

Is there an arms race in the Arctic?

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To what extent does the military posturing of Arctic coastal states reflect an ongoing arms race for the control of the Arctic? This idea first emerged after the 2007 planting of a Russian flag at the North Pole, and is regularly quoted by the media and several political analysts as the most likely scenario. However, the fact that most countries are engaged in the restructuring of their navies does not mean they are engaged in an arms race, a behaviour where every country increases its military capacity in reaction to the neighbors' developments. A quantitative analysis of the Arctic coastal states' navies will be conducted, so as to depict the evolution of the different fleets, taken into account the fact that mere tonnage figures say little about the quality of the equipment, training, employment doctrine, tactics and strategies.¹ Therefore, the analysis will be completed with qualitative comments drawn from naval journals.

1. War in the Arctic? Western views of the Russian strategy for the Arctic

The media regularly depict the Arctic as a region where the melting of the ice cover unleashed a race for the control of potential shipping routes, maritime spaces and vast natural resources. As early as 2005, the *New York Times* described the area as an arena of intense international competition in a High North version of the "Great

¹ Joseph Henrotin, *Les fondements de la stratégie navale au XXIe siècle*. Paris: Économica, 2011, p. 122.

Game.”² In 2008, policy analyst Scott Borgerson claimed the Arctic routes would witness a dramatic surge in traffic in 2008 and warned of an impending “Arctic meltdown” leading to conflict in the region because of a rush to control resource deposits and shipping lanes;³ in 2009 he insisted that the Arctic is on the verge of conflict as the Arctic version of “The Great Game Moves North.”⁴ US Admiral James Stavridis, Supreme Allied Commander for Europe, has claimed that the race for resources in the Arctic could spark a new “cold war” in the region.⁵ “In recent months, a Cold War-style game of imperial conquest has developed beneath the ice of the Arctic Ocean and the Northwest Passage, a submarine-driven dispute involving the United States, Norway, Denmark and especially Canada and Russia”, explained Doug Saunders in 2007.⁶ Canada is about to procure six to eight Arctic patrol ships; Russia launched a new ballistic missile submarine for its Northern fleet; Norway took delivery of five Fridtjof Nansen-class frigates equipped with an Aegis combat system;⁷ the United States has equipped its new Virginia-class submarines with fixtures that help navigation in Arctic seas; Denmark is developing the Knud Rasmussen-class of ice-capable patrol vessels: the “Arctic states are now rearming”⁸ while Russia is developing a “gunboat diplomacy.”⁹

² Krauss, Clifford et al, “As Polar Ice Turns to Water, Dreams of Treasure Abound”, *New York Times*, Oct. 10, 2005.

³ Borgerson, Scott, “Arctic Meltdown: the Economic and Security Implications of global Warming”, *Foreign Affairs* 87(2), 2008, pp. 63, 66-69.

⁴ Borgerson, Scott, “The Great Game Moves North,” *Foreign Affairs*, online version, 25 March 2009, www.foreignaffairs.com/articles/64905/scott-g-borgerson/the-great-game-moves-north, c. January 26, 2012.

⁵ Terry Macalister, “Climate change could lead to Arctic conflict, warns senior NATO commander”, *The Guardian*, October 11, 2010.

⁶ Doug Saunders, “Treading on thin ice”, *The Globe & Mail*, Toronto, October 20, 2007.

⁷ Advanced command and control computer system that tracks multiple targets simultaneously. Several navies are now equipped with this sophisticated system : the United States, Norway, Japan, South Korea, but also Spain and Australia, navies which are not particularly involved in tense theatres. The procurement of the Aegis system is therefore not a good indicator of high political or military tensions.

⁸ Rob Huebert, *The Newly emerging Arctic Security Environment*, CDFAI Paper, Calgary, March 2010, p. 22; Rob Huebert, Heather Exner-Pirot, Adam Lajeunesse and Jay Gullede, *Climate Change & International Security: the Arctic as a Bellwether*, Center for Climate and Energy Solutions, Arlington, VA, May 2012, p. 18.

⁹ Lee Willett, “The Navy in Russia’s ‘Resurgence’ ”, *RUSI Journal*, 154(1), pp. 50-55.

Foreign governments, analysts and the media, ever since the planting of a Russian flag at the bottom of the Arctic Ocean on the North Pole in 2007, have often described Russian manoeuvres, discourses and defense programs as jingoistic, if not bluntly belligerent. In the frame of this reportedly tension-ridden Arctic region, Russia published a new National Security Strategy (2009)¹⁰ in which several analysts were prompt to underline reportedly bellicose assertions. The German daily *Spiegel* asserted that Russia unveiled aggressive Arctic plans,¹¹ whereas James Kraska reported that “in a language reminiscent of the hand-wringing over bipolar measurements [...] in the 1970s, Moscow’s new strategy states that Arctic resources will become the ‘critical point for the world military balance’.”¹² Kimberly Gordy established a link between the Russian planting of a flag at the North Pole in 2007, the sending of bomber patrols towards the Canadian Arctic (“over the Canadian Arctic,” sic) and the publication of the Russian Arctic Policy as proof of Russia’s aggressive posturing and “disregard for Canadian security and environmental interests.”¹³

2. Russia’s Arctic Policy: assertive or aggressive?

2.1. Developments of the Russian doctrine

Two policy documents lay the basis of Russian Arctic governance, *The fundamentals of State policy of the Russian Federation in the Arctic in the period up to 2020 and beyond*¹⁴ and the above-mentioned 2009 Russian National Security Strategy. The Russian

¹⁰Presidential Decree, President Dmitry Medvedev, Security Council of the Russian Federation, *Стратегия национальной безопасности Российской Федерации до 2020 года* [Strategy: National Security Strategy of the Russian Federation to 2020, translation <http://rustrans.wikidot.com/russia-s-national-security-strategy-to-2020> and Daryana Maximova, Institute for the U.S. and Canadian Studies, Russian Academy of Sciences, Moscow], Decree No. 537 (May 12, 2009), www.scrf.gov.ru/documents/99.html, c. January 26, 2012 [hereafter Russian National Security Strategy].

¹¹*Spiegel Online*, “Russia Unveils Aggressive Arctic Plans”, January 29, 2009, www.spiegel.de/international/world/0,1518,604338,00.html, accessed April 13, 2011.

¹²Kraska, James, “International Security and International Law in the Northwest Passage”, *Vanderbilt Journal of Transnat’l Law* 42, 2009, pp. 1109-1132, p. 1117.

¹³Kimberly Gordy, “Dire Straits: the Necessity for Canadian Sovereignty in the Arctic Waterways”, *20 Fordham Environmental Law Review* 551, p. 565.

¹⁴Presidential Decree, President Dmitri Medvedev, *Основы государственной политики Российской Федерации в Арктике на период до 2020 года и дальнейшую перспективу* [Fundamentals of the State policy

Arctic Strategy is a 6-page document articulated in six parts and eleven points. Six major dimensions are tackled within this document: socio-economic development; military security; environmental security; information technologies and communications; science and technology; international cooperation (Article 6). The military aspect is mentioned in article 6b, where the need to safeguard Russia's borders is mentioned; article 8b develops the means to achieve this goal, essentially the creation of special military units and coast guard units under the command of the FSB, mainly for the prevention of smuggling, terrorism and illegal immigration, and the integration of control systems at the borders and at sea. Article 7 lists the most urgent priorities and among them the military security is not mentioned. Thus, focusing on the military aspects put forth in the *Russian Arctic Strategy* leads observers to fail to perceive nuances and the specific scope of the military measures described in the document. Overall, the defense-related articles cover about one page, or one-sixth of the document: it is certainly not the main focus of the 2008 Russian Arctic Strategy. Quite the contrary, there are several articles detailing the need and means to develop regional cooperation. The document underlines the fact that the Arctic is crucial for Russia primarily because of its energy (Article 4) and natural resources strategic deposits (Article 11), and that Russia needs to protect the area against external threats. The concern seems to be more defensive than expansionist, and the general wording is similar to western policy declarations in the Arctic.¹⁵ It is interesting to note that the recent Russian declarations and actions were perceived as aggressive by other Arctic states, whereas declarations and policies published ten years ago were not. Indeed, the general tone of the 2008 document is very different from the harsh, aggressive tone previously used in the 2001 Arctic document.¹⁶ For instance, the 2001 policy document states that in the Arctic, all activities are tied to Russia's military security (page 2); it also highlights the need to urgently provide for counterweights to upscaled military activities in Alaska,

of the Russian Federation in the Arctic in the period up to 2020 and beyond, translation www.arcticprogress.com/2010/11/russias-arctic-policy and Daryana Maximova], September 18, 2008, www.scrf.gov.ru/documents/98.html, c. January 26, 2012 [hereafter Russian Arctic Strategy].

¹⁵ Indra Øverland, "Russia's Arctic Energy Policy", *International Journal*, LXV(4), 2010, p.867.

¹⁶ *Основы государственной политики Российской Федерации в Арктике* [Fundamentals of the State Policy of the Russian Federation in the Arctic], 14 June 2001, www.arctictoday.ru/region/economics/469.html, accessed February 20, 2012. Translation and comments, Olga Alexeeva, post-doctoral fellow, Laval University.

Also see Zysk, Katarzyna, "Russia's Arctic Strategy", *Joint Force Quarterly* 57, Q2, 2010, p.108.

Greenland, Spitzbergen, northern Norway and Arctic waters (page 6), whereas the 2008 document does not mention military activities in other countries nor does it imply that an unfolding military rivalry could be a threat for Russia in the Arctic. The 2008 policy statement remains broadly defined, whereas the 2001 was much more specific in its diagnosis and the military measures to be implemented, notably page 2.

Akin to the 2008 Arctic Strategy, the Russian National Security Strategy is an optimistic, confident and assertive document, stating perceived challenges clearly but avoiding developments about hostile encirclement that permeated previous versions,¹⁷ in particular the 2000 National Security Concept of the Russian Federation.¹⁸ Indeed, if in 2000 Russia wanted to assert itself as “one of the world’s major countries”, in 2009 it aims to transform itself into “a world leader in terms of... influence over global affairs” (Article 1) and makes clear this capacity is largely based on energy reserves and political use of them: “Russia's resource potential and pragmatic policy for its use, have broadened the possibilities for the Russian Federation to reinforce its influence on the world stage”.¹⁹ The document acknowledges that “in the long term, the attention of international politics will be focused on ownership of energy resources, including in the Near East, the Barents Sea shelf and other parts of the Arctic, in the Caspian basin, and in Central Asia” (Article 11), but there is no mention that this will necessarily bring about a major conflict about resource ownership: “For the defense of its national interests, Russia, while remaining within the boundaries of international law, will implement a rational and pragmatic foreign policy, one which excludes expensive confrontation, including a new arms race.” (Article 13). With the help of native Russian speakers, we could not find the phrase about Arctic resources that James Kraska translated as “the critical point for the world military balance”, and assume it was his rather strong interpretation of article 11. Neither does the document call for a specific upgrade of military capacities, especially in the Arctic, but it rather evokes a general

¹⁷ Keir Giles, 2009. *Russia's National Security Strategy to 2020*. NATO Defense College, Research Division, Russia Review Series, Rome, p.4; Lassi Heininen, *Arctic Strategies and Policies. Inventory and comparative Study*, Northern Research Forum & University of Lapland, Akureyri, 2011, p.45.

¹⁸ Presidential Decree No. 24, *National Security Concept of the Russian Federation*, January 10, 2000, online with the Ministry of Foreign Affairs of the Russian Federation, <http://tinyurl.com/82pyg4s>, c. January 26, 2012.

¹⁹ Article 9, *Russia's National Security Strategy to 2020*, <http://rustrans.wikidot.com/russia-s-national-security-strategy-to-2020>.

“military renewal” (Article 112). The 2010 Military Doctrine reflects this moderate Russian position regarding the Arctic, as the region is not even mentioned in the document.²⁰

The need to strengthen surveillance and defense capabilities in the Arctic did not seem a pressing issue in 2006, when an Independent Arctic Border Detachment of the FSB, formed in 1994 and based in Vorkuta, was dismantled.²¹ However, key political documents adopted in recent years do point at such potential threats as terrorism at sea, smuggling, pollution, poaching and illegal immigration. These documents underline what threats are behind the 2008 decision to re-establish FSB border units in Murmansk and Arkhangelsk, to eventually develop a network of airfields to operate drones, and to foster maritime patrols:²² the accent is not on a military confrontation with Arctic riparian countries, but on control of illegal trafficking, terrorism, poaching, environmental threats: the emphasis is thus more on a constabulary role for the armed forces, rather than on a looming war for the Arctic.

2.2. *Discourse and rhetoric*

This reality of rather moderate policy documents does not preclude more inflammatory declarations by either Russian politicians or military staff. Katarzyna Zysk reported about this emphasis put on delimitation disputes and maritime zones overlaps in recent years by Russian officials in many declarations and speeches. Admiral Vladimir Vysotskii, for instance, announced in February 2008 that Russia’s fleet would do whatever possible to strengthen its presence in areas where the country has strategic interests,²³ but admitting by the same token that the Northern Fleet presently does not have the means to maintain a permanent presence in international waters to do so. President Putin also described the Arctic in 2004 as a “disputed

²⁰ *Военная доктрина Российской Федерации*, http://news.kremlin.ru/ref_notes/461 [Military Doctrine of the Russian Federation], Russian Federation Presidential Edict, 5 February 2010, translation www.sras.org/military_doctrine_russian_federation_2010, accessed Feb. 3, 2012.

²¹ Katarzyna Zysk, “Russian perspectives on Arctic Security”, *Baltic Rim Economies*, 4, 2010, p. 17.

²² Zysk, *Baltic Rim Economies*, *op. cit.*, p. 17.

²³ *Barents Observer*, “Northern Fleet looks forward”, Feb. 4, 2008, www.barentsobserver.com/northern-fleet-looks-forward.4455167-16149.html, accessed Feb. 2, 2012.

territory, rich in natural resources”, where “a serious fight of interests between rivals is taking place”²⁴ and promised on February 20, 2012, just before his reelection as President, an unprecedented rearmament program for Russia.²⁵

Russia’s military ambitions, especially within the military officials, remain high even if the doctrine did not develop an aggressive posturing by the Russian government. The government increasingly views a strong Navy as a foreign affairs tool as well as a prestige element Russia cannot do without.²⁶ In this general frame, the Arctic is perceived by Russian leaders as a region with strategic resources crucial for Russia’s economic future economic growth and the hoped for restoration of Russia’s status.²⁷ However, does the publication of the *Arctic Strategy* and the new Russian military posturing in the Arctic since 2007 mean that Moscow is on a collision course with other claimants in the region? Some analysts defended the idea that the “Kremlin believes that credible displays of power will settle the conflicting territorial claims”, even though “Russia is paying a mere lip service to international law”.²⁸ But precisely, despite the dispute over fisheries in the Barents Sea, the Russian navy has refrained from provoking the Norwegian Coast Guard,²⁹ and Norway and Russia have settled their complex maritime dispute in April 2010, without Russia displaying any military pressure on Oslo... The Russian government repeatedly insisted border issues in the Arctic Ocean will be settled within the framework of international law.³⁰

²⁴ *Izvestia*, September 27, 2004, quoted by Zysk, K., “Russian Military Power and the Arctic”, *EU-Russia Center Review*, 8, 2008, p. 84.

²⁵ “Poutine promet un réarmement « sans précédent » de la Russie”, *Mer & Marine*, March 5, 2012, www.meretmarine.com/article.cfm?id=118862, retrieved April 5, 2012.

²⁶ Katarzyna Zysk, “Russia’s Naval ambitions. Driving forces and Constraints”, in Peter Dutton, Robert Ross, Øystein Tunsjø (eds.), *Twenty-First Century Seapower. Cooperation and conflict at sea*, London : Routledge, 2012.

²⁷ Katarzyna Zysk, “Russia and the High North: Security and Defense Perspectives”, *Nato Defense College Forum Paper* 7, May 2009, p. 108-109; Michael Roi, “Russia: the Greatest Arctic Power?”, *Journal of Slavic Military Studies*, 23(4), 2010, p. 558.

²⁸ Ariel Cohen, “Russia in the Arctic: challenges to US energy and geopolitics in the High North”, in Stephen Blank (ed.), *Russia in the Arctic*, Strategic Studies Institute Monograph, July 2011, p. 23.

²⁹ K. Zysk, 2009, op. cit, p. 123.

³⁰ Ilulissat Declaration, May 2008 ; Katarzyna Zysk, “Russia’s Arctic Strategy”, *Joint Force Quarterly* 57, Q2, 2010, p. 106 ; “Lavrov: No war over Arctic resources”, *Barents Observer*, January 13, 2011.

2.3. Other Arctic countries: what posturing?

The other riparian countries of the Arctic Ocean have all published national strategies for the region that are not significantly different from Russia's.

Norway: developing the High North

In March 2004, the Norwegian government presented its *Long-Term Plan for the Armed Forces 2005-2009*, with orientations confirmed in March 2008 under the *Long-Term Plan 2009-2012*: the focus would remain on territorial defense, but with a higher emphasis on the North and the maritime domain, and with Russia as the main potential threat³¹, although the report did emphasize that no new Cold War replaced the old³².

Norway published in 2006 the *Norwegian Government's High North Strategy*,³³ followed in 2009 by *New Building Blocks in the North. The next Step in the Government's High North Strategy*.³⁴ The documents highlight the rapid changes that are taking place in Norway's Arctic (Northern continental Norway and Svalbard). They place emphasis on development, environmental protection, illegal fishing and international cooperation. To achieve these goals, the Norwegian government intends to foster its presence, including militarily; develop Arctic science; protect the environment while developing resources exploitation and sharing benefits with local populations; put a strong emphasis on regional cooperation (2006, p. 7-9). The strategy clearly underlines the economic potential of the "High North", and if the military dimension is indeed mentioned, there is no sense of concern in the documents.³⁵ Indeed, the Norwegian Government argues that if "the Northern areas will be one of the main challenges or more correctly, set of challenges and opportunities in Norwegian security politics...", this situation does not mean that Oslo sees "expedient to seek solutions on several challenges in the North with military means; what is needed is broad civilian

³¹ Håkon Lunde Saxi, *Norwegian and Danish Defence Policy. A comparative Study of the post-Cold War era. Defence and Security Studies Series*, Oslo: Norwegian Institute for Defence Studies, 1, 2010, pp. 55-58, 65-69, 72.

