



# MILITARY CAPABILITIES IN THE ARCTIC

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## I. Introduction

In recent years the forecast of far-reaching climate change in the Arctic has led to fears of future conflict in the region. Such fears have been expressed in official documents, including defence policy documents, of the five Arctic littoral states—Canada, Denmark, Norway, Russia and the United States. Three of them—Canada, Denmark and Russia—have recently adopted foreign and defence policies that have put a special emphasis on the Arctic. They have strengthened their military presence in the Arctic or increased military capabilities for Arctic use and have presented plans for additional military strengthening. Meanwhile, Norway has moved a substantial part of its operational forces to the north of the country. Of the five littoral states, only the USA has placed less focus on Arctic security.

This paper provides an overview of the military capabilities of Canada, Denmark, Norway, Russia and the USA for operations in the Arctic and the ongoing or planned improvements in those capabilities, especially in the Arctic areas beyond their national territories.

## II. Canada

The government of Stephen Harper, Canadian prime minister since 2006, has made protecting and strengthening Canada's 'Arctic sovereignty' a priority. Canada's current defence policy is contained in the Canada First defence strategy of 2008, which includes plans for investments until 2028.<sup>1</sup> It puts a renewed emphasis on defending Canada's sovereignty, including in the Arctic region as it becomes more accessible. Canada's Arctic policy is specified in the government's Northern Strategy, which was released in July 2009.<sup>2</sup> This increased emphasis in policy has been matched by procurement of new equipment, expansion of special Arctic forces and increased training in the Arctic environment.

### Air capabilities

The Royal Canadian Air Force operates 18 CP-140 (P-3C) anti-submarine warfare (ASW) aircraft that have the range to patrol the Arctic region from

<sup>1</sup> Canadian Department of National Defence (DND), *Canada First Defence Strategy* (DND: Ottawa, 18 June 2008).

<sup>2</sup> Canadian Government, *Canada's Northern Strategy: Our North, Our Heritage, Our Future* (Minister of Public Works and Government Services: Ottawa, July 2009).

## SUMMARY

● Climate change is making the Arctic region—and its expected natural resources—more accessible. Overlapping claims by the five Arctic littoral states—Canada, Denmark, Norway, Russia and the United States—have led to fears of future conflict in the region.

In recent years all five countries have included increased protection of Arctic territories and claims in their defence policies. All five have also started to increase their military presences and capabilities in the Arctic region by acquiring Arctic-specific equipment, improving military infrastructure or increasing military forces.

While these changes are sometimes portrayed as significant military build-ups and potential threats to security, the five states are making only limited increases in their capabilities to project military power beyond their recognized national territories. However, the increase in military forces does give some reasons for concern, which military confidence-building measures might help to mitigate.



Map of the Arctic littoral states



their base on the east coast of Canada. The aircraft are being modernized.<sup>3</sup> According to the Canada First strategy, they will be replaced by 10–12 new aircraft from 2020. Canada also has 80 F/A-18 combat aircraft stationed in south-east and central Canada that are regularly deployed in the Arctic region, especially to intercept Russian bomber and reconnaissance aircraft close to Canada's air space. They can operate from four secondary air bases in northern Canada at Inuvik and Yellowknife, both in Northwest Territories (NWT), and Iqaluit and Rankin Inlet, both in Nunavut.<sup>4</sup> The F/A-18s are supported by 7 tanker aircraft.<sup>5</sup> Canada First includes plans to replace the F/A-18s with 65 F-35 Joint Strike Fighters (JSFs) from 2020. Their purchase has repeatedly been linked by the government to Russian long-range bomber aircraft operations over the Arctic.<sup>6</sup>

***The Canadian Government has made protecting and strengthening Canada's 'Arctic sovereignty' a priority***

Canadian helicopters and transport aircraft operate regularly in the Arctic region, including from small and improvised airfields on snow or ice.<sup>7</sup> Aircraft acquisitions in recent years, such as of C-130J and C-17 transport aircraft, have been partly for Arctic missions.<sup>8</sup> A further 17 search-and-rescue aircraft are planned to replace older C-130 and other aircraft. Canadian acquisition plans include air assets specifically for Arctic use. This includes the second phase of the 1.5 billion Canadian dollar (\$1.5 billion) Joint Uninhabited Surveillance and Target Acquisition System (JUSTAS) project for 6 unmanned aerial vehicles (UAVs) for maritime and Arctic patrol.<sup>9</sup>

Canada operates an extensive network of air surveillance radars in the north of the country, the North Warning System, which forms part of the North American Aerospace Defense Command (NORAD; see section VI below).<sup>10</sup> The Northern Strategy includes plans for surveillance systems, including satellites and underwater surveillance systems, to monitor the Arctic region and ship movements in it.<sup>11</sup>

<sup>3</sup> Saunders, S. (ed.), *Jane's Fighting Ships 2011–2012* (Jane's Information Group: London, 2011), p. 103; and Pugliese, D., 'Canada rethinks intel strategy', *Defense News*, 25 Jan. 2012.

<sup>4</sup> Canadian Department of National Defence, 'The Canadian Forces in the north', Canada Command backgrounder, 17 Aug. 2009, <<http://www.canadacom.forces.gc.ca/nr-sp/bg-do/09-002a-eng.asp>>.

<sup>5</sup> International Institute for Strategic Studies (IISS), *The Military Balance 2011* (Routledge: London, 2011), pp. 54–55.

<sup>6</sup> Dufour, J., 'Le Canada: un plan national pour la militarisation de l'Arctique et de ses ressources stratégiques' [Canada; a national plan for the militarization of the Arctic and its strategic resources], *Mondialisation.ca*, 7 Sep. 2010, <<http://www.mondialisation.ca/index.php?context=va&aid=20943>>.

