bazy boevykh korablei VMF’ [Russia will create bases for fighting ships of the Russian Navy in the Arctic], 6 August 2012, on the internet: <http://www.kommersant.ru/news/1996420> (retrieved 3 September 2012).

*Kommersant* (2012) ‘Rossiiskaia armiia sozdast arkticheskie brigady k 2015 gody’ [The Russian army will create Arctic brigades until 2015], 21 February 2012, on the internet: <http://www.kommersant.ru/news/1878332> (retrieved 3 September 2012).

Kulikov, Sergei (2012) ‘Severnyi morskoi put uplyvaet ot Rossii’ [The Northern Sea Route is floating away from Russia], *Nezavisimaia gazeta*, 29 March 2012, on the internet: <http://www.ng.ru/printed/267126> (retrieved 5 July 2012).

Lasserre, Frédéric (2009) ‘High North Shipping: Myths and Realities’ in Sven G. Holtsmark and Brooke A. Smith-Windsor (eds.) *Security Prospects in the High North: Geostrategic Thaw or Freeze?* (Rome: NATO Defence College), pp. 179-199.

Malysheva, Maria (2012) ‘Zapasy, kotorye trudno izvlech’ [Reserves which are difficult to extract], *Gazeta.ru*, 26 May 2012, on the internet: [www.gazeta.ru/science/2012/05/26\\_a\\_4602393.shtml](http://www.gazeta.ru/science/2012/05/26_a_4602393.shtml) (retrieved: 20 September 2012).

Mikhailov, Aleksei and Balburov, Dmitrii (2013) ‘Zapoliarie ostalos bez postoianogo vozdushnogo prikrytia’ [The polar regions remain without constant air cover], *Izvestiia*, 2 February 2013, on the internet: <http://izvestia.ru/news/544070> (retrieved 4 February 2013).

Mikhailov, Aleksei (2012) ‘Dalniaia aviatsiia vernulas na Severnyi polos’ [The strategic aviation has returned to the North Pole], *Izvestiia*, 27 September 2012, on the internet: <http://izvestia.ru/news/536260> (retrieved 1 October 2012).

Ministerstvo energetiki Rossiiskoi Federatsii (2009) ‘Energeticheskaia strategiiia Rossii na period do 2030 goda’ [Russian Energy Strategy up to 2030], *Ministerstvo energetiki Rossiiskoi Federatsii*, 13 November 2009, on the internet: [http://www.minenergo.gov.ru/activity/energostrategy/full.php?sphrase\\_id=268229](http://www.minenergo.gov.ru/activity/energostrategy/full.php?sphrase_id=268229) (retrieved 10 December 2012).

Ministerstvo oborony Rossiiskoi Federatsii (2012), ‘Voiska (sily) ZVO uchatsia vypolniat boevye zadachi v Arktike’ [Troops (forces) of the Western Military District exercises to fulfil combat assignments in the Arctic], *Ministerstvo oborony Rossiiskoi Federatsii*, 24 September 2012, on the internet: [http://function.mil.ru/news\\_page/country/more.htm?id=11373543@egNews](http://function.mil.ru/news_page/country/more.htm?id=11373543@egNews) (retrieved 15 November 2012).

Ministerstvo transporta Rossiiskoi Federatsii (2008) ‘Transportnaia strategiiia Rossiiskoi Federatsii na period do 2030 goda’ [Transport Strategy of the Russian Federation up to 2030], *Ministerstvo transporta Rossiiskoi Federatsii*, on the internet: [http://www.mintrans.ru/upload/iblock/3cc/ts\\_proekt\\_16102008.pdf](http://www.mintrans.ru/upload/iblock/3cc/ts_proekt_16102008.pdf) (retrieved 13 November 2012).

Ministerstvo transporta Rossiiskoi Federatsii (2012) ‘18 iulia Sovet Federatsii FS RF odobril Federalnyi zakon “O vnesenii izmenenii v otdelnye zakonodatelnye akty Rossiiskoi Federatsii v chasti gosudarstvennogo regulirovanie torgovogo moreplavanie v akvatorii Severnogo morskogo puti”’ [On 18 July the Federation Council, Federal Assembly, of the Russian Federation passed the law ‘On the insertion of alterations in individual legislative acts of the Russian Federation in part of the state regulation concerning commercial shipping in the waters of the Northern Sea Route’], *Ministerstvo Transporta Rossiiskoi Federatsii*, 19 July 2012, on the internet: [http://www.mintrans.ru/news/detail.php?ELEMENT\\_ID=18517&phrase\\_id=804650](http://www.mintrans.ru/news/detail.php?ELEMENT_ID=18517&phrase_id=804650) (retrieved 19 September 2012).

Mukhin, Vladimir (2012) ‘Yadernyi zontik dlia Arktika’ [Nuclear umbrella for the Arctic], *Nezavisimaia gazeta*, 28 September 2012, on the internet: <http://www.ng.ru/printed/273791> (retrieved 28 September 2012).