³² *Ibid.*, p. 71.

³³ Norwegian Ministry of Foreign Affairs, *Norwegian Government's High North Strategy*, Oslo, 2006, 73 p.

³⁴ Norwegian Ministry of Foreign Affairs, *New Building Blocks in the North. The next Step in the Government's High North Strategy*, Oslo, 2009, 92 p.

³⁵ Jensen, Ø. and Rottem, S. V. (2010), "The politics of security and international law in Norway's Arctic waters", *Polar Record* 46(236), p.75.

cooperation” .³⁶ On March 23, 2012, the Norwegian Government unveiled a new Long-term Defense Plan that underlined improved operational capability and confirmed the purchase of 53 F-35 fighter aircraft, but with no specific emphasis on Arctic defense. Norway declared it would create an Arctic Battalion, but it is not going to be a new unit, rather the renaming of the 2nd Battalion deployed in Tromsø.³⁷

Norway, in an uneasy relationship with its large neighbor, stresses the need for cooperation and engagement. Yes, Russia is at times unpredictable, is not really democratic in the Western sense, and longs for former glory days, a cause of concern among its neighbors. Oslo tailored a dual policy of engagement with Moscow while at the same time watching closely Russian military development, designing strong homeland military capacities and advocating for the involvement of NATO along with the Arctic Council. But this policy predates the High North policy and cannot be interpreted as a growing fear of a confrontation with Russia in the Arctic.³⁸

Denmark: no threat in the radar screen

In August 2003, the Defence Commission found there were no direct territorial threats to Denmark and pleaded in favor of the investment in mobile forces to fight abroad or to protect Denmark’s interests in Danish waters.³⁹ The ensuing 2004 *Defence Agreement 2005-2009* scrapped Denmark’s three submarines but confirmed the offshore patrol vessels (OPV) approved in December 2003 by the Danish Parliament. The 2008 Danish Defence Commission, thus published after the 2007 rhetoric incidents with

³⁶ Norwegian Ministry of Foreign Affairs, *Interesser, ansvar og muligheter. Hovedlinjer i norsk utenrikspolitikk* [Interests, responsibilities and possibilities. Main lines in Norwegian foreign policy], White Paper 15, Oslo, p.46, www.regjeringen.no/nb/dep/ud/dok/regpubl/stmeld/2008-2009/stmeld-nr-15-2008-2009-.html?id=548673, accessed Feb. 6, 2012; quoted by Astrid Grindheim, *The Scramble for the Arctic? A discourse analysis of Norway and the EU’s Strategies towards the European Arctic*, FNI Report 9/2009, Lysaker, Norway.

³⁷ Ministry of Defense, Oslo, <http://tinyurl.com/c927zka>, retrieved June 4, 2012; “Norway establishes ‘Arctic Battalion’”, *Barents Observer*, March 29, 2012, <http://barentsobserver.com/en/topics/norway-establishes-arctic-battalion>, retrieved May 28, 2012.

³⁸ Katarzyna Zysk, Senior Analyst and Associate Professor, Department of Norwegian Security Policy, Norwegian Institute for Defence Studies, interview June 5 in Oslo; Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.

³⁹ Håkon Lunde Saxi, Norwegian and Danish Defence Policy. A comparative Study of the post-Cold War era. *Defence and Security Studies Series*, Oslo: Norwegian Institute for Defence Studies, 1, 2010, p.53.

Russia, renewed the diagnosis: there are no immediate threats to Danish spaces; patrolling Danish waters is the sole responsibility of dedicated vessels, and the melting of the sea ice creates both opportunities and security challenges that must partly be addressed through a higher military footprint.⁴⁰

Following the Commission's recommendations, Denmark published a military plan for the period 2010-2014 that includes, similar to Russian plans, the establishment of an Arctic military command structure to operate over the whole Arctic region through the merging of the Greenland Command and the Faroe Command.⁴¹ There is a parallel movement but no hint in the Danish strategy that this is in reaction to Russian action. Because the region is changing fast due to climate change, a changed geostrategic significance of the region will entail new tasks for the Danish Armed Forces. The document stresses the need for larger patrol ships for Greenland and the North Atlantic and ships that can carry helicopters for the Arctic, North Atlantic and international operations.⁴² Indeed, two Knud Rasmussen-class offshore patrol vessels (OPV) are replacing the Agdlek-class cutters around Greenland, following a 2003 decision. But there is no mention of a threatened sovereignty to protect. To the contrary, the format of the armed forces is to be reduced: the number of Leopard 2 battle tanks will shrink from 57 to 34; operational aircraft number from 48 to 30; maritime response vessels, from 4 to 3 (p.26).

The Danish government published a *Strategy for the Arctic* in 2011.⁴³ Enforcing sovereignty is tackled with just over two pages (21-22) out of a document of 58 pages. The creation of a unified command and of an Arctic Response Force is outlined as part of the Danish Armed Forces' responsibility of enforcing sovereignty, but nowhere is it mentioned that this sovereignty is threatened or that neighbors are perceived to rearm.

⁴⁰ Ibid., 2010, p. 124.

⁴¹ This unification of the two North Atlantic military commands had, in fact, been discussed for some time with two non-defense goals: rationalization and spending cuts. Nikolaj Petersen, "The Arctic Challenge to Danish Foreign and Security Policy", in James Kraska (ed.), *Arctic Security in an Age of Climate Change*, New York : Cambridge University Press, 2011, p. 162.

⁴² *Danish Defence Agreement 2010-2014*, Copenhagen, June 24, 2009, p. 12, p. 9.

⁴³ Kingdom of Denmark. *Strategy for the Arctic 2011-2020*. Copenhagen, June 2011.

Canada: strong rhetoric for the defense of the sovereignty

Canada is also organizing annual integrated navy, air force and army manoeuvres in the Arctic, officially designed to prepare the country for any future challenge to its sovereignty. If Russia's flag-planting at the North Pole stirred quite a lot of uproar in the West, Denmark and Canada acted similarly on tiny Hans Island in 1988 and then 2005, planting flags and sending ministers to step foot on the bare rock.

Canadian discourses, whether from the media or the government, are quick to point at threats to Canada's sovereignty whether it be from the United States that will not recognize Canada's claim over the Northwest Passage; from Denmark that claims tiny Hans Island as well as Canada; or from Russia whose extended continental shelf claims are likely to overlap with Canada's when they are made public in 2013, or whose military policy is depicted as unfriendly at best. "Canada is the only Arctic state that will establish new Arctic forces designed primarily for constabulary functions. Denmark, Norway, Russia and the United States have either invested or are about to invest in weapons systems designed to fight wars."⁴⁴ But the self-imaged peace-loving Canada is not necessarily perceived as such in Russia or in Scandinavia, especially after the Canadian government highlighted the military dimension of its Arctic policy: if the Canadian media described the Russian planting of a flag at the North Pole as diplomacy "conquistador-style", Stephen Harper, the Conservative Prime minister, used the 2007 "Throne Speech to signal the federal government was stepping up its presence in the Far North, pledging a bold and expensive military campaign to assert sovereignty over territory claimed by Canada and areas of the Arctic that are still in dispute."⁴⁵ No surprise then that Canada is perceived as the most aggressive Arctic country by Europeans in the present sovereignty disputes.⁴⁶

⁴⁴ Rob Huebert, *op. cit.*, 2010, p. 22.

⁴⁵ Doug Saunders, *Globe & Mail*, *op. cit.*, 2007.

⁴⁶ "Among the five Arctic coastal Arctic States, Canada is certainly the one with the most aggressive policy", Olivier Truc, *Le Monde – Bilan géostratégique*, 2010, p. 89 ; "Canada disqualified itself [for a leadership role in the Arctic] by making the Arctic a nationalist and populist theme", Neil Hamilton, "Les défis de la gouvernance de l'Arctique", in P. Jacquet et al (ed.), *Regards sur la Terre 2011*, Armand Colin, Paris, 2011, p. 327 ; "Canada, with Prime minister Harper, is the most aggressive and demanding in its quest of asserting its sovereignty in the Arctic", Jean-Marie Collin, "Arctique, un territoire en recherche de souveraineté", *Cahiers de la Revue Défense Nationale*, special issue *L'Arctique, théâtre stratégique*, Oct.

Canada's Arctic policy is articulated around *Canada's Northern Strategy Our North, Our Heritage, Our Future*,⁴⁷ the *Statement on Canada's Arctic Foreign Policy*⁴⁸ and *Canada First Defence Strategy*.⁴⁹ The tone is given from the first sentence of the Statement: "The Arctic is fundamental to Canada's national identity."⁵⁰ Exercising Canada's sovereignty is the first objective; it spans over six pages of the Statement, five pages of the Strategy, and stresses the need to increase Canada's military presence in the region. Canada also intends to "promote economic and social development; protect our environmental heritage; and improve and devolve Northern governance", but all these goals revolve around the objective of fostering Canada's sovereignty (Statement, p.3). The *Defence Strategy* places conducting "daily domestic and continental operations, including in the Arctic and through NORAD", as its first priority.

United States, the "reluctant Arctic power"

Among the five riparian States, the United States appears to be the least worried about potential encroachments with its sovereignty in the area. Often referred to as the "reluctant Arctic power,"⁵¹ the US is turning its eyes on the Arctic but neither the media nor the government echoes the perception of an immediate threat to the country's interests. In January 2009, President Bush issued a new Presidential Directive about the Arctic.⁵² The document, the first comprehensive re-articulation of US national policy about the Arctic since 1994, is very general in tone, listing all the aspects of governance Washington sees relevant regarding its Arctic policy: national and homeland security of course, including freedom of the seas; but also boundary and continental shelf issues, scientific cooperation, international governance, maritime transportation, native involvement, economic and environmental issues. The military dimension is present in

2011, p. 17 ; also see P. Whitney Lackenbauer, "Sovereignty, Security and Stewardship", in F. Griffiths, R. Huebert and P. W. Lackenbauer, *Canada and the Changing Arctic: Sovereignty, Security and Stewardship*, Waterloo: Wilfrid Laurier University Press, 2011, p. 234.

⁴⁷ Government of Canada, *Canada's Northern Strategy Our North, Our Heritage, Our Future*, Ottawa, 2009.

⁴⁸ Government of Canada, *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad*. Ottawa, 27 p., 2010.

⁴⁹ Ministry of National Defence, *Canada First Defence Strategy*, Ottawa, 2008, 21 p.

⁵⁰ *Statement...*, 2010, p.2; *Canada's Northern Strategy...*, 2009, p. 3.

⁵¹ Rob Huebert, "United States Arctic Policy: the Reluctant Arctic Power", *School of Public Policy Briefing Paper 2(2)*, University of Calgary.

⁵² National Security Presidential Directive NSPD 66 and Homeland Security Presidential Directive HSPD 25, *Arctic Region Policy*, Washington, DC, January 9, 2009.

this declaration: « The United States has broad and fundamental national security interests in the Arctic region and is prepared to operate either independently or in conjunction with other states to safeguard these interests. These interests include such matters as missile defense and early warning; deployment of sea and air systems for strategic sealift, strategic deterrence, maritime presence, and maritime security operations; and ensuring freedom of navigation and overflight; but the declaration remains general and do not hint at possible threats directed at Arctic US territories. However, Canadian media were quick to underline President Bush reiterated the classical US position that the Northwest Passage is an international strait, albeit this issue is not particularly stressed in the document, and picture an aggressive posturing.⁵³ The *Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2011*⁵⁴ does not even evoke the Arctic in its planning for the future of the US Navy, despite the October 2009 issuing of the *US Navy Arctic Roadmap*.⁵⁵ No sense of urgency emerges from this latter document, as it calls for efforts to “consider required Navy Arctic capabilities in developing the Navy Strategic Plan” not before fiscal year 2014 (p.10). The *Quadrennial Defense Review Report 2010*⁵⁶ presents the challenges in the Arctic less as security threats and more in terms of practical commercial and operational considerations: communications gaps, search and rescue capacities and situational awareness.⁵⁷

The *Report to Congress on Arctic Operations and the Northwest Passage*⁵⁸ is of course more specific; it does note that the “changing Arctic climate is highly likely to alter conditions sufficiently to affect US national security interests and objectives in the region over time”, but also that “there is no current military threat in the region...” (p.9), as “relationships among the Arctic nations will remain generally stable and

⁵³ Scott Zellen, *Arctic Doom, Arctic Boom: The Geopolitics of Climate Change in the Arctic*, New York: Praeger, 2009, p. 116.

⁵⁴ Director of Warfare Integration, Office of the Chief of Naval Operations, *Report to Congress on annual Long-Range Plan for construction of Naval Vessels for FY 2011*, Washington, DC, February 2010, 32 p.

⁵⁵ Vice-Chief of Naval operations, Department of the Navy, *US Navy Arctic Roadmap*, Washington, DC, October 2009, 31 p.

⁵⁶ Department of Defense, *Quadrennial Defense Review (QDR) Report*, Washington, DC, February 2010.

⁵⁷ Michael Mayer, *The 2010 QDR and US Grand Strategy*, Norwegian Institute for Defence Studies, Oslo, p.5 ; see *QDR Report* on p.19 and 86.

⁵⁸ Department of Defense, *Report to Congress on Arctic Operations and the Northwest Passage*, Washington, DC, May 2011.

cooperative”.⁵⁹ The Department of Defense estimates it “can accomplish its missions against existing threats in current Arctic conditions with its current capabilities”,⁶⁰ although it reckons some responsibilities, like search and rescue, are very challenging due to limited infrastructures and the paucity of assets (p.14). Thus, no threat to American sovereignty and no major threat are identified, and therefore no increase in military capacity is advocated in US strategy documents, although of course the US Northern Command has raised the issue of involvement in the Arctic and of security issues in the region .

Thus, the five riparian Arctic countries do mention security or sovereignty issues in their Arctic strategies – to the difference of Finland, Sweden or Iceland, the other members of the Arctic Council.⁶¹ However, the urgency they place in achieving it varies. Exercising sovereignty and ensuring security are the main goals for two countries: Canada and the United States. Russia’s strategy does mention the possibility of conflicts and concedes that the Arctic is also “the sphere of military security”, but the security dimension in the Russian strategy does not come first and is coordinated with an emphasis on cooperation to solve actual disputes. For Norway and Denmark, asserting sovereignty is also mentioned as a priority, but that ranks only sixth for Norway and is included in the first as a tool for Denmark; for both kingdoms, it is understood as an instrument to help achieve the other priorities.

Besides, for all countries, security or sovereignty is coordinated with several other civilian objectives, environmental protection, international cooperation, economic development, native governance... It is thus difficult to interpret any of these strategies as a clue to a tenuous climate between Arctic countries. Then, to what extent the evolution of the naval or air order of battle in the Arctic could attest to a revival of military tension in the region?

⁵⁹ Ibid., p. 10.

⁶⁰ Ibid., p. 15.

⁶¹ Heininen, 2011, *op. cit*, p. 72.

3. The evolution of Russia's military naval and air posture

Indeed, Russia is bolstering its military capacity at the operational level in the Arctic. Plans were announced to increase the operational radius of Russia's northern submarine fleet and reinforce the army's combat readiness along the Arctic coast.⁶² In August 2007, Russia resumed long-range bomber patrols over the Arctic and in July 2008, announced it would patrol Arctic waters with Northern Fleet units – these two patrolling activities had been suspended after the Cold War. The bomber patrols were deemed very controversial by some Western experts after patrols approached Canada, Alaska, the UK and Norway's central command at Bodø;⁶³ several were intercepted and made the headlines in Canada and in the UK,⁶⁴ although they never entered the airspace, flew at high altitude⁶⁵ and may have borne no weapon.⁶⁶ The increased air and naval activity is impressive only if compared to the long period of decay in the Russian

⁶² *The Telegraph*, "Russia plans Arctic military build-up", June 11, 2008, www.telegraph.co.uk/news/worldnews/europe/russia/2111507/Russia-plans-Arctic-military-build-up.html, accessed Feb. 2, 2012.

⁶³ Kefferpütz, Roderick, "On thin ice? (Mis)interpreting Russian Policy in the high North", *CEPS Policy Brief*, n°205, February 2010, p. 7.

⁶⁴ "U.S. jets escort Russian bombers off Alaska coast", CNN, March 28, 2008; "Harper warns Russians after two bombers intercepted", *National Post*, Feb. 29, 2009; "RAF catches Russian bombers in UK airspace", *Scotsman*, March 24, 2010.

⁶⁵ Pavel Baev, "Troublemaking and Risk-taking: the north in Russian Military Activities", in Elana Wilson Rowe (ed.), *Russia and the North*, Ottawa: University of Ottawa Press, 2009, p.22; "RAF fighter jets scrambled to intercept Russian bombers", *Daily Mail*, August 22, 2007; "Canadian jets repel Russian bombers", *Toronto Sun*, July 30, 2010. NORAD spokesman Lt. Desmond James explained in 2010 that "both Russia and NORAD routinely exercise their capability to operate in the North. These exercises are important to both NORAD and Russia and are not cause for alarm" (CBC News, August 25, 2010). It seems the media often confuse the buffer zone, the zone where traffic is monitored, and the actual airspace, which extends only 12 miles beyond the coast. Violating the actual airspace with military planes is a serious international offense and it is likely that if the Russian bombers had actually done so, diplomatic language would have been much coarser.