<sup>7</sup> Canadian Department of National Defence, 'Canadian Rangers Patrol Group', 17 Aug. 2011, <<http://www.army.forces.gc.ca/land-terre/cr-rc/crpg-gprc-eng.asp>>.

<sup>8</sup> Champion-Smith, B., 'Canadian troops flex muscle in Arctic exercise', *Toronto Star*, 25 Aug. 2010; and Canadian Government, *Northern Strategy: Record of Achievement 2009–2010* (Canadian Government: Ottawa, 2010).

<sup>9</sup> Pugliese (note 3); and Huebert, R., *The Newly Emerging Arctic Security Environment* (Canadian Defence and Foreign Affairs Institute: Calgary, Mar. 2010), p. 8.

<sup>10</sup> Huebert, R., 'Domestics ops in the Arctic', Presentation at the conference Canadian Reserves on Operations, *Journal of Military and Strategic Studies*, vol. 12, no. 4 (summer 2010); International Institute for Strategic Studies (note 5), pp. 54–55; and Canadian Department of National Defence (note 4).

<sup>11</sup> 'New Arctic icebreaker to be named after Diefenbaker', CBC News, 28 Aug. 2008, <<http://www.cbc.ca/news/canada/north/story/2008/08/28/new-icebreaker.html>>; 'Battle for the Arctic heats up', CBC News, 20 Aug. 2010, <<http://www.cbc.ca/news/canada/story/2009/02/27/f-arctic-sovereignty.html>>; Canadian Government (note 8); Huebert (note 9), pp. 6–7; and Prime Minister



Under the Polar Epsilon project, data from the high-resolution civilian radar-equipped earth observation satellite RadarSat-2 is used for surveillance of the Arctic region. RadarSat-2 was launched in 2007 and was modified from July 2009 to provide higher resolutions.<sup>12</sup> Two specific military ground stations are to be operational by late 2011, and two additional satellites are planned for launch in 2014–15.

### Land capabilities

The Canadian Rangers, a lightly armed paramilitary force with a patrol and reconnaissance role in northern Canada, is trained and equipped for year-round Arctic operations.<sup>13</sup> Its size is being increased from 4100 personnel in 2008 to 5000 by 2012, and it will receive new equipment and weapons.<sup>14</sup> Other Canadian land forces receive basic cold weather training and have cold weather personal equipment, while much Canadian heavy equipment is cold weather capable to some extent and increased winter training of large units is part of the Canada First policy.<sup>15</sup> However, Major General Alan Howard, assistant chief of the land staff of the Canadian Army, complained that the Canadian Army has lost the ‘ability to operate up north in the Arctic’ because of the focus on operations in Afghanistan.<sup>16</sup> The army’s capabilities for Arctic operations are to be improved after Canada’s withdrawal from Afghanistan in 2012.<sup>17</sup> In addition, a special small battalion-sized (500 troops) regular army unit for Arctic operations is to be set up.<sup>18</sup> Since 2008, Canadian reserve forces have included an Arctic company, based in Yellowknife, NWT, which under the Northern Strategy is planned to have a strength of 100 by 2019.<sup>19</sup>

Since the 1950s a small military base has been located at Alert on Ellesmere Island, Nunavut, in the extreme north of Canada, facing Greenland.<sup>20</sup> To improve Arctic training, a special Arctic training base was set up at Resolute Bay, Nunavut, in 2007.<sup>21</sup>

of Canada, ‘PM announces new polar class icebreaker project to be named after former PM John G. Diefenbaker’, 28 Aug. 2008, <<http://pm.gc.ca/eng/media.asp?id=2251>>.

<sup>12</sup> Campion-Smith (note 8); Canadian Department of National Defence, ‘A new step for the Polar Epsilon project’, 21 July 2010, <<http://www.forces.gc.ca/site/commun/ml-fe/article-eng.asp?id=6335>>; ‘Canadian satellite set to keep an eye on Arctic’, CBC News, 14 Dec. 2007, <<http://www.cbc.ca/news/technology/story/2007/12/13/tech-radarsat-launch.html>>; and Huebert (note 9), p. 9.

<sup>13</sup> Canadian Department of National Defence (note 7).

<sup>14</sup> Canadian Government (note 2); Prime Minister of Canada, ‘Prime Minister announces expansion of Canadian Forces facilities and operations in the Arctic’, 10 Aug. 2007, <<http://www.pm.gc.ca/eng/media.asp?category=1&id=1784>>; Huebert (note 10); Pugliese, D., ‘Canadian Rangers to replace storied Lee–Enfield rifles’, *Ottawa Citizen*, 2 Aug. 2011; and Canadian Department of National Defence (note 7).

<sup>15</sup> Gillis, L., ‘Canadian Forces and US Army winter training exercise coming in March’, *Timmins Times*, 1 Feb. 2011.

<sup>16</sup> DeSilva-Ranasinghe, S., Interview (with Major General Alan Howard), *Jane’s Defence Weekly*, 12 Jan. 2011, p. 34.

<sup>17</sup> DeSilva-Ranasinghe (note 16), p. 34; Prime Minister of Canada (note 14); and Huebert (note 10).

<sup>18</sup> O’Dwyer, D. and Pugliese, D., ‘Canada, Russia build Arctic forces’, *Defense News*, 6 Apr. 2009.