Norberg, Johan (2012) ‘Russia’s Western Military District in Times of Military Reform’ in Shinji Hyodo and Carolina Vendil Pallin (eds) *Neighbourhood*

*Watch: Japanese and Swedish Perspectives on Russian Security* (Stockholm: FOI), pp. 57-69.

Panov, Pavel (2012) ‘Rossia postroit krupneishii v mire atomnyi ledokol’ [Russia builds the largest ice-breaker in the world], *Izvestiia*, 3 July 2012, on the internet: <http://izvestia.ru/news/529147> (retrieved 4 September 2012).

Prezident Rossii ‘Soveshchanie po vypolneniiu gosprogrammy vooruzheniia v oblasti osnashcheniia flota’ [Conference on the implementation of the State Armament Programme in the naval field], *Prezident Rossii*, 30 July 2012, on the internet: <http://news.kremlin.ru/news/16086/print> (retrieved 6 September 2012).

*RiaNovosti* (2013) ‘Podvodnyi kreiser “Yurii Dolgorukii” voshel v sostav VMF’ [Submarine cruiser *Yurii Dolgorukii* has joined the Navy], 10 January 2013, on the internet: [http://ria.ru/defense\\_safety/20130110/917563580-print.html](http://ria.ru/defense_safety/20130110/917563580-print.html) (retrieved 10 January 2013).

*RiaNovosti* (2012) ‘Russia to Set Up Naval Infrastructure in the Arctic – Patrushev’, 6 August 2012, on the internet: [http://en.rian.ru/military\\_news/20120806/175015455.html](http://en.rian.ru/military_news/20120806/175015455.html) (retrieved 26 September 2012).

*Ria Novosti* (2011) ‘Rossia dolzhna aktivnee ispolzovat Severnyi morskoi put – Patrushev’ [Russia must use the Northern Sea Route more], 7 August 2011, on the internet: [http://ria.ru/arctic\\_news/20110807/413154123.html](http://ria.ru/arctic_news/20110807/413154123.html) (retrieved 5 July 2012).

Rotshtein, Danil (2012) ‘Razmorazhivanie aerodromov v Arktike budet nosit simvolicheskii kharakter’ [De-icing airfields in the Arctic will be symbolic], *Kommersant*, 31 May 2012, on the internet: <http://www.kommersant.ru/doc/1947639> (retrieved 3 September 2012).

Saiganov, Iliia (2012) ‘Vse zapasy korennykh almazov sosredotocheny v Rossiiskoi Arktike’ [All reserves of solid diamonds are concentrated in the Russian Arctic], *Gazeta.ru*, 12 April 2012, in the internet: [http://www.gazeta.ru/science/2012/04/20\\_a\\_4557613.shtml](http://www.gazeta.ru/science/2012/04/20_a_4557613.shtml) (retrieved 20 September 2012).

Serov, Mikhail (2012) ‘OSK postroit dlia “Rosatoma” novoe sudno’ [The state united shipbuilding company builds a new ship for Rosatom], *Kommersant Sankt-Peterburg*, 24 August 2012, on the internet: <http://www.kommersant.ru/doc/2007116> (retrieved 3 September 2012).

Smith, Laurence C. and Stephenson, Scott R. (2013) ‘New Trans-Arctic Shipping Routes Navigable by Midcentury’, *Proceedings of the National Academy of Sciences Plus*

<http://www.pnas.org/content/early/2013/02/27/1214212110.full.pdf+html>

(retrieved 8 March 2013).

Socor, Vladimir (2012) ‘Gazprom’s Shtokman Project: Relic of a Past Era’, *Eurasia Daily Monitor*, 10 August 2012, Vol. 9, Issue 153.

Sovet bezopasnosti Rossiiskoi Federatsii (2009) ‘Osnovy gosudarstvennoi politiki Rossiiskoi Federatsii v Arktike na period do 2020 goda i dalneishiuu perspektivu’ [Foundation of the state policy of the Russian Federation on the Arctic for 2020 and in the longer perspective], *Sovet bezopasnosti Rossiiskoi Federatsii*, on the internet: <http://www.scrf.gov.ru/documents/98.html> (retrieved 4 July 2012).

Sovet bezopasnosti Rossiiskoi Federatsii (2009) ‘Strategiia natsionalnoi bezopasnosti Rossiiskoi Federatsii do 2020 goda’ [National Security Strategy of the Russian Federation up to 2020], *Sovet bezopasnosti Rossiiskoi Federatsii*, on the internet: <http://www.scrf.gov.ru/documents/99.html> (retrieved 4 July 2012).

Tikhonov, Aleksandr (2011) ‘Ucheniia nad Arktikoi’ [Exercises over the Arctic], *Krasnaia Zvezda*, 25 July 2011, on the internet:

<http://www.redstar.ru/index.php/2011-07-25-15-56-32/item/2914-ucheniya-nad-arktikoym?tmpl=component&print=1> (retrieved 27 November 2012).