⁶⁶ All pictures depicting interceptions by NATO planes show the Tu-95 bearing no missile on the wing pods. Nothing can be said about the bomb bays however for both Tu-95 and Tu-160. Russian journalists also underline the bombers are not carrying nuclear weapons in their strategic patrols: A. Golts, "Летают, но низенько-низенько", *Ежедневный Журнал* ["They fly, but very very low", *Ezhednevnyy Journal*], August 23, 2007. However, air patrols around Norway are not warned of to the Norwegian government, and the mock attack against Bodø was reportedly carried with cruise-missile-carrying bombers. Annoying, but not a cause for alarm, according to the Norwegian government. Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.

armed forces after the collapse of the Soviet Union, and it is far below the average Cold War levels.⁶⁷ The resumption of Arctic patrols may therefore be interpreted more in terms of the desire not to lose capacities and, above all, as a political tool rather than the sign of a renewed aggressiveness in the region.⁶⁸

3.1. New Russian planes? The difficulties of designing modern bombers

After the Tu-16 Badger was withdrawn from the Russian Air Force in 1993, the Russian strategic bomber force now displays Tu-95 Bear (designed in the 1950s) and Tu-160 Blackjack long-range bombers, as well as Tu-22M Backfire medium bombers that were especially feared by NATO for their anti-ship capacities. In 2011, 18 Tu-160, 63 Tu-95MS and 80 Tu-22M were in service.⁶⁹ The Russian combat planes are not stealthy and are easily detected when flying at high altitude, despite additional electronic countermeasures (ECM) recently added to the Tu-160 and Tu-22M.⁷⁰ The Russians can partly make up for this drawback by adopting a mission profile with a low-altitude flight followed, if applicable (for the Tu-22M and Tu-160) by a high-altitude supersonic final segment to reach attack range.⁷¹ The only problem with this solution, besides the fact that it is not radar-proof, is that it implies a strong inflight refueling coordination, since low altitude flights consume much more than high altitude cruise flights: the

⁶⁷ Kararzyna Zysk, "The Evolving Arctic Security environment: an assessment", in Stephen Blank, *op. cit.*, 2011, p. 112.

⁶⁸ Joseph Henrotin, "La dissuasion de Moscou comme manœuvre stratégique", *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p. 39.

⁶⁹ "Russian Air Force receives new Tu-160 strategic bomber", *RIA Novosti*, April 29, 2008, <http://en.rian.ru/russia/20080429/106194482.html>, retrieved March 29, 2012; *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p.71.

⁷⁰ Public data is hard to find and often display wide discrepancies, but the general pattern attests to larger radar equivalent surfaces or radar cross sections (RCS) for Russian planes. According to the journal *Air & Cosmos* dated February 2009 (special issue on furtivity), the RCS for the B-52 is 150 m² ; for the Tu-160, about 15 m² ; 7 m² for the F-111 Aardvark ; 3 m² for a MiG-29, 2 m² for a Rafale ; 1 m² for the B-1B Lancer and 0,06 m² for a B-2 Spirit stealth bomber. The Indian Defense forum website published the following figures : F-15, Su-27: 10~15 m² ; MiG-29: 5 m² ; F-16, Mirage 2000: 1~2 m² ; Su-47: 0,3 ; Rafale: 0,1~0,2 m² ; Typhoon EF 2000: 0,05~0,1 m². www.indiandefence.com/forums/defence-military-club/6172-radar-cross-section-values-all-fighter-jets-courtesy-antibody.html, retrieved May 20, 2012. The estimated RCS for the 5th generation T-50 PAK-FA is about 0,5 m² according to *Aviations Militaires*, www.aviationsmilitaires.net/display/aircraft/102/t-50, retrieved May 30th, 2012.

⁷¹ Jérôme Le Roy, "L'activisme militaire russe dans l'Arctique: nouvelle guerre froide ou volonté d'exister?", in F. Lasserre (dir.), *Passages et mers arctiques. Géopolitique d'une région en mutation*. Québec, Presses de l'Université du Québec, 2010, p. 104.

Russian air force is severely lacking inflight refueling capacities for long distance missions. The Il-78 Midas, derived from the Il-76 military transport plane, is Russia's only flying tanker. Russia has only between 16 and 19 such planes equipped for midair refueling of the Tu-160 Blackjack and Tu-95 Bear strategic bombers and the A-50 Mainstay early warning and control planes.⁷² This is probably not enough given the extent of Russia's airspace.⁷³

The ageing of the squadrons led Moscow in 1983 to consider the design of a new bomber, the Sukhoi T-60S that was to replace the Tu-22M and the Tu-16, but also the tactical bomber Su-24. The program was cancelled after the Cold War ended,⁷⁴ but ageing is increasingly a problem for the strategic bombers, as cracks began to appear, notably in the reservoir frames.⁷⁵ The delay in renewing the fleet is considerable: between 1993 and 2003, the Air Force received no new plane; between 2004 and 2009, it received three.⁷⁶ In 2009, the Russian government granted a contract to Tupolev to develop a new stealth bomber that would replace the Tu-22M, the Tu-160 and the Tu-95MS, the PAK-DA;⁷⁷ the prototype is scheduled to fly in 2020⁷⁸ and the bomber is expected to enter service only in the 2025–30 timeframe.⁷⁹ However, it seems the development of the 5th generation fighter Sukhoi T-50/PAK-FA is the priority for the ministry of Defense, at least partly because of a better export potential, as it absorbs

⁷² "Russia needs more flying tankers for its Air Force", *RIA Novosti*, July 8, 2010, <http://en.rian.ru/analysis/20100708/159738146.html>, retrieved May 15, 2012; Philippe Langlois, "Les forces aériennes russes", *Défense & Sécurité Internationale*, special issue n°17, April-May 2011, p. 71.

⁷³ By comparison, the U.S. Air Force has 59 KC-10 Extender and 167 KC-135 Stratotanker (and 180 with the Air National Guard and 67 in reserve) air-to-air tanker aircraft (Data December 2011, US Air Force, www.af.mil, retrieved May 20, 2012). In 2011, 179 KC-46A tanker planes were ordered to partly replace the ageing planes. *Washington Post*, "Boeing wins \$35 billion contract to supply new aerial refueling tankers", February 25, 2011, www.washingtonpost.com/wp-dyn/content/article/2011/02/24/AR2011022404699.html, retrieved May 17, 2012.

⁷⁴ "T-60S Intermediate Range Bomber", www.testpilot.ru/russia/sukhoi/t/60/t60_e.htm, retrieved December 16, 2011.

⁷⁵ *Défense & Sécurité Internationale* n°67, February 2011, p.20.

⁷⁶ Joseph Henrotin, "Le paradoxe russe au défi des enjeux de sécurité", *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p. 15.

⁷⁷ "PAK-DA", <http://red-stars.org/spip.php?article302>, retrieved Dec. 16, 2011.

⁷⁸ "The first PAK-DA prototype will be ready by 2020", *Russian Aviation*, Dec. 20, 2011, www.ruaviation.com/news/2011/12/20/690, retrieved April 16, 2012.

⁷⁹ "Russia to develop new strategic bomber by 2017", *RIA Novosti*, Dec. 23, 2009, www.en.rian.ru/russia/20091223/157335991.html, retrieved Dec. 17, 2011.

most of development credits;⁸⁰ besides, the development of the new tactical bomber Su-34 (replacing the Su-24) also proved expensive.⁸¹ Because the T-60S program was canceled and the long time frame for the development of the PAK-DA, the Tu-22M was upgraded and the Russian ministry of Defense announced 10 more Tu-160 will be delivered before 2020,⁸² but it is probable many present Russian strategic or medium-range bombers will no longer be operational by 2025-2030.⁸³ The Russian bomber force will then be left only with its ageing Tu-160 fleet and a few antiquated, if modernised, Tu-95.

3.2. A quantitative analysis: are the fleets expanding fast and in a coordinated manner?

A quantitative analysis of the Soviet, then Russian fleet has been conducted. The selected timeline is 1988-2012. Nineteen eighty eight is one of the last cold war years and can be used as a benchmark. Data comes from public sources.⁸⁴ For some of the oldest soviet submarine classes, these are sometimes estimates as hard data is missing.

For each class of ship, the dates used to determine whether a ship adds to the total of the fleet is the date of commission. This is especially important as in the case of the Russian fleet, hulls have sometimes remained in the dockyard for more than ten years but were not operational: the date of commission is therefore the most relevant data. However, the authors are equally conscious of the fact that it biases sometimes the analysis of the average age of the fleet as, for example, a ship launched in 2000 and commissioned in 2010 would count in 2012 as only 2 years old, whereas the hull is in fact 12 years old. However, we believe that the bias thus introduced in the average age of the fleet is marginal.

⁸⁰ "Les chasseurs russes dans l'ombre du T-50", *Air & Cosmos* n°2279, Sept. 16, 2011, p. 16.

⁸¹ "Su-34 Fullback: le nouveau bombardier de Moscou", *Air & Cosmos* Special Issue Avions de Combat, 2011, p. 74.

⁸² "Russia to Upgrade Over 10 Tu-160 Bombers by 2020", *RIA Novosti*, Feb. 2, 2012, http://en.rian.ru/military_news/20120207/171200584.html, retrieved April 16, 2012; *Défense & Sécurité Internationale* n°79, March 2012, p. 18.

⁸³ *Défense & Sécurité Internationale* n°67, February 2011, p. 20; Joseph Henrotin, "La dissuasion de Moscou comme manœuvre stratégique", *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p.39. The Tu-22M will likely be withdrawn after 2015 except for patrol missions, *Défense & Sécurité Internationale* *ibidem*, p. 70.

⁸⁴ Mostly *Jane's Fighting Ships* (UK); *Flottes de Combat* (France); *Combat Fleets of the World* (USA) databases.

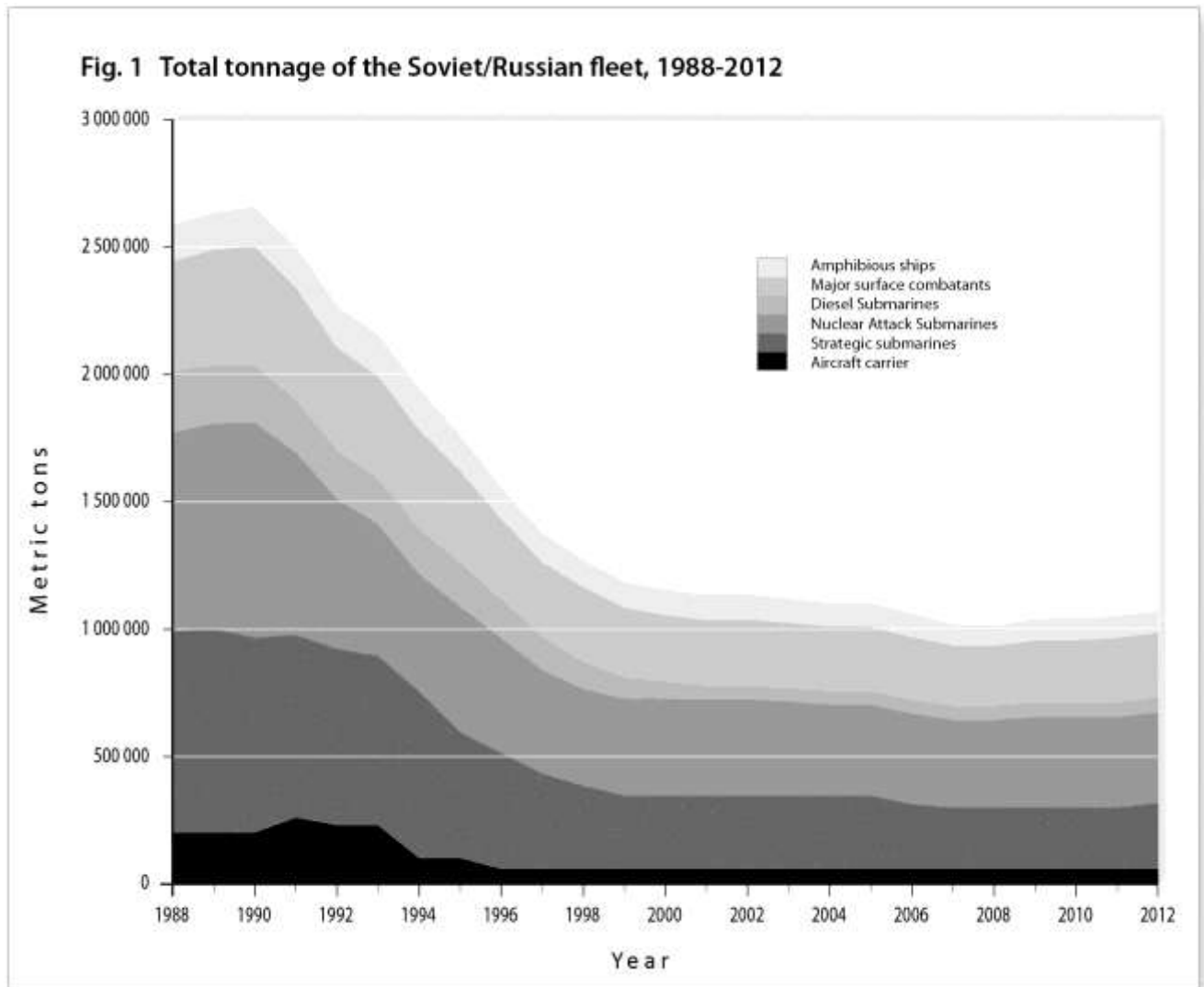
The composition of high sea combat fleets is then analysed over time, grouping ship by general classes: aircraft carriers (including helicopter carriers); strategic submarines (including the old SSG diesel ballistic missile submarines of the Soviet fleet); nuclear attack submarines including cruise-missile launching nuclear submarines (SSGN); surface combatants; amphibious and landing ships. The total volume (tonnage) of the fleet as well as the number of ships are taken into account.

Whenever possible, a specific analysis has been made for the Northern fleet. Over the recent years, the fleet to which Russian ships are allocated (Baltic; Northern; Black Sea; Pacific; Caspian) has been much more transparent than what it was during the Cold war years, particularly as regards submarines. For the oldest submarine classes in the late 1980s, reasonable assumptions had to be made extrapolating from known data; the authors believe that the margin of error stemming from these extrapolations is minimal and more than compensated by the ability to isolate the Northern Fleet out of the complete Russian fleet.

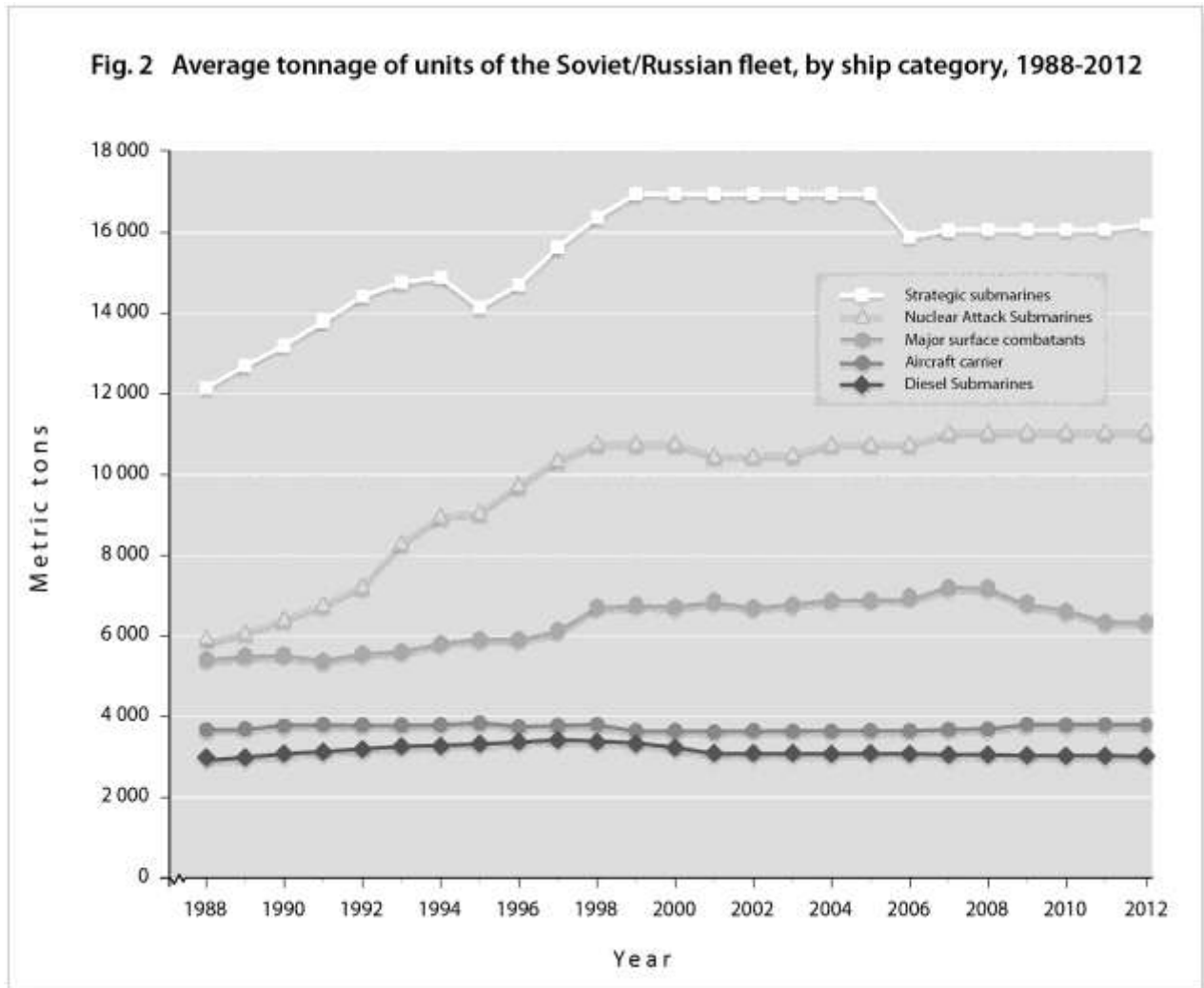
Last, in the case of the Soviet/Russian fleet, the authors have made the choice not to include small craft (missile and torpedo boats) below 1 000 t such as Grisha-class coastal corvettes and Tarantul-class missile boats. For the Danish and Norwegian fleets, patrol ships below 125 t were not taken into account. Interesting as a study of these craft may be, it would add useless complexity in the case of this analysis without changing the general conclusions.

Salient points of the analysis:

The overall tonnage of the Soviet fleet peaked at 2,6 million tons (Mt) in 1990 and then decreased, never to regain Cold war numbers (Fig. 1). The 1990 peak predates the collapse of the USSR but is also emblematic of the inertia of decision making in naval construction. Since 1991, the overall tonnage collapsed rapidly to 1.3 Mt in 1998 (index 49 vs. 1988) and then more slowly to an all-time low of barely over 1 Mt in 2008 (index 39 vs 1988). Tonnage has then very marginally grown again, to reach 1.07 Mt in 2012 (index 41 vs. 1988). The total number of hulls has equally collapsed from 406 ships in 1988 to 131 in 2012, passing through an all-time low of 119 in 2008.