<sup>19</sup> Huebert (note 9), p. 9; Huebert (note 10); and ‘Canada’s Arctic strategy’, CBC News, 27 July 2009, <<http://www.cbc.ca/news/canada/story/2009/07/27/arctic-sovereignty-map.html>>.

<sup>20</sup> ‘Battle for the Arctic heats up’ (note 11); and Canada Command (note 10).

<sup>21</sup> Prime Minister of Canada (note 14); Huebert (note 9), p. 13; and ‘Canada’s Arctic strategy’ (note 21).



## Sea capabilities

Canada's 15 major surface warships are large enough and its 4 conventional submarines have enough range to operate in the Arctic Ocean.<sup>22</sup> The Royal Canadian Navy currently has no ice-strengthened warships. Patrolling the Arctic is mainly done by the Canadian Coast Guard (under the Department of Fisheries and Oceans), which has five large- or medium-sized unarmed icebreakers and six small icebreakers. However, most of these can only operate in the Arctic in the summer.<sup>23</sup> Two of the icebreakers have specific Arctic research roles.<sup>24</sup> Canada First and the Northern Strategy include plans for six to eight large Arctic offshore patrol vessels (OPVs) for the navy (modified from a 2005 plan for three large armed naval icebreakers for Arctic use) and one large icebreaker for the coastguard to be operational by 2017 at a cost of 720 million Canadian dollars (\$720 million), replacing an older ship.<sup>25</sup>

The nearest naval base is at Halifax, Nova Scotia, in the far south-east of Canada.<sup>26</sup> However, the existing small coastguard base at Nanisivik on Baffin Island, Nunavut, is being expanded in the period 2010–15 at a cost of 100 million Canadian dollars (\$100 million) to a naval base with docking and supply facilities.<sup>27</sup>

## III. Denmark, including Greenland

Denmark's defence policy for the period 2010–14 is contained in the 2009 Danish Defence Agreement, which underlines the changing geostrategic significance of the Arctic.<sup>28</sup> A special Arctic strategy was adopted in 2011.<sup>29</sup> In July 2009 the Danish Parliament approved a plan for an Arctic military command and task force to be set up by 2014.<sup>30</sup> The Arctic Military Command will merge the Greenland and Faroe Islands commands and will be headquartered in Nuuk, Greenland.<sup>31</sup> A modular Arctic Response Force composed of different parts of the Danish armed forces is to be set up for operation on Greenland and in other Arctic areas.<sup>32</sup>

*Denmark's defence policy underlines the changing geostrategic significance of the Arctic*

<sup>22</sup> ed. Saunders (note 3), pp. 98–102.

<sup>23</sup> Huebert (note 10).

<sup>24</sup> ed. Saunders (note 3), pp. 106–107.

<sup>25</sup> 'New Arctic icebreaker to be named after Diefenbaker' (note 11); 'Battle for the Arctic heats up' (note 11); Canadian Government (note 8); Huebert (note 9), pp. 6–7; and Prime Minister of Canada (note 11).

<sup>26</sup> ed. Saunders (note 3), p. 98.

<sup>27</sup> Canadian Government (note 2); Prime Minister of Canada (note 14); Prime Minister of Canada, 'Expanding Canadian Forces operations in the Arctic', 10 Aug. 2007, <<http://www.pm.gc.ca/eng/media.asp?id=1785>>; Huebert (note 9), p. 13; and Huebert (note 10).

<sup>28</sup> Danish Ministry of Defence (MOD), *Danish Defence Agreement 2010–2014* (MOD: Copenhagen, 24 June 2009).

<sup>29</sup> Danish Ministry of Foreign Affairs (MFA), Greenland Department of Foreign Affairs and Faroe Islands Foreign Service, *Kongeriget Danmarks Strategi for Arktis 2011–2020* [The Kingdom of Denmark's strategy for the Arctic 2011–2020] (MFA: Copenhagen, Aug. 2011).

<sup>30</sup> Danish Ministry of Foreign Affairs, Greenland Department of Foreign Affairs and Faroe Islands Foreign Service (note 29).

<sup>31</sup> 'Denmark, Greenland plan Arctic force', *Jane's Defence Weekly*, 8 June 2011, p. 10.

<sup>32</sup> Danish Ministry of Defence (note 28), p. 12.



### Air capabilities

Denmark operates three unarmed maritime patrol aircraft over the Baltic Sea and off Greenland. Plans for the potential deployment of F-16 combat aircraft to Greenland have also been reported.<sup>33</sup> In the past Danish F-16s have used Kangerlussuaq (Søndre Strømfjord) Airport in western Greenland.<sup>34</sup> The renewed use of the currently dormant Thule Air Base in the north-west of Greenland has been considered (see section VI).<sup>35</sup>

### Land capabilities

The small Frømandskorps (frogman corps) special forces unit has a partly Arctic role on Greenland. Denmark also maintains a small military patrol force on Greenland, the Slædepatrulje Sirius (sledge patrol Sirius).<sup>36</sup>

### Sea capabilities

Denmark's three frigates, soon to be increased to five, are able to operate in Arctic waters but are not ice-strengthened. However, four Thetis class OPV/frigates, which were commissioned in the early 1990s and designed for patrols in the North Atlantic and off Greenland, are capable of breaking ice up to 1 metre thick.<sup>37</sup> Two smaller but potentially more heavily armed ice-strengthened Knud Rasmussen class OPVs are dedicated for patrols off Greenland; they were ordered in 2004 and commissioned in 2008–2009, and a third is planned for 2017. One ice-strengthened large patrol craft also operates from Greenland.<sup>38</sup> The Royal Danish Navy has a base at Kangilinnguit (Grønnedal) in the south of Greenland.<sup>39</sup>

## IV. Norway

Norwegian defence policy is guided by the 2007 Soria Moria Declaration on International Policy, which gave the north of Norway and Svalbard a priority in national defence.<sup>40</sup> Norway's policy remains strongly focused on Russia but has shifted from emphasizing a potential threat to the whole of Norway to the potential for conflicting interests in the Arctic area.<sup>41</sup> However, at the same time Norwegian–Russian relations are considered to be good, and Norway and Russia are increasingly cooperating in the European Arctic area

<sup>33</sup> Huebert (note 9), p. 10.