United Nations, ‘United Nations Convention on the Law of the Sea’, *United Nations*, 10 December 1982, on the internet:

[http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/closindx.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm) (retrieved 20 September 2012).

Vzgliad, ‘MChS sozdaet aviagruppa v Arktike’ [The Ministry of Emergency establishes an air group in the Arctic], 19 March 2012, on the internet: <http://vz.ru/news/2012/3/19/569388.print.html> (retrieved 26 September 2012).

Wezeman, Siemon T. (2012) *Military Capabilities in the Arctic*, March 2012, SIPRI Background Paper (Stockholm, Stockholm International Peace Research Institute).

Wisniewska, Iwona (2012) ‘Natural Resources on the Russian Continental Shelf: Foreign Investors Sought...on Russian Terms’, *Centre for Eastern Studies*, 9 May 2012, on the internet: <http://www.osw.vaw.pl> (retrieved 28 May 2012).

- Zazimko, Vadim (2012) 'Arktika: proekt veka' [The Arctic: project of the century], *Krasnaia Zvezda*, 13 March 2012, on the internet: <http://www.redstar.ru/index.php/daty/item/1069-arktika-proekt-veka?tmpl=component&print=1> (retrieved 26 September 2012).
- Zonn, Igor and Zhiltsov, Sergei (2012) 'Zakhvatit i razburit' [Capture and drill], *Nezavisimaia gazeta*, 10 April 2012, on the internet: <http://www.ng.ru/printed/267577> (retrieved 5 July 2012).
- Zysk, Katarzyna (2011) 'Military Aspects of Russia's Arctic Policy' in James Kraska (ed.) *Arctic Security in an Age of Climate Change* (United States of America: Manchester University Press), pp. 85-106.
- Zysk, Katarzyna (2011) 'The Evolving Arctic Security Environment: an Assessment' in Stephen Blank (ed.) *Russia and the Arctic* (Carlisle, US Army War College Strategic Studies Institute), pp. 91-138.
- Zysk, Katarzyna (2010) 'Russia's Arctic Strategy', *Joint Force Quarterly*, Issue 57 2nd quarter 2010, pp. 103-110.
- United Nations, 'United Nations Convention on the Law of the Sea', *United Nations*, 10 December 1982, on the internet: [http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/closindx.htm](http://www.un.org/Depts/los/convention_agreements/texts/unclos/closindx.htm) (retrieved 20 September 2012).

## Selected FOI reports on Russia 2010–2012

Franke, Ulrik and Vendil Pallin, Carolina. *Russian Politics and the Internet in 2012*, FOI-R--3590--SE, December 2012.

Carlsson, Märta. *The Structure of Power – an Insight into the Russian Ministry of Defence*, FOI-R--3571--SE, November 2012.

Hyodo, Shinji and Vendil Pallin, Carolina (ed.). *Neighbourhood Watch: Japanese and Swedish perspectives on Russian security*, FOI-R--3519--SE, October 2012.

Vendil Pallin, Carolina (ed.). *Russian Military Capability in a Ten-Year Perspective – 2011*, FOI-R--3474--SE, August 2012.

Roffey, Roger. *The Russian Demographic and Health Situation: Consequences and policy dilemmas*, FOI-R--3396--SE, April 2012.

Westerlund, Fredrik. *Russian Nanotechnology R&D: Thinking Big About Small Scale Science*, FOI-R--3197--SE, June 2011.

Oxenstierna, Susanne. *Russia's Nuclear Energy Expansion*, FOI-R--3049--SE, December 2010.

Hedenskog, Jakob. *Naval Strategies in the Black Sea Region*, FOI-R--2881--SE, August 2010.

Bergstrand, Bengt-Göran. *Economic and Military Expenditure Trends since 1990 for the Russian Federation and for EU and NATO*, FOI Memo 3202, May 2010.

Westerlund, Fredrik. *Russian Intelligence Gathering for Domestic R&D: Short Cut or Dead End for Modernisation?*, FOI Memo 3126, April 2010.

Roffey, Roger. *Biotechnology in Russia: Why is it not a Success Story?*, FOI-R--2986--SE, April 2010.

Harriman, David. *Brussels without Muscles? Exploring the EU's Management of its Gas Relationship with Russia*, FOI-R--2969--SE, March 2010.

Heickerö, Roland. *Emerging Cyber Threats and Russian Views on Information Warfare and Information Operations*, FOI-R--2970--SE, March 2010.

Recent reports and other publications are available to download in PDF format on the FOI Russia Project website: <http://www.foi.se/russia> and for the Arctic project at <http://www.foi.se/arctic>. Printed copies may be ordered from Ms Christina Engström, e-mail: [chreng@foi.se](mailto:chreng@foi.se).