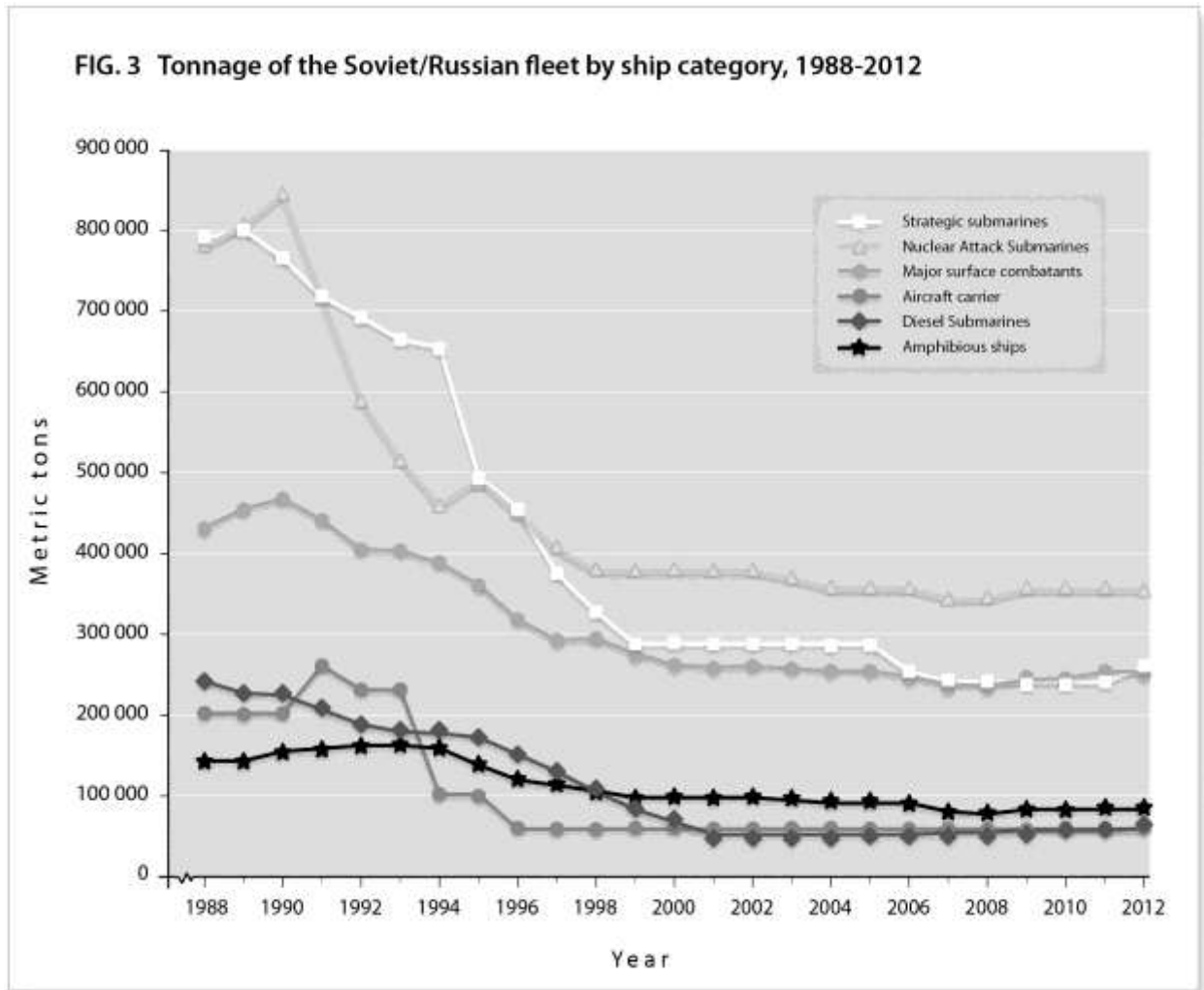
The average size of Soviet/Russian ships has not changed substantially, denoting no major doctrinal change over the years (fig. 2). The only substantial changes in hull size concerns ballistic nuclear submarines (from 10 000 t to 17 000 t in spite of the withdrawal of the famed Typhoon-class over the period) and nuclear attack submarines (6 000 to 11 000 t average size). These trends reflect a more general move over the period towards heavier submarines allowing them to be stealthier and to carry more weapons. It can be observed among western navies as well and is not specific to the Russian navy.



Classes that have been downsized the most are diesel submarines (index 25 in 2012 vs. 1988), aircraft/helicopter carriers (index 29 in 2012 vs. 1988) and strategic submarines (index 33 in 2012 vs. 1988) (fig. 3). In the case of strategic submarines, this reflects the reality of worldwide strategic arms reduction as well as the fact that Russia is now down to barebones as far as the strategic submarine fleet is concerned. In the case of aircraft carriers, Russia goes from a multi-class navy, including the early Moskva-class helicopter carriers and later the Kiev-class STOL⁸⁵ carriers) to the sole *Admiral Kuznetsov* in 2012. However, classes generally deemed more suited to the

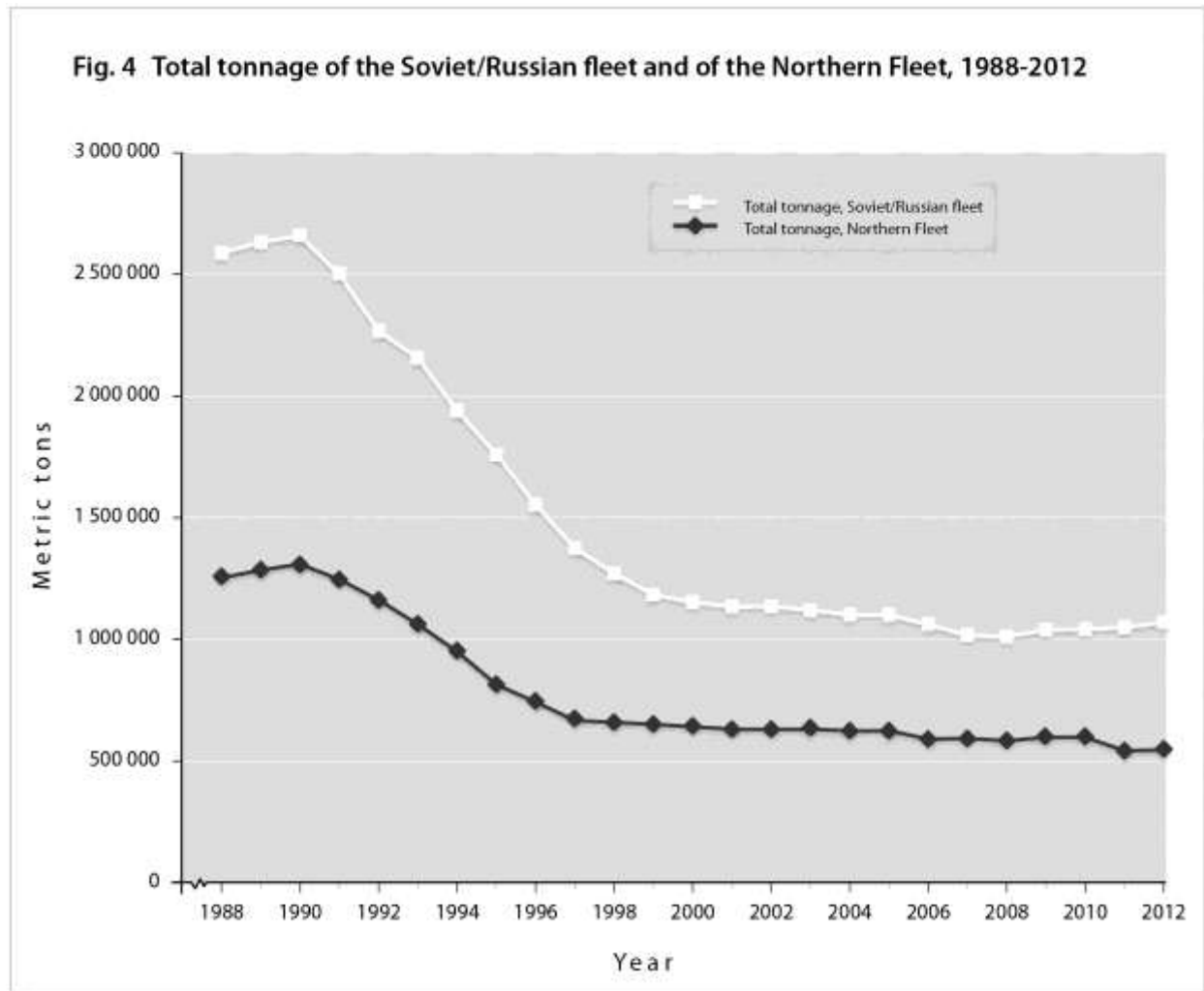
⁸⁵ Short take-off and landing.

attack, such as surface combatants, nuclear attack submarines and amphibious vessels have been severely downsized as well and are all, at index 60 or lower vs. 1988.



The evolution of the Northern Fleet has been remarkably similar to the one of the Soviet/Russian fleet generally as shown on figure 4. In 2012, the overall tonnage of the Northern fleet is at index 44 vs. 1988 whereas the tonnage of the total Russian fleet is at index 41 vs. 1988. All classes have suffered and particularly all submarine classes. Even more importantly, the marginal increase since 2008 does not concern the Northern fleet. While the overall fleet tonnage went up from 1.01 Mt in 2008 to 1.07 Mt in 2012, the Northern fleet tonnage went from 583 000 t to 545 000 t over the same period. This reflects, among other issues, the decreased level of priority of the Northern fleet in Russia from Soviet times, stemming from a change in perceived threats towards the

Black Sea and the Pacific; and the fact the Northern fleet is not even now that the Arctic is at the heart of Russian speeches, benefiting from a more favourable treatment than the other fleets.



At the same time, the overall age of the Soviet/Russian fleet, which was well within western standards at the end of the Cold war (14 years), remained more or less stable until 2002 (16 years) as the older classes were the first to be decommissioned, leaving only the most modern ships operational. This trend changed after 2002 as the Russian fleet started to age rapidly, reaching an all-time high of nearly 23 years in 2012. At the opposite, for instance, the Danish navy average ship age went from 16.7 years in 1988, to 14.3 years in 2002 and 8.9 years in 2012. While this is far above western standards in general terms, the most significant is probably that western navies

systematically upgrade naval platforms every ten or fifteen years, allowing relatively old ships to become modern platforms at a fraction of the cost of a new built class. This is much less the case for the Russian navy. To the best of our knowledge, only a small fraction of Russian ships get a mid-life upgrade or equivalent. The preferred choice of Russian naval designers is to create a new, improved class (Oscar II, Sierra II, Akula II submarines, improved Udaloy destroyers) while letting the initial class exist simultaneously without major upgrade to improved levels. Ultimately, the fact that the average age of Russian ships has nearly doubled in 25 years raises concerns in terms of operational capabilities.

While the Northern fleet was drastically downsized, neighboring navies such as the Danish and Norwegian navies, although much smaller, were achieving tremendous mutations, going from coastal, defensive navies designed to contribute to the defence of NATO's northern flank (in the Baltic and the Norwegian Sea respectively) where small diesel submarines and surface unit played a pivotal role, to modern high-seas fleets capable for the first time of some genuine power projection thanks to new, larger classes (Danish Absalon-class support ship and Iver Huitfeldt-class frigates; Norwegian Nansen-class frigates). In the case of Denmark, the submarine and minesweeping components disappeared entirely, while in the Norwegian navy, they were considerably reduced while the amphibious component disappeared (fig. 5 and 6). Compared with the Russian Northern fleet, the result is eloquent: while in 2012 the Northern fleet's overall tonnage is at index 42 vs. 1988, the Danish fleet is at index 137 and the Norwegian fleet is at index 149 (Fig. 7). Both navies, while small compared to the Russian Northern fleet, are now among NATO's most modern and capable navies, with a capacity to conduct long-range operations.⁸⁶

⁸⁶ Norwegian and Danish units participated in the EU and NATO anti-piracy operations off Somalia.

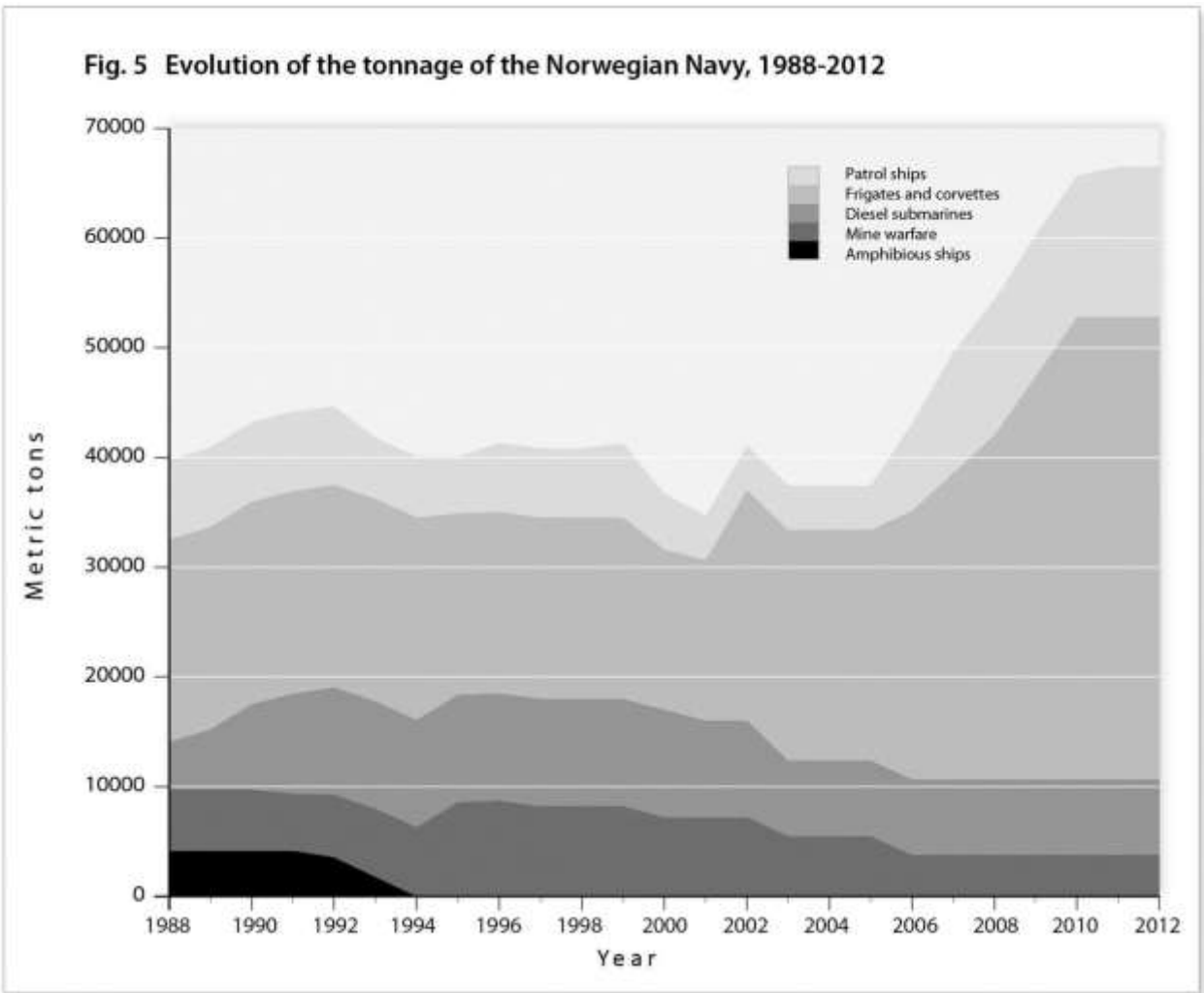


Fig 5. Evolution of the Norwegian Navy, 1988-2012.