<sup>34</sup> 'Denmark's Arctic assets and Canada's response: sovereignty and strategic resources of the high Arctic', *Canadian American Strategic Review*, May 2005, <<http://www.casr.ca/id-indetail-05.htm>>, part 4.

<sup>35</sup> Danish Ministry of Defence (note 28),

<sup>36</sup> 'Denmark's Arctic assets and Canada's response' (note 34).

<sup>37</sup> ed. Saunders (note 3), p. 190.

<sup>38</sup> ed. Saunders (note 3), p. 193.

<sup>39</sup> ed. Saunders (note 3), p. 190.

<sup>40</sup> Office of the Norwegian Prime Minister, 'The Soria Moria declaration on international policy', 4 Feb. 2007, <<http://www.regjeringen.no/en/dep/smk/documents/Reports-and-action-plans/rapporter/2005/The-Soria-Moria-Declaration-on-Internati.html>>; Norwegian Ministry of Defence (MOD), *Norwegian Defence: Facts and Figures 2011* (MOD: Oslo, 2011), p. 30.

<sup>41</sup> Office of the Norwegian Prime Minister (note 40); and Huebert (note 9), pp. 12–13.



and have held several joint military exercises in recent years.<sup>42</sup> In August 2009 the headquarters of the Norwegian Armed Forces moved from Jättå in the south of the country to Reitan, near Bodø, just north of the Arctic Circle, and the headquarters of the Norwegian Army is even further north, in Bar-dufoss.<sup>43</sup> While the Royal Norwegian Navy remains based mainly in Bergen, in the south, in 2010 the coastguard's headquarters was moved north, to Sortland.<sup>44</sup>

Five large Cold Challenge exercises have been held in northern Norway by Norwegian, North Atlantic Treaty Organization (NATO) and other allied troops since 2006. These were directed against unspecified threats in cold environments but probably also gave a good training opportunity for potential Arctic operations.<sup>45</sup>

**Norway's policy remains strongly focused on Russia but has shifted to the potential for conflicting interests in the Arctic area**

### Air capabilities

A large proportion of the approximately 60 F-16 combat aircraft that Norway operates is based in Bodø, the main base of the Royal Norwegian Air Force.<sup>46</sup> However, in November 2011 the Norwegian chief of defence recommended the closure of the air base at Bodø by 2024 and relocation of the combat aircraft south to Ørland.<sup>47</sup>

Norway has decided to buy up to 56 F-35 aircraft to replace the F-16s from around 2018.<sup>48</sup> However, with their limited range and lack of tanker aircraft support, F-16 and F-35 aircraft are not much use in the Arctic area outside Norway. The bulk of what can be seen as a real Arctic capability lies with the six P-3 long-range maritime patrol aircraft.<sup>49</sup> However, these are now over 20 years old and, while they are to be modernized, no plans have yet been announced for a replacement.<sup>50</sup>

<sup>42</sup> Ingebritsen, R., Norwegian State Secretary of Defence, 'From the High North to terrorism: Norwegian perspectives', Speech, Ottawa, 24 Nov. 2011, <<http://www.regjeringen.no/en/?id=664882>>; Pettersen, T., 'First Norwegian-Russian shooting exercises', BarentsObserver.com, 8 June 2010, <<http://www.barentsobserver.com/index.php?id=4791127>>; Nilsen, T., 'Norwegian soldiers to train in Russia', BarentsObserver.com, 1 Sep. 2011, <<http://www.barentsobserver.com/index.php?id=4954715>>; and Pettersen, T., 'Norwegian-Russian naval exercises successful and effective', BarentsObserver.com, 23 May 2011, <<http://www.barentsobserver.com/index.php?id=4923753.html>>.

<sup>43</sup> Norwegian Armed Forces, 'Norwegian Joint Headquarters', 9 Feb. 2012, <<http://mil.no/organisation/about/norwegianjointheadquarters/>>; and Norwegian Armed Forces, 'The Army', <<http://mil.no/organisation/about/army/>>.

<sup>44</sup> Norwegian Ministry of Defence (note 40), p. 22.

<sup>45</sup> Huebert (note 9), p. 14; and Norwegian Armed Forces, 'Cold Challenge 2011', <<http://mil.no/exercises/cold-challenge/Pages/cold-challenge.aspx>>.

<sup>46</sup> Norwegian Armed Forces (note 43).

<sup>47</sup> Berg, J., 'Norwegian plan recommends air base closure', *Jane's Defence Weekly*, 30 Nov. 2011, p. 13.

<sup>48</sup> Wall, R., 'Norway sets JSF buy in new budget', *Aviation Week*, 10 Oct. 2011.

<sup>49</sup> ed. Saunders (note 3), p. 574; Nilsen, T., 'From Barents surveillance to pirate hunting', BarentsObserver.com, 28 Sep. 2011, <<http://www.barentsobserver.com/index.php?id=4966346>>; and Norwegian Ministry of Defence (note 40), p. 24.

<sup>50</sup> US Defense Security Cooperation Agency, 'Norway: procure and install equipment on P-3C aircraft', News release, 31 Aug. 2011, <[http://www.dsca.mil/sc\\_news/](http://www.dsca.mil/sc_news/)>; and Wall (note 48).



### Land capabilities

Brigade Nord (Brigade North), since 2009 the largest active unit of the Norwegian Army, is stationed in the north of Norway, above the Arctic Circle.<sup>51</sup> It is winter-trained but is organized as a heavy mechanized unit and is equipped for operations in Norway.<sup>52</sup> In November 2011 the chief of defence recommended that the brigade's two battalions be reduced to one.<sup>53</sup>

### Sea capabilities

The Royal Norwegian Navy had replaced its five small frigates by five much larger and more capable Fridtjof Nansen class frigates by early 2011. Because of their size and equipment, the new frigates are much more able to operate in Arctic waters, as are Norway's six Ula class submarines.<sup>54</sup> For the first time, Norway is planning to acquire a large support ship, to be in service in 2015, which will give the frigates a substantial increase in range.<sup>55</sup>

Norway also operates a large 'research ship' with electronic and signals intelligence equipment, which is capable of operations in thin ice. A replacement was ordered in 2010.<sup>56</sup> The Norwegian Coastguard operates four large but lightly armed OPVs capable of operations in icy conditions, including three with a helicopter hangar, and four other large ocean-going OPVs.<sup>57</sup> None of Norway's warships or patrol ships can break ice.

## V. Russia

On 18 September 2008 Russian President Dmitry Medvedev officially adopted 'The foundations of the Russian Federation's State Policy in the Arctic until 2020 and beyond'.<sup>58</sup> It underlines the importance of the Arctic as a principal source of natural resources by 2020 and mentions potential trouble with other claimants of exclusive economic zones in the Arctic Ocean. It outlines a plan for development of Arctic forces under the Russian armed forces and other government agencies such as the Russian Border Guard Service. However, such Arctic forces would have as their main task the protection of the northern regions of Russia and would not be used in the Arctic areas beyond it.

***Russia's Arctic policy underlines the importance of the Arctic as a principal source of natural resources by 2020***

<sup>51</sup> Norwegian Armed Forces (note 43).

<sup>52</sup> Norwegian Ministry of Defence (note 40), p. 24.

<sup>53</sup> Berg (note 47).

<sup>54</sup> ed. Saunders (note 3), pp. 571–72; and Huebert (note 9), p. 13.

<sup>55</sup> ed. Saunders (note 3), p. 577.

<sup>56</sup> ed. Saunders (note 3), p. 576.

<sup>57</sup> ed. Saunders (note 3), pp. 578–79.

<sup>58</sup> The document was not published until Mar. 2009. [The foundations of the Russian Federation's State Policy in the Arctic until 2020 and beyond], *Rossiyskaya Gazeta*, 30 Mar. 2009 (in Russian). An unofficial English translation is available at <<http://www.arcticprogress.com/2010/11/russias-arctic-policy/>>.



## Air capabilities

Russia's air assets in the Arctic region consist mainly of the aircraft supporting the Northern Fleet or stationed in northern Russia, along with some of the aircraft based with the Pacific Fleet. Many of these do not have the range for operations in the Arctic area outside Russia, but 100 navy-operated long-range Tu-22 bomber and Tu-142 and Il-38 maritime reconnaissance aircraft also form part of the fleets.<sup>59</sup> After a 15-years hiatus, in 2007 Russia recommenced regular deployment of these reconnaissance and bomber aircraft on missions near or over the Arctic.<sup>60</sup>

## Land capabilities

Russia's ground forces in the Arctic region include naval infantry and an army brigade on the Kola Peninsula.<sup>61</sup> These are winter-trained but are organized and equipped for operations in the north of Russia, not in the more inhospitable regions of the Arctic.

In March 2009 Russia announced a plan for a special military force to protect Arctic interests. In May 2011 it was reported that Russia's first Arctic special forces brigade had been unveiled, based at Pechenga on the Kola Peninsula. According to Russia, these forces 'balance the situation' with NATO forces in the Arctic.<sup>62</sup> The exact status of the Russian Arctic forces is unclear. According to the Russian Minister of Defence, Anatoly Serdyukov, plans for two Arctic brigades, including their size, armament and location, were still being worked out in July 2011.<sup>63</sup>

## Sea capabilities

A substantial part of the Russian Navy is organized in the Northern Fleet, the largest of the five Russian fleets, stationed at several large naval and air bases on the Kola Peninsula and along the coasts of the Barents and White seas. The fleet includes nuclear-powered ballistic missile submarines (SSBNs), which operate in the Arctic area (including under the ice) and are protected by surface ships (including Russia's sole aircraft carrier), nuclear-powered submarines and aircraft.<sup>64</sup> Russia's second largest fleet, the Pacific Fleet,

<sup>59</sup> ed. Saunders (note 3), pp. 682–83; and Pettersen, T., 'Russian Navy flexing muscles in Barents Sea', BarentsObserver.com, 9 Sep. 2011, <<http://www.barentsobserver.com/index.php?id=4957753>>.

<sup>60</sup> 'Russia restarts cold war patrols', BBC News, 17 Aug. 2007, <<http://news.bbc.co.uk/2/hi/europe/6950986.stm>>; Nilsen, T., 'Only seven nuclear submarine patrols in 2008', BarentsObserver.com, 13 Feb. 2009, <<http://www.barentsobserver.com/index.php?id=4557290-58932.html>>; and Nilsen, T., 'US sub surfaced at North Pole', BarentsObserver.com, 16 Nov. 2011, <<http://www.barentsobserver.com/index.php?id=4653404-16149.html>>; and Huebert (note 9), p. 17.