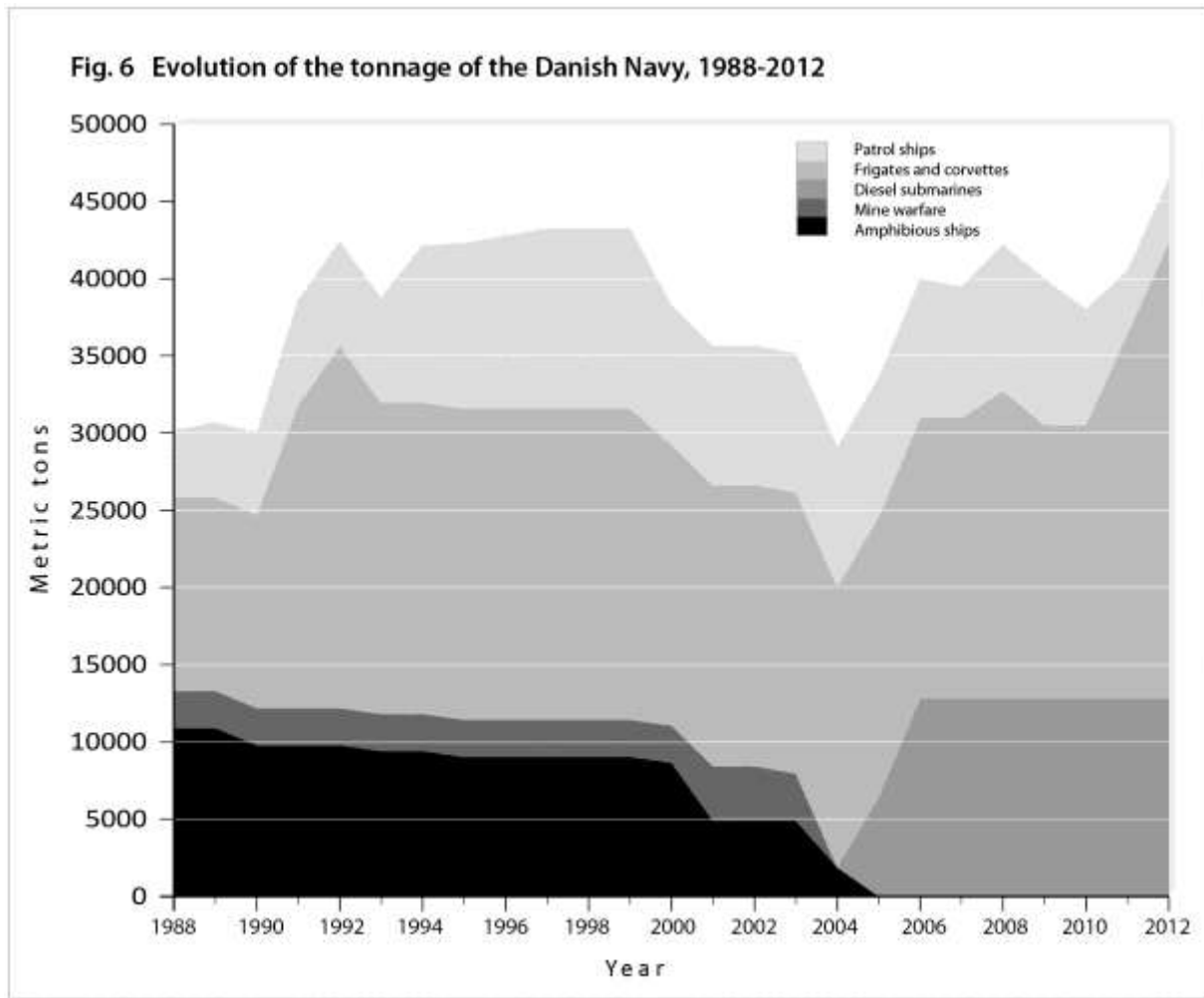


Fig. 6. Evolution of the Danish Navy, 1988-2012

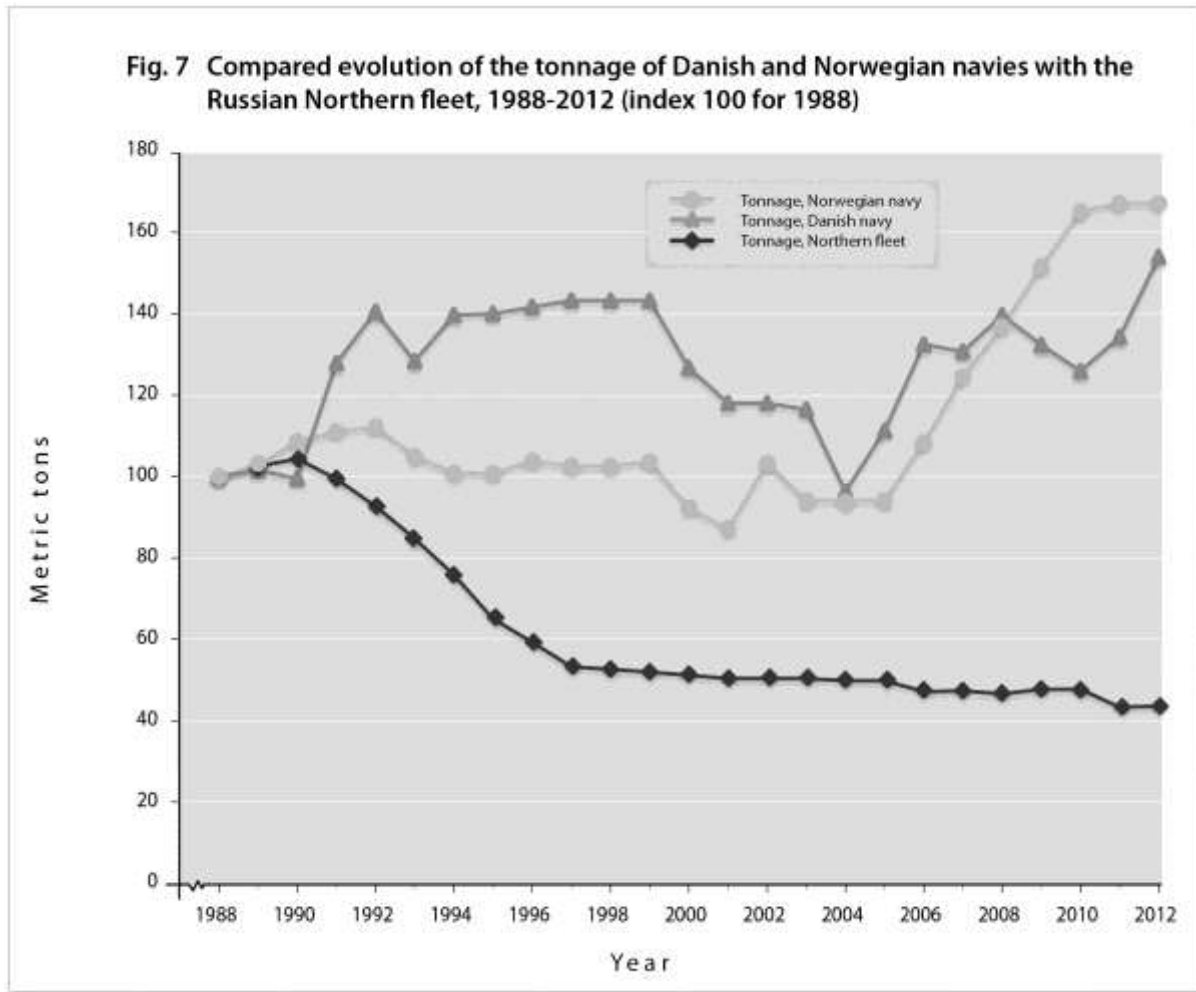


Fig. 7. Compared evolution of the Danish (green), Norwegian (red) and Russian Northern fleet (blue), index 100 = 1988.

This complete shift in operational posture with the Danish and Norwegian navies is all the more obvious when considering the frigates and corvettes component. For the Norwegian navy, total tonnage went from 18 450 t in 1988 (8 ships) to 14 610 t in 2001 (6 ships), to 42 216 t in 2011, with 9 ships: it is not the number of units that is increasing, it is the average tonnage of the new ships, with much larger units, capable of overseas deployment. For the Danish navy, a similar observation can be made: 12 530 t in 1988 (8 ships), 18 184 t in 2001 (7 ships), 29 608 t in 2012 with 8 units. The development of the major surface combatants did not materialize through more ships, but through much larger units. This evolution has not been linear and recent: in

Norway, the amphibious component disappears as early as 1994; the mine warfare component is first strengthened up to 1996 before gradually declining, and the submarine force is expanded up to 1991 before being gradually halved. The frigate and patrol ships expansion takes place about 2003 – but the decision had been taken much earlier, see section 8. In Denmark, submarines are phased out in 2003, minewarfare ships in 2004 and icebreakers in 2012, and the Absalon-class support ships enter service in 2005, whereas the tonnage of patrol ships declined from 11 658 t in 1999 to 4072 t in 2012. This evolution depicts a long-term transformation from a coastal navy, just like for Norway, into a blue-water navy in the wake of the end of the Cold War.

It is thus difficult to make a link between these two mutations, the evolution of the Russian Navy, and Arctic policies where policies were defined much more recently: the evolution of the three navies is not showing reactive expansions to make up for the neighbour's; neither do they show a recent and determined course that could be explained by the desire to control threatened new Arctic sea zones.

After such a severe downsizing and with most of its platforms now very old, there has been little change in the Northern fleet over the past 10 years and this stable situation is unlikely to change drastically in the near future. Even the forthcoming profile additions will not substantially raise the Northern fleet's profile and capability: the much delayed first Borei class strategic nuclear submarine was supposed to be deployed to the Pacific fleet⁸⁷ and, out of the four Mistral-class amphibious helicopter carriers, only one is likely to be allocated to the Northern fleet, which will limit its role to a few high profile deployments as well as the protection of its strategic component.

3.3. New Russian subs and surface combatants: not enough to stop the decline

Russian submarines: the main mission of the navy remains nuclear deterrence

⁸⁷ The ships will probably enter service in the Northern fleet, announced Rear Admiral Igor Mukhametshin in March 2012. But this change may not reflect a shift in priority: it is rather to replace another submarine, as the Northern Fleet Delta-IV class SSGN *Iekaterinburg* suffered very severe damage from fire in December 2011, and to repair it will take some 3 to 4 years and cost around €24.5 million. *Barents Observer*, "Yury Dolgoruky stays in the Arctic", March 19, 2012, <http://barentsobserver.com/en/topics/yury-dolgoruky-stays-arctic>, retrieved June 4th, 2012. It is also probably to make up for a dwindling number of units that the Russian Navy is conducting exercises on fast inter-fleets transfers. Katarzyna Zysk, *op. cit.*, Norwegian Institute for Defence Studies, interview June 5 in Oslo; Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.

During the Cold War, the European Arctic, from the Barents Sea to the Greenland-Iceland-UK gap (GIUK), was among the most heavily militarized regions in the world, with constant airborne, surface and submarine patrols, especially attack submarines (SSN) chasing ballistic missile submarines (SSBN), playing mouse and cat and developing tactics to track each other. The Soviet Navy comprised 362 submarines (of which 180 were nuclear submarines) in 1986, but the Russian Navy only deploys 63 (of which 37 are nuclear) in 2012.⁸⁸ The Kola Peninsula and the Barents Sea were considered by Moscow as military bastions crucial for both nuclear deterrence and as a base for SSN raids to disrupt NATO convoys in the event of a conflict.⁸⁹

The media were quick to underline the recent launching of new Russian nuclear submarines. However, to what extent does this reflect an expansion of the Russian Navy? For the modernization and the development of its submarine force, Russia is presently conducting three major programs. Regarding the nuclear deterrence ballistic missile submarines (SSBN), the Borei class will gradually replace the Delta III class. Five of the 6 Delta IV have recently been upgraded, and the Typhoon-class *Dmitry Donskoi*, after a modernisation from 1992 to 2004 (12 years), was replaced into operational service,⁹⁰ but is only used for training and test-firing the Bulava guided missile.⁹¹ Two other Typhoon-class ships (*Arkhangelsk* and *Severstal*) were to be reactivated in 2011 and modernized, before all Typhoons are decommissioned gradually from 2014 till 2019.⁹² Recent reports suggest the costs of modernizing the two latter Typhoons are so high that the Admiralty eventually decided never to put them back to sea⁹³... Laid down in 1996, the first Borei, the *Yuri Dolgoruki*, was supposed to be commissioned in 2012, experienced long delays because of technical difficulties partly explained by a decline in

⁸⁸ "Russian Navy", Federation of American Scientists", www.fas.org/programs/ssp/man/rowwpns/russia/navy.html; *Jane's Fighting Ships 2011-2012*, Redhill (UK): IHS Jane's, 2011, p. 651.

⁸⁹ Roi, M., 2010, *op. cit.*, p. 564.

⁹⁰ Joseph Henrotin, "Moscou face au déclin de ses forces sous-marines", *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, p. 70.

⁹¹ "[Russia set to keep Typhoon class nuclear subs until 2019 - Navy](#)", *RIA Novosti*, May 7, 2010.

⁹² *Défense & Sécurité Internationale* n°75, November 2011, p. 20.

⁹³ "Era of the Typhoon monster boat is over", *Warships - International Fleet Review*, April 2012, p. 4; Katarzyna Zysk, "Russia's Naval ambitions. Driving forces and Constraints", in Peter Dutton, Robert Ross, Øystein Tunsjø (eds.), *Twenty-First Century Seapower. Cooperation and conflict at sea*, London : Routledge, 2012.

engineering capacity of the main shipyards: the arms industry suffered during a decade of financial constraints, leading to obsolete production facilities and an acute shortage of skilled workers.⁹⁴ The submarine is presently set to be commissioned in 2013.⁹⁵

As for attack submarines, five out of the seven Oscar II guided-missile submarines (SSGN) have been modernized during the past decade. Ten Akula I and two Akula II attack submarines (SSN), as well as two Sierra II, one Sierra I and four Victor III are still in active service, but their operational status is unknown. The Yasen/Graney class, designed to replace both the Akula SSN and the Oscar II SSGN, is also experiencing very long delays. The *Severodvinsk*, laid down in 1993, was launched and begun its sea trials only in 2010 and was supposed to be commissioned in 2012.⁹⁶ However, sea trials underlined the reactor was not powerful enough and that the acoustic signature was above standards, problems that will likely incur additional delays.⁹⁷ The second submarine (*Kazan*), was laid down in 2009 and should be completed in 2015. However, unconfirmed reports suggest that, at more than 1 billion \$ each, (2 billion \$ according to RIA Novosti⁹⁸), it is unlikely the Russian Navy will be able to afford as many units as planned,⁹⁹ although the Admiralty recently ordered five more units.¹⁰⁰

Regarding conventional submarines (SSK), 17 out of the 24 Kilo-class ships and one Tango are still in service. The Lada class was designed to replace the Kilo class and

⁹⁴ John Wood, *Russia, the Asymmetric Threat to the United States*. Santa Barbara: ABC Clio, 2009, p. 49; Hervé Coutau-Bégarie, "Sous-marins : quel avenir pour les constructeurs? », *Défense & Sécurité Internationale* n°59, May 2010, p. 62; Joseph Henrotin, "Quelle marine russe pour 2020?", *Défense & Sécurité Internationale* n°58, April 2010, p. 91; Alexandre Sheldon-Duplaix, "Russie : le programme naval 2011-2020", *Marines & Forces navales*, n°132, April-May 2011, p. 52; "Is this the Kremlin's Arctic grab flagship?", *Warships – International Fleet Review*, September 2011, pp. 4-5 ; K. Zysk, "Russia's Naval ambitions. Driving forces and Constraints", *op. cit.*, 2012.

⁹⁵ "Russian Navy Declares Development Prospects", *RusNavy*, Oct. 15, 2012, http://rusnavy.com/news/navy/index.php?ELEMENT_ID=16163 accessed Dec. 14, 2012.

⁹⁶ Henrotin, *op. cit.*, April 2010, p. 70.

⁹⁷ *Défense & Sécurité Internationale* n°84, Sept. 2012, p. 18.

⁹⁸ "Russia launches long-awaited submarine", *RIA Novosti*, June 16, 2010, <http://en.rian.ru/analysis/20100616/159452336.html>, accessed Dec. 15, 2012.

⁹⁹ "Too much, too late", *Ships Monthly*, Sept. 2010, p.10; *Défense & Sécurité Internationale* n°84, Sept. 2012, p.18.

¹⁰⁰ "Russian Navy to receive 1st Graney class attack sub by end of 2012", *RIA Novosti*, Dec. 3, 2011, http://en.rian.ru/military_news/20111203/169275854.html, accessed Dec. 15, 2012.

the first unit, the *Sankt Peterburg*, was laid down in 1997, the second in 2005 and the third in 2006. In November, 2011 the Russian Navy decided that the construction of the Lada class will be stopped, as the lead ship has fallen far short of requirements during tests,¹⁰¹ another hint at the poor performance of Russian military shipyards. For now, only the *Sankt Peterburg* will be commissioned at an unknown date, the construction of the two others being suspended before a final decision is taken by the Admiralty on the future of the program,¹⁰² part of which seems to be the resumption of the Kilo-class program, rechristened Varshavyanka class or Improved Kilo, as three new units have been laid down between 2010 and 2012, and three others ordered in 2011.¹⁰³

From a quantitative point of view, the Russian submarine force will experience a severe reduction in the future because of the obsolescence of the ships and their lack of replacement.¹⁰⁴ Too few ships were laid down (table 1) and construction time is often far too long at antiquated shipyards: 21 years for the Neustrashimyy-class frigate *Yaroslav Mudryy*; 15 years for the *Sankt Peterburg*; 19 years for the *Severodvinsk*; 14 years for the *Yuri Dolgoruki*; 12 years for the modernization of the *Dmitry Donskoi*, and 8 years and counting for the refurbishment of the aircraft carrier *Admiral Gorshkov* sold to the Indian Navy in 2004. Long delays are experienced in the transformation of the *Admiral Gorshkov*: the carrier, renamed *INS Vikramaditya*, was supposed to be ready in 2008, and

¹⁰¹ “ВМФ отказался от новейших подлодок проекта «Лада»”, *Izvestia*, Nov. 23, 2011, <http://izvestia.ru/news/507580>, accessed March 28, 2012; “La Russie ne prolongera pas la série des sous-marins du type Lada”, *Mer & Marine*, Feb. 17, 2012, www.meretmarine.com/article.cfm?id=118815, retrieved April 5, 2012.

¹⁰² “Russian Navy to Decide on Lada Project After Trials”, *RusNavy*, March 22, 2012, http://rusnavy.com/news/navy/index.php?ELEMENT_ID=14643, retrieved March 29, 2012.

¹⁰³ Alexandre Sheldon-Duplaix, “Le point sur les constructions navales russes”, *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p. 87; “ВМФ России до 2016 года получит шесть дизельных подлодок”, *Взгляд.Ру*, Nov. 21, 2011, <http://vzglyad.ru/news/2011/11/21/540313.html>, accessed Dec. 14, 2012; “Подводная лодка “Старый Оскол” для Черноморского флота будет заложена на Адмиралтейских верфях 17 августа”, *FlotProm*, Aug. 15, 2012, http://flotprom.ru/news/index.php?ELEMENT_ID=119836, accessed Dec. 14, 2012; “Russia to Lay Down New Diesel Sub for Black Sea Fleet”, *RIA Novosti*, August 17, 2012, http://en.ria.ru/military_news/20120817/175263174.html, accessed Dec. 14, 2012.

¹⁰⁴ Joseph Henrotin, “Moscou face au déclin de ses forces sous-marines”, *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, p.70-73; Rolf Tamnes, “Arctic Security and Norway”, in James Kraska (ed.), *Arctic Security in an Age of Climate Change*, New York : Cambridge University Press, 2011, p. 51.

the Sevmash shipyards announced in November 2012 it would be late by one more year, with expected delivery now set in October 2013.¹⁰⁵ Subsequent ships usually take less time to build after the first of a class is completed, but the time frame for construction remains considerable.¹⁰⁶ The Delta III submarines can hardly navigate beyond 2015 and the Delta IV beyond 2020. If the shipyards can deliver, there would then be only 8 to 10 Borei. In 2020, it is likely the Sierra, Victor III and several Akula I will be decommissioned – the Admiralty confirmed in 2012 the Akula-class will be decommissioned before 2014.¹⁰⁷ The Tango SSK and most Kilos should also be out of service but the SSK type should experience a drastic reduction if the Admiralty cannot quickly design a replacement for the Lada class – it seems in the short term the Admiralty opted for the continuation of the old though improved Kilo-class.

Table 1: New Russian submarines laid down since 1993¹⁰⁸

Year	Number	Type
1993	1	Graney (<i>Severodvinsk</i>)
1994-1995	0	
1996	1	Borei (<i>Yuri Dolgoruki</i>)
1997	1	Lada (<i>Sankt Peterburg</i>)
1998-2003	0	
2004	1	Borei (<i>Aleksandr Nevsky</i>)
2005	1	Lada (<i>Kronshtadt</i>) : suspended
2006	2	Lada (<i>Sevastopol</i>), suspended; Borei (<i>Monomakh</i>)
2007-2008	0	
2009	1	Graney (<i>Kazan</i>)

¹⁰⁵ *Defence & Security Systems International*, 2012-2013, p. 8

¹⁰⁶ Thomas R. Fedyszyn, "Renaissance of the Russian Navy?," *Proceedings of the US Naval Institute*, 138(3), March 2012, p. 309.

¹⁰⁷ "Putin: Russian Navy to Recommission Mothballed Subs", *RusNavy*, August 1st, 2012, www.rusnavy.com/news/navy/index.php?ELEMENT_ID=15513, accessed Dec. 14, 2012.

¹⁰⁸ Joseph Henrotin, "Moscou face au déclin de ses forces sous-marines", *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, p. 70-73; "Russian Navy to receive 1st Graney class attack sub by end of 2012", *RIA Novosti Defence*, December 3, 2011, http://en.rian.ru/military_news/20111203/169275854.html, accessed March 28, 2012; *Mer & Marine*, Dec. 6, 2011; *Naval Technology*, August 22, 2012; "Russia starts new submarines, upgrades Indian Kilos", *Defense Review Asia*, Oct. 22, 2012, www.defencereviewasia.com/articles/187/Russia-starts-new-submarines-upgrades-Indian-Kilos, accessed Dec. 14, 2012.

2010	1	Kilo (<i>Novorossiysk</i>)
2011	2	Borei (<i>Nikolay</i>); Kilo (<i>Rostov-on-Don</i>)
2012	3	Kilo (<i>Stary Oskol</i>); Borei (<i>Knyaz Vladimir</i>); Graney ?

Table 2. Comparison of probable order of battle, Russian submarines, 2011 and 2020.¹⁰⁹

	SSN	Types	SSGN	Types	SSBN	Types	SSK	Types
2011	19	10 Akula I 2 Akula II 1 Sierra I 2 Sierra II 4 Victor III	7	7 Oscar II	12	3 Typhoon (2 in reserve) 5 Delta IV 4 Delta III	18	1 Tango 17 Kilo
2020	6	4 Akula I 2 Akula II	6	6 Graney	8 to 10	8 to 10 Borei	6-8	3 Lada 3-5 Kilo

Besides, because of financial constraints, the number of submarine long patrols plummeted, entailing a sharp decrease in training and operational capacity. “SSBN patrols tripled between 2007 and 2008”, as the Federation of American Scientists says.¹¹⁰ But it is useful to remind that the number of patrols plunged from 230 in 1984 to 102 in 1990 to 3 in 2002, and then bouncing back to 9 in 2006 and 18 in 2008. If Russia would definitely like to restore its military power at sea, it is confronted with an ageing fleet, a lack of financial and operational maintenance capacity and the decline of its operational know-how. The resumption of long-range patrols can thus be interpreted more as an attempt to restore its capacities than the sign of a new aggressiveness.

Russian surface combatants: are carrier groups manageable?

¹⁰⁹ Joseph Henrotin, “Moscou face au déclin de ses forces sous-marines”, *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, p. 72.

¹¹⁰ Hans Kristensen, “Russian Strategic Submarine Patrols Rebound”, *FAS Strategic Security Blog*, www.fas.org/blog/ssp/2009/02/russia.php, retrieved March 29, 2012.

The Russian Admiralty ambitiously asserted in 2007 that it would build 5 to 6 carrier groups before 2025, with three based in the Northern Fleet.¹¹¹ Moscow does want to rebuild a credible Navy as a powerful political tool. The program included, besides the 5-6 Ulyanovsk-class aircraft carriers, 20 Gorshkov-class large frigates, 20 Stereguschiy-class corvettes and 40 other corvettes.¹¹² Then presidential candidate Vladimir Putin asserted in February 2012 that he intended to order 24 submarines and 50 surface warships among a large military modernization plan worth 775 billion \$ over 10 years— although he did not specifically mention aircraft carriers.¹¹³ But, besides the electoral rhetoric, analysts doubt Russia's finances and technological base will enable the government to fulfill this program.¹¹⁴ Besides, suffice is not to build the ships, a strategy must also be developed and training must be adequate. Building capacities must also be taken into consideration: the present carrier, the *Kuznetsov*, was built in the 1980s and since then many engineering skills were lost¹¹⁵. Unsurprisingly, the Russian naval authority later admitted the target for the deployment of the carrier groups had been postponed to 2060¹¹⁶ as it conceded it lacked the funds to achieve such an ambitious program – no carrier can be laid down before 2020¹¹⁷ - despite the ambitious armament program worth €470 billion (USD626,3 billion) over the period 2011-2020 announced in 2011 by the Defense ministry.¹¹⁸

¹¹¹ "Russia plans to deploy six carrier battlegroups by 2025", *Defense Update*, July 15, 2007, http://defense-update.com/newscast/0707/news/150707_russian_Navy.htm, retrieved February 12, 2012.

¹¹² Joseph Henrotin and Philippe Langlois, "Les bâtiments de la flotte russe : une force déliquescence", *Défense & Sécurité Internationale* Special Issue n°4, Nov.-Dec. 2008, p. 67.

¹¹³ "Fearing West, Putin pledges biggest military buildup since cold war", *CS Monitor*, Feb. 12, 2012; "Putin: Russian Navy to Recommission Mothballed Subs", *RusNavy*, August 1st, 2012, www.rusnavy.com/news/navy/index.php?ELEMENT_ID=15513, accessed Dec. 14, 2012.

¹¹⁴ "Analysts, on the left and right, were skeptical that he can accomplish such a buildup": "Putin promises Russian military buildup", *Washington Post*, Feb. 20, 2012, http://articles.washingtonpost.com/2012-02-20/world/35445463_1_vladimir-putin-missile-defense-shield-russian, accessed Dec. 14, 2012.

¹¹⁵ Joseph Henrotin, "Porte-avions: la continuité russe", *Défense & Sécurité Internationale* n°56, February 2010, p. 83.

¹¹⁶ "Russia to have 5-6 aircraft carriers by 2060 – Navy commander", *RIA Novosti*, April 4, 2008; Joseph Henrotin, "Les derniers feux de la stratégie hémisphérique russe?", *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p. 94.

¹¹⁷ "Russia halts aircraft carriers building", *UPI.com*, Dec. 10, 2010, <http://tinyurl.com/7ouoxnu>, retrieved March 15, 2012; *Défense & Sécurité Internationale* n°66, January 2011, p. 20; *Ships Monthly*, March 2011, p. 15.

¹¹⁸ "Russia boosts rearming budget", *BarentsObserver*, February 25, 2011.

Amphibious landing ships are 35 years old on average. The first ship of the new Ivan Gren-class LST (5 080 t) is scheduled to be completed in 2012. However, the 6 units will not be able to make up for the ageing Ropucha class. Russia's assault ships' capacities experienced a steep decline over the past decade, as only one Ivan Rogov-class LPD¹¹⁹ remains active and in an uncertain condition¹²⁰. In October 2012, the Admiralty indicated it would scrap the ship as its modernization would be too costly.¹²¹ The purchase from France of 4 Mistral-class LHD¹²² in February 2010 was met by worried comments in the media as well as in Northern Europe, where voices in Latvia, Lithuania, Poland, Sweden expressed concerns.¹²³ However, it must be reminded that these ships are useless without a trained-tested doctrine, an integrated command and control chain (especially for ASW,¹²⁴ naval and air capacities) that will not arise in a few months,¹²⁵ and a strong support battle group as these ships are very poorly armed, whether for attack purposes or for defense – thus implying a significant departure from the traditional Russian naval doctrine of heavily-armed carriers.¹²⁶ A poorly defended battle group centered on a *Mistral*-class ship in an enclosed sea like the Baltic would be a tempting target for air raids in war time. It seems the short-term use the Russian navy emphasises with this purchase has more to do with the Navy's image rather than true combat capability. Besides, there are technical advantages: the addition of *Mistrals* into the Russian fleet also fits into the navy's plan of adding warships as quick as possible to replace outdated vessels. The *Mistral* also gives the ability for the Russian Navy to have

¹¹⁹ LPD: Landing Platform Dock.

¹²⁰ The *Mitrofan Moskalenko*, 14 000 t, besides the 15 lighter Ropucha-class LST (Tank Landing Ship), 4 471 t. Jane's reports the *Mitrofan* was deleted from active service in 2008 but kept moored. *Défense & Sécurité Internationale* n°58, April 2010, p. 17; "Ivan Rogov Class (Type 1174), Russian Federation", *Naval Technology*, not precisely dated, 2011, www.naval-technology.com/projects/ivan/, retrieved May 3rd, 2012; *Jane's Fighting Ships 2011-2012*, Redhill (UK): IHS Jane's, 2011, pp. 651, 684.

¹²¹ *Défense & Sécurité Internationale* n°85, October 2012, p.18.

¹²² LHD: Landing Helicopter Dock.

¹²³ "Lithuanian MEP Calls Mistral Deal 'a Flower on the Grave of Europe's Solidarity'", *Baltic News Service*, March 4, 2010; *BarentsObserver*, "Norway: No comment, Sweden: Effects must be discussed", January 18, 2011; "Mistral does(not) mean 'storm'", *Lithuania Tribune*, June 30, 2011.

¹²⁴ Anti submarine warfare.

¹²⁵ Joseph Henrotin, *Les fondements de la stratégie navale au XXIe siècle*. Paris: Économica, 2011, p. 149.

¹²⁶ Patrick Thomas Baker, *A Study of the Russian Acquisition of the French Mistral Amphibious Assault Warships*, Master's Thesis, Naval Postgraduate School, Monterey, CA, June 2011, p. 9.

access to badly needed advanced technology and modern building techniques.¹²⁷ Attesting to this reasoning by the Russian Admiralty is the possibility that Moscow buys a few frigates on international markets,¹²⁸ thus reckoning its shipyards cannot solve the financial and technological challenges they meet now.



Fig. 8. CV *Kuznetsov* in Murmansk, June 2010. (Picture: F. Lasserre)

The *Kuznetsov* is presently Russia's only aircraft carrier. Rather than a spearhead of the future Russian fleet, it is more of a legacy of the Soviet era as its main function was to be a guided missile launcher besides carrying planes, to the detriment of space dedicated to more fighters. Besides, the naval air force operational efficiency is doubtful given the lack of proper training time for the pilots.¹²⁹ Actually, despite Russia's naval program to develop carrier battle groups, the navy's backbone remains the submarine force and littoral combat units.¹³⁰ Nuclear deterrence stays at the heart of the Russian military doctrine:¹³¹ the costs of developing the Borei SSBN class and the Bulava missile

¹²⁷ Eric Wertheim, "World Navies in Review", *Proceedings*, US Naval Institute, March 2012, p. 43.

¹²⁸ "Frégates : La Russie songe à lancer un appel d'offres international", *Mer & Marine*, Oct. 19, 2010.

¹²⁹ Philippe Langlois, "Chine et Russie: le même combat aéronaval?", *Défense & sécurité Internationale* Special Issue n°20, Oct.-Nov. 2011, pp. 92-93.

¹³⁰ Benoît Bihan, "La remontée des abysses. Le redressement de l'armée russe, de la Tchétchénie à la guerre de Géorgie (1996-2008)", *Diplomatie* Special Issue n°5, November 2011, p. 79.

¹³¹ Michael Roi, op. cit, 2010, p.565; Alexandre Sheldon-Duplaix, "Le point sur les constructions navales russes", *Défense & Sécurité Internationale* Special Issue n°17, April-May 2011, p. 86.

take up a large part of the military budget, despite the sustained economic growth experienced since 2002, and hamper modernization efforts for other sectors of the Navy.¹³²

For instance, the Sovremenny-class destroyers and Krivak-class frigates are ageing and Moscow will be faced with the choice of upgrading them at a high cost, or developing new designs for large surface combatants. The Gorshkov-class large frigates could be a possible long-term replacement for both the Sovremenny and the Krivak classes. The first unit was launched in October 2010 and the Russian government ambitiously announced up to 20 units should be built before 2015 – a target that is unlikely to be met given financial, engineering and training problems.¹³³ As of February 1st, 2012, three units were in construction.¹³⁴ It is probably the realization that the program will not meet the deadline that led the government to order six cheaper, lighter frigates of the Admiral Grigorovitch class, a modified version of the Talwar class designed for the Indian Navy.¹³⁵ Given the financial and technical impossibility to order new powerful surface units, the Admiralty once considered modernizing the three Kirov-class cruisers placed in reserve. Presently only the *Peter the Great* is operational; the *Nakhimov* was supposed to be ready by 2015, and heavy work on the *Lazarev* and the *Ushakov* was considered.¹³⁶ However, serious difficulties emerged if the three cruisers put in reserve were to be operational by 2020 as projected by the Admiralty: the electronics was to be thoroughly modernized; the nuclear propulsion to be overhauled and the know-how of the Russian shipyards in this field, once again, has declined over the years; and the cost of modernizing the three cruisers appeared astronomical.¹³⁷ The

¹³² Marlène Laruelle, "Russian Military Presence in the High North: Projection of Power and Capacities of Action", in Stephen Blank (ed.), *Russia in the Arctic*, Strategic Studies Institute Monograph, Carlisle, PA, July 2011, p. 75.

¹³³ Joseph Henrotin, "Destroyers russes: que promet la classe Gorshkov?", *Défense & Sécurité internationale* n°67, February 2011, p. 111.

¹³⁴ "Сразу два боевых корабля заложат на "Северной верфи" в Петербурге », *RIA Novosti*, http://ria.ru/defense_safety/20120130/552332825.html, retrieved March 30, 2012.

¹³⁵ "Russian Navy to receive six frigates", *RusNavy*, June 20, 2011, http://rusnavy.com/news/navy/index.php?ELEMENT_ID=12529, retrieved June 6, 2012. Katarzyna Zysk, "Russia's Naval Ambitions. Driving forces and Constraints", *op. cit.*, 2012.

¹³⁶ *Défense & Sécurité Internationale* n°75, November 2011, p.24 ; *Ships Monthly*, Nov. 2010, p. 12.

¹³⁷ Joseph Henrotin, "Les Kirov dans la généalogie du croiseur", *Défense & Sécurité Internationale* n°68, March 2011, p. 111.

Admiralty estimated that the modernization of a single cruiser would cost 50 billion rubles – about 1,6 billion \$. Thus, the modernization of the *Lazarev* and the *Ushakov* was abandoned in 2012, and only the *Nakhimov* is still presently considered for upgrade – but no planning was published for works.¹³⁸

The Neustrashimyy-class frigates were much talked about when the *Yaroslav Mudryy* was launched in 2009: this ship, however, had been laid down in 1988... A third unit had been laid down in 1990 but work was halted. These are rather large ASW frigates (4 350 tons) that are deprived of anti-ship missiles. The Admiralty is experiencing difficulties in replacing ageing large combatants, and the emphasis in construction seems to be shifted towards corvettes like the Stereguschi or Yantar classes,¹³⁹ underlining the difficulty the Admiralty will be facing if its ambitions to develop 5 or 6 carrier groups are to be fulfilled, as a carrier group needs several large combatants for air and ASW protection, a task corvettes cannot accomplish efficiently. Since the collapse of the Soviet Union in 1991, few surface units have been commissioned and most are corvettes: two Dergash-class corvettes; two Gepard-class corvettes; two Astrakhan-class corvettes, two Stereguschi-class corvettes, the *Mudryy* Neustrashimyy-class frigate, and the highly publicized *Peter the Great* Kirov cruiser in 1998. The Russian navy thus seems to focus on lighter, coastal defense surface units, with the exception of the 4 Mistral-class LHD and the refurbished *Nakhimov* cruiser. Besides, the Russian navy gradually let its icebreaking capability decline: most large icebreakers are civilian, but the Navy had built 18 Dobrynya Nikitich-class light icebreakers (3 043 t) between 1960 and 1971 as no Navy surface unit is ice-strengthened. Now, only 4 are still in active service.¹⁴⁰

Naval analyst Joseph Henrotin is therefore quite pessimistic about future prospects for the Russian Navy, estimating that by 2020, surface units would comprise 4 LHD, 11 or 12 cruisers and destroyers, 13 frigates and 50 corvettes for the 5 fleets¹⁴¹. Another naval analysts also doubts the Russian navy can do more than managing a

¹³⁸ Jean-Jacques Mercier, "Vers une renaissance des croiseurs lourds de la classe Kirov?", *Défense & Sécurité Internationale* n°86, Nov. 2010, pp. 100-103.

¹³⁹ Joseph Henrotin, "Frégates: le dilemme russe", *Défense & Sécurité Internationale* n°63, October 2010, p. 105.

¹⁴⁰ *Jane's Fighting Ships 2011-2012*, Redhill (UK): IHS Jane's, 2011, p. 701.