<sup>61</sup> Pettersen (note 59).

<sup>62</sup> 'Denmark, Greenland plan Arctic force' (note 31).

<sup>63</sup> Grove, T., 'Russia creates two brigades of Arctic troops', Reuters, 1 July 2011, <<http://uk.reuters.com/article/2011/07/01/russia-arctic-troops-idUKLDE76017D20110701>>.

<sup>64</sup> ed. Saunders (note 3), pp. 651–711; James Martin Center for Nonproliferation Studies, 'Russia: Northern Fleet', NIS Nuclear and Missile Database, Nuclear Threat Initiative, Feb. 2010, <<http://www.nti.org/db/nisprofs/russia/naval/nucflt/norflt/norflovr.htm>>; Nilsen, 13 Feb. 2009 (note 60); and Antrim, C. L., 'The next geographical pivot: the Russian Arctic in the twenty-first century', *Naval War College Review*, vol. 63, no. 3 (summer 2010), p. 19.



operates mainly in the Pacific Ocean but also has bases on Russia's eastern Arctic coast.

Only the Northern Fleet has a thick ice-breaking capacity with the large icebreaker *50 Let Pobedy*. Four small Project 97 icebreakers, capable of breaking thin ice, serve with the Northern and Pacific fleets. The Russian Border Guard Service operates three Project 97P large armed icebreaking OPVs in the Northern Fleet area and two more in the Pacific Fleet area. Over 20 civilian icebreakers, including several former navy ships, operate in the Arctic.<sup>65</sup>

Russian SSBNs have become more active and in 2009 restarted operations near or under the Arctic ice.<sup>66</sup> In 2009 a Russian SSBN launched a ballistic missile after breaking through the Arctic ice.<sup>67</sup> Several older SSBNs are being modernized and new SSBNs are being built.<sup>68</sup> It is likely that this larger and more active SSBN fleet will lead to an increase in surface ships and aircraft, including many that can operate effectively in the harsh Arctic environment. At the same time, the reduction in Arctic ice under which the SSBNs can hide is also likely to increase the need for escorts and patrol aircraft.<sup>69</sup>

While announced plans or visions that foresee several aircraft carriers and large numbers of submarines and escort and support ships are unlikely to be realized due to their high costs, a substantial increase in the Northern Fleet escort capabilities is likely.<sup>70</sup> In addition, power-projection capabilities will increase with the introduction of new amphibious ships.<sup>71</sup> Chief among these are four Mistral class amphibious assault/helicopter carrier ships ordered in 2010 and 2011 from France. The first will be based with the Pacific Fleet and the second with the Northern Fleet.<sup>72</sup>

## VI. The United States

One of George W. Bush's final acts as US President was the presentation in January 2009 of an Arctic Policy, replacing the previous policy from 1994. It lists security as the first of six policy priorities.<sup>73</sup> Later in 2009 the US Navy published an 'Arctic roadmap' as a guide for its policy, strategy and investments in the Arctic.<sup>74</sup> However, Arctic security concerns play only a minor role in overall US defence policy. The US National Security Strategy, issued in 2010 by the administration of President Barack Obama, and the US National Military Strategy, issued in 2011, define the goals of US security and

<sup>65</sup> ed. Saunders (note 3), pp. 701–705; and 'Russia tests nuclear icebreaker on open sea', RIA Novosti, 31 Jan. 2007, <<http://en.rian.ru/russia/20070131/59989100.html>>.

<sup>66</sup> Huebert (note 10); Huebert (note 9), pp. 17–18; and Nilsen, 16 Nov. 2011 (note 60).

<sup>67</sup> Nilsen, 16 Nov. 2011 (note 60).

<sup>68</sup> ed. Saunders (note 3), pp. 653–56.

<sup>69</sup> Antrim (note 64), p. 29.

<sup>70</sup> James Martin Center for Nonproliferation Studies (note 64); and Huebert (note 9), p. 16.

<sup>71</sup> ed. Saunders (note 3), p. 684.

<sup>72</sup> Nilsen, T., 'Mistral to Northern Fleet', BarentsObserver.com, 12 Jan. 2011, <<http://www.barentsobserver.com/index.php?id=4871384-58932.html>>.

<sup>73</sup> White House, 'Arctic region policy', National Security Presidential Directive no. 66 and Homeland Security Presidential Directive no. 26, 9 Jan. 2009, <<http://georgewbush-whitehouse.archives.gov/news/releases/2009/01/20090112-3.html>>; and Huebert (note 9), p. 19.

<sup>74</sup> US Navy, *U.S. Navy Arctic Roadmap* (Department of the Navy: Washington, DC, Oct. 2009).



military policies but mention the Arctic only in passing.<sup>75</sup> The Arctic is not mentioned at all in a January 2012 document outlining security priorities for the 21st century.<sup>76</sup>

Because of the increased commercial activity in the Arctic, Admiral Robert Papp, commandant of the US Coast Guard since May 2010, has expressed the need to begin preparing, with partners, for operations in the Arctic, including establishing bases. However, he also recognizes that US 'strategic interests' in the region are not yet prominent enough to support anything but 'outreach, planning, and small-scale summer deployments'.<sup>77</sup>

The USA has not yet announced plans for a separate command to supervise military operations in the Arctic. Currently, the Northern Command (USNORTHCOM), the Pacific Command (USPACOM) and the European Command (USEUCOM) all have responsibilities in the Arctic region.<sup>78</sup> However, from 2011 USNORTHCOM has been assigned responsibility for Arctic planning and for coordination with other US and foreign government agencies.<sup>79</sup> US forces in Alaska fall under the Alaskan Command (ALCOM), which is part of USPACOM.<sup>80</sup> ALCOM consists of 16 000 regular personnel and 3700 National Guard and reserve personnel. The USA also has a presence in Antarctica and experiences from there, such as for example supply by air, are applicable in the Arctic region.<sup>81</sup>

**Arctic security concerns play only a minor role in overall US defence policy**

## Air capabilities

The Arctic region is important for US and Canadian air and missile defence. The North American Aerospace Defense Command controls US interceptor aircraft in Alaska (Alaska NORAD Region, ANR) and all Canadian interceptor aircraft (Canadian NORAD region).<sup>82</sup> NORAD also controls the North Warning System, which operates air surveillance radars in Alaska, Canada and Greenland.

The USA maintains two large air bases in Alaska, both near the Arctic: Eielson Air Force Base (AFB) near Fairbanks and Elmendorf-Richardson AFB near Anchorage.<sup>83</sup> Both bases house combat and support aircraft, including F-22 interceptors and airborne early-warning (AEW) aircraft and are able to accommodate substantially larger forces. While the USA has over

<sup>75</sup> White House, *National Security Strategy* (White House: Washington, DC, May 2010); and US Department of Defense (DOD), *The National Military Strategy of the United States of America 2011: Redefining America's Military Leadership* (DOD: Washington, DC, 8 Feb. 2011).

<sup>76</sup> US Department of Defense (DOD), *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (DOD: Washington, DC, Jan. 2012).

<sup>77</sup> Papp, R. J., 'Charting the Coast Guard's course', *Proceedings of the United States Naval Institute*, vol. 137, no. 3 (Mar. 2011), p. 21.

<sup>78</sup> Zellen, B. S., 'Cold front on a warming Arctic', *Proceedings of the United States Naval Institute*, vol. 137, no. 5 (May 2011), p. 45.

<sup>79</sup> US Department of Defense (DOD), *Report to Congress on Arctic Operations and the Northwest Passage* (DOD: Washington, DC, May 2011), p. 20.

<sup>80</sup> US Army Alaska, <<http://www.usarak.army.mil/>>.

<sup>81</sup> Joint Task Force Support Forces Antarctica Public Affairs, 'South Pole airdrop delivers critical medical supplies in total darkness', Air Force Print News Today, 1 Sep. 2011, <[http://www.pacaf.af.mil/news/story\\_print.asp?id=123270390](http://www.pacaf.af.mil/news/story_print.asp?id=123270390)>.

<sup>82</sup> North American Aerospace Defense Command (NORAD), <<http://www.norad.mil/>>.

<sup>83</sup> Joint Base Elmendorf-Richardson, <<http://www.jber.af.mil/>>; and Eielson Air Force Base, <<http://www.eielson.af.mil/>>.



200 long-range maritime patrol aircraft, only a few US Coast Guard HC-130 aircraft based on Kodiak Island operate over the Bering Sea and the Arctic.<sup>84</sup> US forces also have the use of Thule AFB in the north-west of Greenland, which has a long runway. It is the most northerly US air base but it currently houses only a large intercontinental ballistic missile (ICBM) detection radar and no aircraft.<sup>85</sup>

### Land capabilities

The army component of ALCOM is the US Army Alaska (USARAK). While it also calls itself 'America's Arctic Warriors', USARAK is mainly made up of ordinary mechanized infantry and airborne troops and is not specifically earmarked for Arctic operations. It has bases near Anchorage and Fairbanks.<sup>86</sup> The Northern Warfare Training Center in Black Rapids has a more specifically Arctic role: it is where all US Army cold weather training (including for non-Arctic cold regions) is concentrated.<sup>87</sup> The army also operates the Cold Regions Research and Engineering Laboratory and the Cold Regions Test Center in Alaska.<sup>88</sup> The 1850-strong Alaska National Guard is the most likely army components to have Arctic tasks.

Some other US land forces (including the US Marine Corps) have at least partly specific training or equipment for potential Arctic roles or have experience in extreme cold weather operations in Afghanistan.<sup>89</sup> In the past few years the US armed forces have placed several orders for 'extreme cold weather' clothing.<sup>90</sup> This clothing is likely to be for use in Afghanistan but the same equipment, as well as the experiences from Afghanistan, may be useful in the Arctic.

### Sea capabilities

While not specifically adapted to ice conditions, the many US aircraft carriers, other major combat ships and amphibious warfare ships are generally capable of operating in northern weather conditions. The annual large Northern Edge and Alaska Shield summer exercises included an aircraft carrier group in 2004 and 2009.<sup>91</sup> The US Navy's only surface ship specifically adapted to Arctic ice conditions is the MV *Susitna*, a small experimental

<sup>84</sup> ed. Saunders (note 3), pp. 924, 963; Brown, M. K. and Parker, R. C., 'The case for the cutter', *Proceedings of the United States Naval Institute*, vol. 137, no. 8 (Aug. 2011), p. 18; 'Les gardes-côtes américains survolent un camp d'exploration russe' [The US Coast Guard flew over a Russian exploration camp], *Mer et Marine*, 29 Sep. 2011, <<http://www.meretmarine.com/article.cfm?id=117240>>.

<sup>85</sup> Peterson Air Force Base, '821st Air Base Group', <<http://www.peterson.af.mil/units/821stairbase/index.asp>>.