¹⁴¹ Joseph Henrotin, "Quelle marine russe pour 2020?", *Défense & Sécurité Internationale* n°58, April 2010, p. 91. There are five fleet commands in the Russian Navy: Northern, Baltic, Black Sea, Caspian and Pacific.

decrease in capacity over the next decades,¹⁴² a grim view shared by Russian analysts as well, who underline the main cause for the decline is the dismal state of the Russian shipbuilding industry, which is "incapable of producing warships in either the quantity or at the level of quality that their Navy customer requires" for the future:¹⁴³ in 2020, it could be, according to analyst A. Khramtchikhin, that the Russian fleet comprises only 50 units.¹⁴⁴

Table 3. Comparison of probable order of battle, main Russian surface combatants, 2010 and 2020.¹⁴⁵

	Aircraft carrier	Large surface combatants	Frigates	Corvettes	Amphibious
2010	1	26 (7 cruisers and 19 DDG)	6	91	1 LPD
2020	1	11-12	13	50	4 LHD

Overall, if the Russian Navy remains the second in the world in tonnage in 2011, its operational capacities have declined to a point that it barely qualifies for the third

¹⁴² Alexandre Sheldon-Duplaix, "Russie : le programme naval 2011-2020", *Marines & Forces navales*, n°132, April-May 2011, pp. 53, 62.

¹⁴³ "Адмиральское трезвомыслие. Обстоятельства заставляют главкома ВМФ заказывать корабли за рубежом" ["Admiral's good reflexion. Circumstances force the Commander of the Navy to order ships abroad"], *Независимое военное обозрение* [Independent Military Review], *Независимая газета* [Nezavisimaya Gazeta], July 24, 2009, www.ng.ru/editorial/2009-07-24/2_red.html, accessed April 19, 2012.

Александр Храмчихин [Aleksandr Khramtchikhin] "ВМФ РФ на зарубежных кораблях. ОПК не способен обеспечить военный флот плавсредствами" ["The Russian Navy will navigate with foreign ships. OPK is unable to provide military ships"], *Независимое военное обозрение* [Independent Military Review], *Независимая газета* [Nezavisimaya Gazeta], July 3, 2009, http://nvo.ng.ru/realty/2009-07-03/1_vmf.html, accessed April 19, 2012.

"Russian Navy facing 'irreversible collapse'", *IHS Jane's: Defense & Security Intelligence & Analysis*, July 13, 2009.

¹⁴⁴ Aleksandr Khramtchikhin, op. cit., 2009.

¹⁴⁵ Source: *Flottes de combat* 2010; Joseph Henrotin, "Quelle marine russe pour 2020?", *Défense & Sécurité Internationale* n°58, April 2010, p. 91.

tier in the 6-tier classification designed by strategy analysts Hervé Coutau-Bégarie¹⁴⁶ and Joseph Henrotin.¹⁴⁷

4. United States

Although the Coast Guard icebreakers¹⁴⁸ are administratively military ships, the US Navy does not have any ice-strengthened vessel that thus can hardly deploy surface units even in marginal ice zones. The armed forces display a few niche capabilities specifically tailored for Arctic operations, like the ski-equipped HC-130 Hercules transport aircraft, or the *Improved Los Angeles* or *Seawolf* class attack submarines¹⁴⁹ (and probably the *Virginia*-class too¹⁵⁰) designed for under-ice operations with diving planes on the bow, rather than on the sail, and reinforced sails. But these are niche capacities and were designed not with a conflict in mind, but in line with DoD's policy of preparing for a wide range of contingencies. This planning option is all the more necessary as plans for the future show the attack submarine force of the United States is going to decrease over the next years, going from 87 attack submarines in 1991¹⁵¹ to 57 in 2011, to 39 in 2030 before bouncing back to 45 in 2040 (Table X).

¹⁴⁶ Hervé Coutau-Bégarie, *Traité de stratégie*. Paris, Economica, 1999[2]; Hervé Coutau-Bégarie, *L'Océan globalisé. Géopolitique des mers au XXI^e siècle*. Paris: Économica, 2007, p. 102,

¹⁴⁷ Joseph Henrotin, *Les fondements de la stratégie navale*, op. cit., 2011, pp. 137-140.

¹⁴⁸ The *Polar Star* and the *Polar Sea* have been removed from active service (but not decommissioned), only the *Healy* remains in operation.

¹⁴⁹ Department of Defense, *Report to Congress on Arctic Operations*, op. cit., 2011, pp. 13, 17; "SSN-688 Los Angeles-class", Federation of American Scientists, nd, www.fas.org/programs/ssp/man/uswpns/navy/submarines/ssn688_la.html; "SSN-21 Seawolf-class", http://www.fas.org/programs/ssp/man/uswpns/navy/submarines/ssn21_seawolf.html; Guillaume Martin de Clausonne, "Les enjeux militaires de l'Arctique", *Bulletin d'Études de la Marine* n°47, January 2010, p. 54.

¹⁵⁰ "SSN-774 Virginia-class", Federation of American Scientists, nd, www.fas.org/programs/ssp/man/uswpns/navy/submarines/ssn774_virginia.html; Rob Huebert, op. cit., 2010, p. 20.

¹⁵¹ Alexandre Sheldon-Duplaix, "Les forces sous-marines américaines en 2010", *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, p. 66.

Table 4. United States' Navy FY2011 30-Year Shipbuilding Plan: projected force levels for main combat ships¹⁵²

	CVN	SSN	SSGN	SSBN	LSC	AWS	SSC
2011	11	53	4	14	84	29	42
2015	11	54	4	14	88	31	28
2020	12	49	4	14	96	33	39
2025	12	45	4	14	92	35	41
2030	12	39	0	12	77	33	49
2035	12	44	0	12	68	30	55
2040	11	45	0	12	76	30	55

Key: CVN = aircraft carrier; SSN = nuclear attack submarine; SSGN = guided missile attack submarine; SSBN = ballistic missile nuclear submarine; LSC = large surface combatant (cruisers, destroyers); AWS = amphibious warfare ships; SSC = small surface combatants (frigates, littoral combat ships).

5. Norway

Norwegian submarines have been plying High North waters more often in recent years, attesting to the recent shift in policy described in the Norwegian Government High North Strategy. However, Oslo also decided to shut down the Olavsvern base in 2009, depriving submarines of any military port in the northern half of the country. Upgrading the naval base at Ramsund, near Narvik, could be a way to compensate for the loss of this northern base.¹⁵³

The Fridtjof Nansen-class frigates are now the main surface combatant units of the Norwegian navy. The launching of the fifth frigate, the *Thor Heyerdhal* in 2009, led to much speculation about the motivation of the Norwegian government for such a potent unit, equipped with the Aegis multi-target air tracking system. In fact, the Nansen class is not an addition to Norway's navy, they were ordered, back in 2000, to replace the aging Oslo-class frigates that gradually were withdrawn from service.

¹⁵² Source: Ronald O'Rourke, *Navy Force Structure and Shipbuilding Plans: background and issues for Congress*, Congressional Research Service, April 13, 2011, Washington, DC, p.9.

¹⁵³ *Défense & Sécurité Internationale* n°56, February 2010, p. 22.



Fig. 9. The *Roald Amundsen*, a Fridtjof Nansen-class frigate; seen here in June 2012 in Oslo. (Picture: F. Lasserre)

The Skjöld-class patrol boats are new, large and very fast (60 knots) stealth missile crafts; there are 6 now in active service and they partly replace the old Hauk-class fast attack crafts.¹⁵⁴ The Coast Guard, a military body, benefited from several new additions. The *Svalbard* (Lloyd's ice class 1AS, or IACS¹⁵⁵ PC5) is an Arctic Offshore patrol vessel Norway laid down in 2000 and commissioned in 2002. It is specifically built for Arctic operations. The *Harstad* is a multipurpose offshore patrol vessels (OPV, Lloyd's ice class 1B) optimised for emergency towing of large oil tankers, oil spill clean-up and firefighting. The most common duty will be fishery inspection and search and rescue in Norway's large exclusive economic zone. The *Barentshav* class OPVs (3 vessels, Lloyd's ice class 1A) will ensure EEZ patrol, fishery inspection, search and rescue as well as tug readiness along the shore of Norway. The ships are set to replace the NoCGV *Chieftain*, *Tromsø* and *Stålbas*.

A controversy emerged regarding the new OPVs launched by Norway or Denmark: if their main tasks were constabulary, why were they armed like warships, and so well equipped? The *Svalbard*, for instance, is NBC-proof (nuclear, bacteriological

¹⁵⁴ Eric Wertheim, "World Navies in review", *Proceedings*, US Naval Institute, March 2011, p. 67.

¹⁵⁵ International Association of Classification Societies.

and chemical), which appears unnecessary to some analysts unless it was designed to operate in a hostile maritime environment,¹⁵⁶ but the ship is also equipped for firefighting and environmental protection. Other navies deploy ships that are both armed and display modern technologies, like France's stealth Gowind-class OPVs, or *Floréal*-class light surveillance frigates,¹⁵⁷ Italy's Commandante-class OPVs¹⁵⁸ or Iceland's Thor-class multipurpose OPVs, and no comment about their being overequipped was ever floated. The Norwegian Coast Guard is part of the Navy and must be equipped with combat-capable units. Besides, the *Svalbard* was also designed in 1999 and 2000 at a time when there were fears of nuclear incidents with the fast-declining and deteriorating Russian Navy – an analysis proved partly right in 2000 with the sinking of the *Kursk*. The patrol vessel was designed, not to be engaged in combat in a nuclear war, but to be able to carry out its missions in radiation-affected zones.¹⁵⁹

True, Norway still invests in High North espionage, and recently ordered a new research vessel, to replace the *Marjata* that patrolled the Barents Sea for the past 15 years: the Barents Sea treaty of 2011 and the confidence-building measures between Russia and Norway¹⁶⁰ do not mean Norway is no longer watching what Russia is doing in Arctic seas.¹⁶¹

¹⁵⁶ Rob Huebert, *The Newly Emerging Arctic Security Environment*, op. cit., 2010, p. 14.

¹⁵⁷ Ordered in 1989, 6 units patrolling French EEZs equipped with ECM, a 100-mm gun, Exocet missiles and a Panther ASW helicopter. *Naval Technology*, www.naval-technology.com/projects/florealclassfrigate/, retrieved May 23, 2012.

¹⁵⁸ Not stealth but with a low radar and infrared signature, these ships are armed with a helicopter and three guns (76 mm and two 25 mm) and are ECM capable. Commissioned between 2002 and 2004. *Naval Technology*, www.naval-technology.com/projects/commandante/, retrieved May 23, 2012.

¹⁵⁹ Commander SG Svein Lystrup, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.

¹⁶⁰ "Norway to strengthen military cooperation with Russia", *BarentsObserver*, Feb. 23, 2011.

¹⁶¹ *BarentsObserver*, June 22, 2010 and October 27, 2010; confirmed by Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo: Norway is both engaging Russia on dialogue and confidence-building measures, while monitoring Russian activities, just like Russia monitors Norway's.

6. Denmark

The 2004 *Defence Agreement 2005-2009* scrapped Denmark's three submarines¹⁶² but confirmed the offshore patrol vessels (OPV) approved in December 2003 by the Danish Parliament. The two new Knud Rasmussen-class OPVs for North Atlantic and Arctic waters, with an ice-class hull (Lloyd's ice class 1C/1B) were to replace the three older Agdlek-class cutters.¹⁶³ The Danish Navy also uses four Thetis-class OPV (Lloyd's ice class 1B), built between 1988 and 1991.

In June 2010, the Danish government announced that after 14 years on inaction, the Navy's three icebreakers will be taken out of service. They were assigned to keeping the main shipping routes around Denmark clear but since 1996 the ice proved thin enough to let traffic go through without their intervention. They could have been redeployed to Greenland; however Copenhagen decided it was not worth it.¹⁶⁴ August 2010 saw the retirement of three well-armed *Niels Juel*-class missile corvettes that had been in service since the early 1980s. The class is replaced by the larger, 6 000-ton Iver Huitfeldt-class frigates. These three new vessels will probably enter service between 2011 and 2013.¹⁶⁵

¹⁶² Håkon Lunde Saxi, *Norwegian and Danish Defence Policy. A comparative Study of the post-Cold War era. Defence and Security Studies Series*, Oslo: Norwegian Institute for Defence Studies, 1, 2010, p. 53.

¹⁶³ "Current Danish Naval Projects", *Canadian American Strategic Review (CASR)*, May 2008.

¹⁶⁴ "Navy retires icebreakers", *Copenhagen Post*, June 23, 2010. In 2012 the icebreakers were still part of the Navy, but a spokesperson from the Danish Command confirmed they would be withdrawn as part of the Defence agreement 2010 – 2014. Nicholas Lundgard, Press Officer, Defence Command Denmark, correspondence with F. Lasserre, June 1st, 2012.

¹⁶⁵ Joris Janssen Lok, "Danish Modern", *Defense Technology International*, July-August 2008, pp. 28-29; Eric Wertheim, "World Navies in Review", *Proceedings*, U.S. Naval Institute, March 2010, p. 48; Eric Wertheim, "World Navies in Review", *Proceedings*, US Naval Institute, March 2012, p. 41.



Fig. 10. The *Knud Rasmussen* patrol boat, gunless in Ilulissat (Greenland), September 2008. (Picture: F. Lasserre)

7. Canada

Canada's surface units are not designed to ply Arctic waters. The only ships that can navigate in (thin) ice are the two old (1969) *Protecteur*-class Auxiliary Oil Replenishment (AOR) and the Kingston-class Maritime Coastal Defence Vessel (MCDV), both with a low ice-class (Lloyd's) 1D.¹⁶⁶

¹⁶⁶ Kyle D. Christensen, *Arctic Maritime Security and Defence: Canadian Northern Security Opportunities and Challenges*, Technical Report TR2005/01, National Defense, Ottawa, 2005, p. 53.



Fig. 11. HMCS *Glace Bay* (701) seen from HMCS *Shawinigan* (704) (both Kingston class) during manoeuvres in Hudson Bay, August 2005. (Picture: F. Lasserre)

The government decided in 2004 to design three new Joint Support Ship (JSS, ice-class 1C/1B) to replace the AOR. However, the program was canceled in 2008. It was revived in 2010 for two ships,¹⁶⁷ but the contracts have not been awarded yet and it is unlikely the first unit will enter service before 2017.¹⁶⁸ The Conservative government announced in 2006 the construction of three armed heavy icebreakers, but in 2007 decided to cancel this program and opted for the construction of six to eight Arctic offshore patrol vessels (AOPV, ice class 1AS or PC6) inspired from the Norwegian Svalbard-class or the Danish Thetis-class.¹⁶⁹ A first design contract was awarded in 2008, a preliminary contract was signed in July 2012, but construction has not begun yet.¹⁷⁰

¹⁶⁷ "2 JSS finalists solicited; shipbuilding strategy next steps...", *Defense Industry Daily*, Oct. 13, 2010.

¹⁶⁸ *Ships Monthly*, Nov. 2010, p. 10.

¹⁶⁹ Martin Shadwick, "Maritime futures", *Canadian Military Journal*, Summer 2007, p.81; "Armed Naval Icebreakers – the Arctic Offshore Patrol Ship", *Canadian American Strategic Review*, July 10, 2007.

¹⁷⁰ STX Marine, www.stxmarine.net/headlines.html#polar, retrieved April 3, 2012; "Irving Shipbuilding focuses on Arctic Offshore Patrol Ships (AOPS)", *Canadian Sailings*, Nov. 29th, 2012, www.canadiansailings.ca/?p=5424, accessed Dec. 15, 2012.

The Canadian Conservative government also announced the construction of new bases in the Arctic: a training base at Resolute (2007); a naval supply base at Nanisivik (2007); and a transport air hub at Rankin Inlet (2011), to be added to the four Forward Operating Locations, or seasonal airfields in Inuvik decided in 1987, Yellowknife, Rankin Inlet and Iqaluit.¹⁷¹ However, the format of the projected Nanisivik base appears to be considerably reduced in 2012 from the initial plans.¹⁷² It would not be the first time Ottawa would announce a military base at Nanisivik, only to back down, as in February 1988, the Progressive Conservative government said it would develop a base there.¹⁷³

It is not the first time the Canadian government reacts to crises or a fast changing Arctic political environment by announcing military orders: in 1987, two years after the *Polar Sea* episode, the Progressive Conservative government's *White Paper* planned to purchase 10 to 12 SSNs. The project was however cancelled in the 1989 budget because of a lack of support, significant costs and a rising deficit.¹⁷⁴ In 2011, frustrated by the poor performances of the Upholder SSKs Canada bought from Britain, the federal government hinted it could once again be interested in nuclear submarines.¹⁷⁵

8. An arms race?

To what extent are military developments the reflection of an arms race in the Arctic? Definitions of an arms race underline two things: first, simultaneous abnormal growth rates in the military outlays of countries in a region; second, it is local tensions

¹⁷¹ Kuujjuaq was also selected but was later sided off. John Honderich, *Arctic Imperative. Is Canada Losing the North?*, Toronto: University of Toronto Press, 1987, p. 110; Claude Manzagol, "Les forces armées canadiennes: fiche signalétique", *Cahiers de Géographie du Québec*, 34(93), 1990, p. 353.

¹⁷² "Le projet de base navale perd des plumes", *La Presse*, March 22, 2012; "Planned Arctic naval base cut back sharply", *Nunatsiaq News*, March 22, 2012.

¹⁷³ Matthew Fisher, "Permanent Military Base planned for Arctic", *Globe & Mail*, Feb. 5, 1988, p. A1; M. Fisher, "Canada plans to open military base near Northwest Passage", *Anchorage Daily News*, Feb. 6, 1988, p. 1.

¹⁷⁴ Nathaniel French Caldwell, *Arctic Leverage. Canadian Sovereignty and Security*. New York: Praeger, 1990, pp. 62-65; Ted McKenna, "Warmer waters: melting ice opens the Canadian arctic to new commercial opportunities. Can the government keep control?", *Journal of Electronic Defense*, Nov. 2004, p.37.

¹⁷⁵ "Canada may buy nuclear submarines », *CBC News*, Oct. 27, 2011, www.cbc.ca/news/politics/story/2011/10/27/submarines-british-nuclear.html, retrieved March 25, 2012.

that drive the increase: build up must be reciprocated, not driven by exogenous or domestic factors that coincidentally bring about simultaneous increases.¹⁷⁶

Overall, there are real efforts of modernization of most navies, and efforts to develop adapted tools for patrolling and controlling Arctic marine spaces indeed – a consequence of the melting sea ice and the opening up of formerly inaccessible Exclusive Economic Zones and unclaimed extended continental shelves. Besides, the time frame of the decision to build new ships, their being laid down and eventually commissioned, does not portray a concentration of decisions in the last few years, nor the attempts of every Arctic nation to respond in kind to each other’s naval addition – the definition of an arms race. Most units recently commissioned were decided in the early years of the previous decade, if not much longer before regarding Russian units. It is therefore difficult to argue that they reflect a recent and reciprocated concern about the neighbor’s build-up (Table 5).

Table 5. Construction and decision timeframe for latest updates to Arctic States navies.¹⁷⁷

Ship	Country	Commissioned	Launched	Laid down	Decided/ Ordered
<i>Virginia</i> SSN (subsequently one sub a year, 18 units)	USA	2004	2003	1997	1997
<i>Arleigh Burke</i> IIA DDG (35 units) 16 units commissioned 2005-2011	USA	2000-2014	1998-2013	1997-2011	1994

¹⁷⁶ Michael Wallace, “Arms Race and Escalation: some new evidence”, *Journal of Conflict Resolution* 23(3), 1979, p. 5; Alex Braithwaite and Douglas Lemke, “Unpacking Escalation”, *Conflict Management and Peace Science*, 28, 2011, p. 113.

¹⁷⁷ Source: compiled data from *Naval Technology*; *Global Security*; *Défense & Sécurité Internationale*; *Ships Monthly*; *Jane’s Defense Weekly*; *Jane’s Fighting Ships 2011-2012*, Redhill (UK): IHS Jane’s, 2011; *RIA Novosti*, Dec. 3, 2011; *Defense Review Asia*, Oct. 22, 2012; *RusNavy*, Oct. 15, 2012.

<i>Wasp</i> Assault ship LHD (8 units)	USA	1989-2009	1987-2006	1985-2004	1984
<i>San Antonio</i> Amphibious Ship LPD (10 units)	USA	2006-2016	2003-2014	2000-2012	1993/1996
<i>Yaroslav Mudryy</i> FFG (Neustrashimyy class)	Russia	2009	1991	1988	1986
<i>Severodvinsk</i> SSN (Severodvinsk or Graney class)	Russia	2013 ?	2010	1993	1985
<i>Kazan</i> SSN (Severodvinsk class)	Russia	2014 ?	2013 ?	2009	1996
Five units, SSN (Severodvinsk class)	Russia				2012
<i>Yuri Dolgoruki</i> SSBN (Borei class)	Russia	2013 ?	2008	1996	1982
<i>Aleksandr Nevski</i> SSBN (Borei class)	Russia	2014 ?	2010	2004	1996 ?
<i>Vladimir Monomakh</i> SSBN (Borei class)	Russia	2013 ?	2012 ?	2006	1996 ?
<i>Knyaz Vladimir</i> SSBN (Borei class)	Russia			2012	
<i>Sankt Peterburg</i> SSK (Lada class)	Russia	Not yet - suspended	2004	1997	1996
<i>Novorossiysk</i> SSK (Kilo class)	Russia	2014 ?	2012	2010	19 th unit ordered 2010
<i>Rostov-on-Don</i> SSK (Kilo class)	Russia	2014 ?		2011	20 th unit ordered 2011
<i>Stary Oskol</i> SSK (Kilo class)	Russia	2015?		2012	21 st unit ordered 2012

<i>Peter the Great</i> Kirov-class cruiser	Russia	1998	1989	1986	1968/1973
<i>Stereguschiy</i> FFG (6 units)	Russia	2007-2015	2006-2014	2001-2011	2000
<i>Admiral Gorshkov</i> FFG (2 units ordered; 15 units announced to be built before 2015)	Russia	2012, 2014 ?	2010 2012 ?	2006, 2009	2005
<i>Skjöld</i> patrol boat (6 units)	Norway	1999-2011	1998-2008	1997-2007	1996, 2003
<i>Svalbard</i> corvette	Norway	2002	2001	2000	1997/1999
<i>Fridtjof Nansen</i> class: 5 units	Norway	2006, 2007, 2008, 2009, 2011	2004, 2005, 2006, 2007, 2009	2003-2007	1997
<i>Harstad</i> OPV	Norway	2005		2004	2003
<i>Barentshav</i> OPV (3 units)	Norway	2009, 2010	2008, 2009	2007, 2008	2004/2005
Absalon-class Combat Support and Command Ship (2 units)	Denmark	2004, 2005	2004	2003, 2004	2001
Knud Rasmussen class OPV (2 units)	Denmark	2008, 2009	2006, 2007	2005	2003
<i>Iver Huitfeldt</i> frigate (3 units)	Denmark	2011, 2012, 2013	2010-2011	2008-2009	2004/2006
Arctic AOPV	Canada	-	-	-	2007
Joint Support Ships	Canada	-	-	-	2010

As far as military budgets are concerned, the figures do not show neither significant nor simultaneous growths responding to each other (fig. 12).¹⁷⁸

In 2011, Russia indeed declared a major increase over the previous year's figures, with a 9.34% growth of its defense budget, in line with the country's plans to begin

¹⁷⁸ The analysis here draws on personal calculation based on SIPRI's Military spending figures, in constant 2010 US dollars, 2012.

replacing most of its Soviet-era military equipment with modern weaponry.¹⁷⁹ However, 2010 had posted a 1.6% decline in the military budget in constant US dollars. Besides, the level of spending is far below Soviet levels and kept declining after 1991 to a low in 1997. It was in 1998 that spending starts increasing back with figures averaging 9.1% per year.

Norway's military spending was very stable from 1988 until 2001. In 2002, it jumped by 20.2% and since then increased moderately by 1.4% per year on average from 2002 till 2011.

Denmark military spending slowly eroded from 1988 to 2005, with an average yearly decrease over the period of -0.6%. Spending was stepped up 9.4% in 2006 and from then on remained fairly stable with an average increase of 0.1% from 2006 till 2011. In 2011, its military spending is still lower than in 1988 in constant dollars.

Canada's defense budget eroded from 1988 till 1997 by 3.7% per year, before beginning to grow back from 1998 on. Over the period 1997-2011, spending increased by 3.8% per year. Most of this increase was used to modernize aging equipment and infrastructures, invest in human resources and specifically in the increase of pay and benefits for military personnel, as well as to finance overseas deployment of Canadian Forces in Bosnia, Kosovo and Afghanistan.

The United States witnessed a similar evolution, its spending decreasing from 1988 to 1998 by 3.8% per year, before beginning to grow back. Unsurprisingly, it was after 2001 and conflicts in Iraq and Afghanistan that major increases were witnessed: +12.3% in 2002, +13.4% in 2003, +9% in 2004, +4.8% in 2005. Spending increased by 5% a year from 1998 until 2011.

It is thus apparent that growths in military spending, over the past 10 years, although significant, are not incommensurate and come after a decade of compression. Besides, it is very difficult to argue that the stepping up of spending is a response to the neighbours: Russia started reinvesting in 1998, but Norway in 2002, Denmark in 2006, and the USA in 2002 in the wake of the September 11, 2001 attacks and the decision to

¹⁷⁹ "Financial Crisis No Impact On Military Spending In Russia And China", *Radio Free Europe*, April 17, 2012; "World military spending levels out after 13 years of increases", SIPRI, April 17, 2012.

go to war in Afghanistan and Iraq. Only Canada began reinvesting in 1998, and at the time it was not for Arctic protection reasons.

Defense Spending by Arctic coastal States, 1988-2011

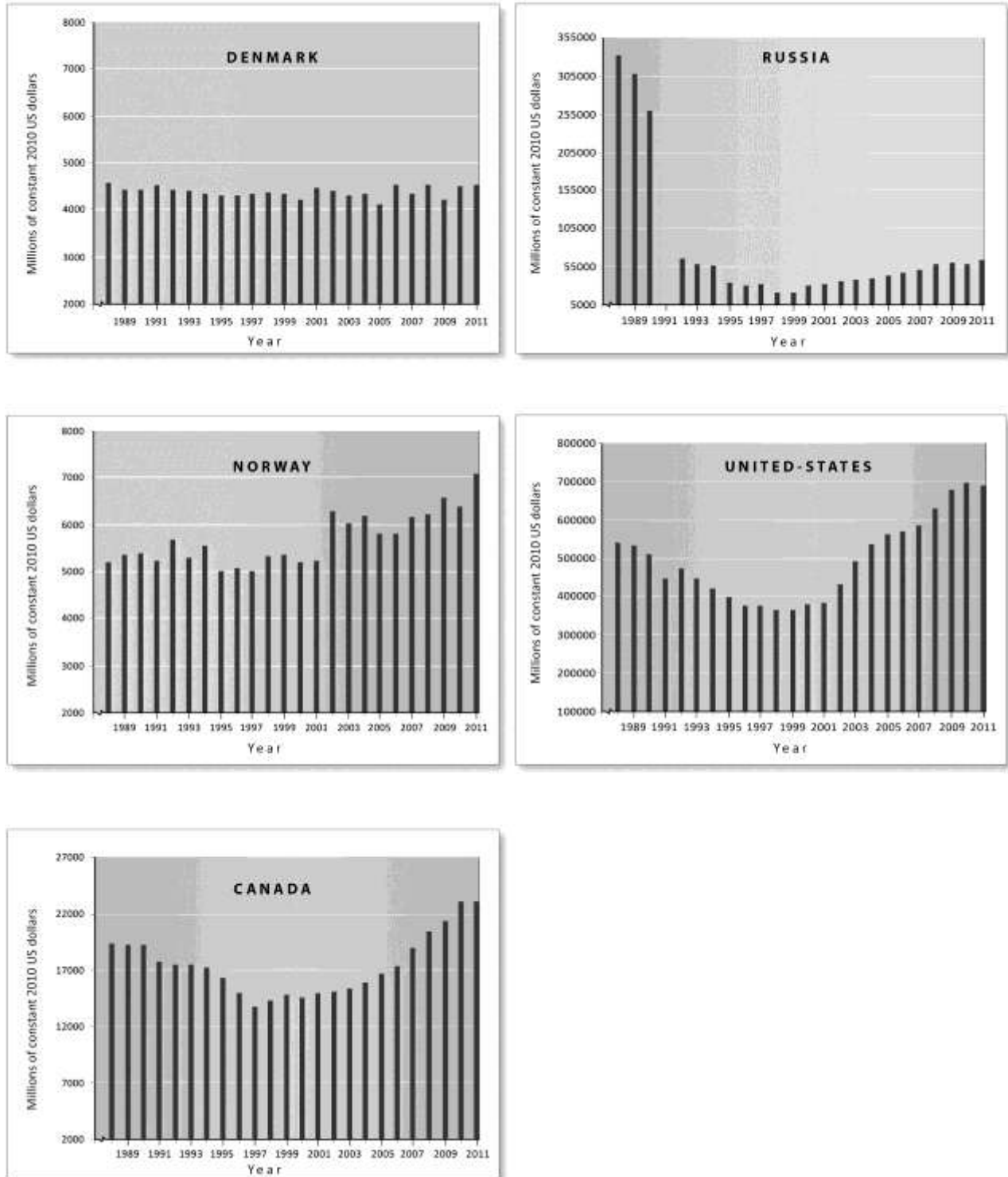


Fig. 12. Evolution of defense spending of Arctic coastal States, 1988-2011.

Source: SIPRI.

Conclusion

Russian ambitions in the Arctic may be very real, but they are still far from being realized and they are not necessarily implying the will to confront the other riparian Arctic States. Russia may nourish high ambitions for its Arctic and armed forces, but plans to recreate a powerful navy, to lay down new icebreakers to replace a declining fleet, to establish new FSB border control units and search & rescue units are a daunting task; it is hard to imagine that Russia has the financial, administrative efficiency and technical capacity to meet these objectives.¹⁸⁰

Arctic militarization is largely defended in Russia by the security and defense establishments, who naturally wish to expand their budgets and see an opportunity with the sovereignty in the Arctic issue, to advocate for greater investment in hardware.¹⁸¹ But the government does not seem to adhere to these views, rather using this strong rhetoric as a public relations tool.¹⁸² Military programs by other riparian countries do not show either a strong intention to significantly upgrade military capacities in the Arctic.

A survey conducted by EKOS in 2010 underlined vast differences between the public opinions of the Arctic countries. Asked “Thinking about border and/or resource sharing disputes in the Arctic, what statement is closest to your point of view?”, 42% of Canadian, 36% of Icelandic and 34% of Russian respondents replied “My country should pursue a firm line in defending its sections of the Arctic”, against 5% of Danish, 8% of Norwegian and 10% of American respondents.¹⁸³ The perception of a growing arms race and escalating tensions is thus far from being widespread in the Arctic. Most analysts, academics or government, rather point to a modernization effort, in Russia as well as with other Arctic countries.

¹⁸⁰ R. Tamnes, *op. cit.*, 2011, p. 56.

¹⁸¹ Kefferpütz, *op. cit.*, 2010, p. 8.

¹⁸² Ekaterina Piskunova, “Russia in the Arctic: what’s lurking behind the flag?,” *International Journal*, 65(4), 2010, p. 864.

¹⁸³ EKOS Research Associates, *Rethinking the Top of the World: Arctic Security Public Opinion Survey*, Report submitted to The Walter and Duncan Gordon Foundation and The Canada Centre for Global Security Studies at the Munk School of Global Affairs, Toronto, January 2011, p. 62.

Strong rhetoric about a reportedly threatened sovereignty and the need to defend it through an increased military presence can thus provide politicians with an increased popularity among the military and the electorate, especially in Canada and in Russia.¹⁸⁴ Leaked cables from the American Embassy in Ottawa¹⁸⁵ seem to attest to this idea that the Canadian government does not believe there is a threat to Canada's sovereignty in the North, and that rhetoric is developed merely for electoral reasons.¹⁸⁶

Not only is Russia's policy in the Arctic far more nuanced than often depicted in Western discourses, but the trend in military equipment of its navy and air force does not underline any deliberate aggressive build-up in the Arctic, as Moscow now seems to focus on sea nuclear deterrence (SSGN) and coastal defense.¹⁸⁷ The other Arctic Ocean riparian countries have also developed similar Arctic policies, but they depict a posture that is no more aggressive than Russia's. They have also begun to upgrade their military equipment and military doctrine with a view to a better control of the Arctic, but it is in an orderly manner that is not reminiscent of an arms race. Rather, the

¹⁸⁴ Ryan Dean and Sarah French, "Facta, non verba: interprétation des politiques canadiennes et russes dans l'Arctique", *Cahiers de la Revue Défense Nationale*, special issue *L'Arctique, théâtre stratégique*, Oct. 2011, pp. 66-69; Dodds, Klaus, "We are a northern country: Stephen Harper and the Canadian Arctic", *Polar Record* 47(243), 2011, p. 373; Stéphane Roussel, "The bad guy of the Arctic", *The Dispatch/CDFAI*, Summer 2011, p.23; Kefferpütz, op. cit., 2010, p. 8 ; Kraska, 2009, op. cit., p. 1120 ; Bruce Campion-Smith, "Diplomatic thaw at hand over Arctic", *Toronto Star*, August 15, 2009; Samantha Arnold and Stéphane Roussel, "La sécurité et la position du Canada en Arctique", oral presentation, conference *Changements climatiques et ouverture de l'Arctique : quels impacts stratégiques pour le Canada ?*, Quebec City, November 17, 2006.

¹⁸⁵ The American Embassy in Ottawa refused to comment on the authenticity of these documents when contacted in January 2012. Several media and scientists do not seem to doubt their being authentic, like Klaus Dodds, "The WikiLeaks Arctic cables", *Polar Record*, available on CJO 2011, Oct. 2011, doi:10.1017/S003224741100043X, but also *The Guardian*, *The Globe & Mail*, *APTN*, *CBC* to name but a few.

¹⁸⁶ "While Arctic sovereignty is tried and tested as an election issue, the promises made are seldom implemented... That the PM's public stance on the Arctic may not reflect his private, perhaps more pragmatic, priorities, however was evident in the fact that during several hours together with ambassador Jacobson [...], the PM did not once mention the Arctic." January 21, 2010, Ambassador Jacobson, "Canada's Conservative Government and its Arctic Focus", Ref. 10OTTAWA29. "According to PM Harper, Canada has a good working relationship with Russia with respect to the Arctic, and a NATO presence could backfire by exacerbating tensions". January 20, 2010, Ambassador Jacobson, "Canadian PM and NATO S-G discuss Afghanistan, the Strategic Concept and the Arctic", Ref. 10OTTAWA21.

¹⁸⁷ [Joseph Henrotin](#), « Le développement des SLBM soviéto-russes », *Technologie et armement*, n° 9, Dec. 2007- Jan. 2008, pp. 68-73 ; Thomas R. Fedyszyn, op. cit., *Proceedings*, 138(3), 2012, p. 310.

equipment and doctrine renewal point toward a securitization of newly opened maritime spaces that each State wishes to control.

In June 2010, the Canadian Standing Committee on National Defence concluded that “there is no immediate military threat to Canadian territories. [...] The challenges facing the Arctic are not of the traditional military type. [...] Rather than sovereignty threats we face what might best be termed policing threat. These do not require combat capability.”¹⁸⁸

The overall picture of Arctic military evolution is one of limited modernization, limited increases or change in equipment. Some of these changes, like the strengthening of the Canadian Rangers or the moving north of Norwegian units and headquarters, have little to do with power projection into contested areas, but are rather for the patrolling of recognized national spaces.¹⁸⁹ There has indeed been some modest military buildup by the Arctic states, and often the new equipment was replacement, not expansion. But that buildup hardly signals aggressive designs. Rather, it seems little more than a prosaic response to expanded jurisdictional space with the melting of the ice, and continued resource development.¹⁹⁰

¹⁸⁸ Standing Committee on National Defence, *Canada's Arctic Sovereignty*, House of Commons, Ottawa, June 2010, pp. 5, 7.

¹⁸⁹ Siemon Wezeman, “Military Capabilities in the Arctic” *SIPRI Background Paper*, March 2012, pp. 13-14.

¹⁹⁰ Lawson Brigham, reply to Rob Huebert, “True North”, *Foreign Policy*, November 2010, www.foreignpolicy.com/articles/2010/10/11/true_north, retrieved April 10, 2012.