<sup>86</sup> Joint Base Elmendorf-Richardson (note 83); US Army Alaska (note 80). The airborne unit operated in 2007 in Iraq and in 2009 in Afghanistan. US Army, 4th Brigade Combat Team, 'History', <<http://www.usarak.army.mil/4bde25th/history.html>>.

<sup>87</sup> US Army, Northern Warfare Training Center, <<http://www.wainwright.army.mil/nwtc/>>.

<sup>88</sup> US Army Alaska (note 80).

<sup>89</sup> US Department of Defense (note 79), p. 19.

<sup>90</sup> Examples include a \$22.8 million order in May 2011. US Department of Defense, 'Contracts for Tuesday, May 10, 2011', Press release, 10 May 2011, <<http://www.defense.gov/contracts/contract.aspx?contractid=4531>>.

<sup>91</sup> Joint Base Elmendorf-Richardson (note 83); and Huebert (note 9), p. 21.



icebreaking ferry/landing ship. After testing in 2010–11 in Alaska, it was handed over to local civilian authorities.<sup>92</sup>

Most of the approximately 53 US nuclear attack submarines (but not the SSBNs) are known to be able to operate under the Arctic ice and break through the ice from below; they regularly transit under the Arctic ice or break through the ice and surface near the North Pole. The US Pacific Fleet has a dedicated Arctic Submarine Laboratory that is responsible for developing and maintaining the Arctic capabilities of submarines.<sup>93</sup> In April 2011 two US nuclear attack submarines participated in Ice Exercise (ICEX) 2011, operating under the Arctic ice. In the same exercise a camp was established 150 nautical miles (278 kilometres) north of Prudhoe Bay, Alaska.<sup>94</sup> The US Coast Guard regularly deploys OPVs in or near the Arctic.<sup>95</sup>

The new Legend (also known as National Security Cutter, NSC) class large OPVs have been designed partly to be able to operate in Arctic weather conditions better than the previous Hamilton class, but they are not ice-strengthened.<sup>96</sup> Eight are planned, the first two of which were commissioned in 2010–11. The US Coast Guard operates three large, unarmed icebreakers capable of breaking Arctic ice; two have reached the North Pole in summer periods.<sup>97</sup> These ships have a mainly scientific role in both the Arctic and Antarctic region. One of the ships is being modernized in the period 2009–13 and one has been out of service since 2010 and is scheduled for decommissioning due to budget constraints.<sup>98</sup> Ideas for new vessels are under consideration, and the Coast Guard's budget for 2013–17 is to include \$860 million for one large icebreaker.<sup>99</sup>

## VII. Conclusions

While some media, politicians and researchers have portrayed the changes in the capabilities of the Arctic littoral states as significant military build-ups and potential threats to security, the overall picture is one of limited modernization and increases or changes in equipment, force levels and force structure. Some of these changes—for example, the strengthening of the Canadian Rangers, the move of the main Norwegian land units to the north of Norway or the new Russian Arctic units—have little or nothing to do with power projection into the areas of the Arctic with unclear ownership; rather they are for the patrolling and protecting of recognized national territories

<sup>92</sup> ed. Saunders (note 3), p. 947; Demer, L., 'Alaska town gets ferry boat and more expenses', *Anchorage Daily News*, 1 Sep. 2011; and US Department of Defense (note 79), p. 17.

<sup>93</sup> ed. Saunders (note 3), p. 912; Arctic Submarine Laboratory, US Pacific Fleet, 'Historical timeline', <<http://www.csp.navy.mil/asl/Timeline.htm>>; and Nilsen, 16 Nov. 2011 (note 60).

<sup>94</sup> Rosamond, J., 'DeepSiren proves its worth in Arctic exercise', *Jane's Defence Weekly*, 20 Apr. 2011, p. 10.

<sup>95</sup> Brown and Parker (note 84), p. 18.

<sup>96</sup> Cross, T. and Truver, S. C., 'Endangered species', *Proceedings of the United States Naval Institute*, vol. 137, no. 8 (Aug. 2011), p. 30; and Cavas, C. P., 'U.S. Coast Guard budget request eliminates 2 cutters', *Defense News*, 24 Feb. 2012.

<sup>97</sup> ed. Saunders (note 3), pp. 966–67.

<sup>98</sup> US Coast Guard 'Shipmate 10: FY 2012 Presidents budget', Announcement ALCOAST 059/11, Feb. 2011, <[http://www.uscg.mil/announcements/alcoast/059-11\\_alcoast.txt](http://www.uscg.mil/announcements/alcoast/059-11_alcoast.txt)>; and Associated Press, 'Coast Guard has plans for polar icebreaker', *Seattle Times*, 7 Mar. 2012.

<sup>99</sup> ed. Saunders (note 3), p. 965; US Coast Guard (note 98); 'Begich reveals Coast Guard plan to build Polar icebreaker', *Dutch Harbor Telegraph*, 1 Mar. 2012; and Cavas (note 96).



that are becoming more accessible, including for illegal activities. Others changes—such as new but unarmed navy or coastguard icebreakers—may have more to do with civilian research in support of national claims to an ‘extended continental shelf’ under the 1982 United Nations Convention on the Law of the Sea (UNCLOS).<sup>100</sup>

While aircraft and ships play a much more important role for Arctic security than land forces, most of the extensive changes—such as the acquisitions by Canada and Norway of new combat aircraft or large surface combat vessels—have a much more general background than increasing worries about potential threats in the Arctic region. Russia’s expansion of its fleet in the Arctic also appears more a matter of providing protection for its SSBNs, as the Soviet Union did during the 1970s and 1980s, than a programme building up for a military struggle over Arctic resources. Some of the large military acquisitions announced have little prospect of being completely realized. It is unlikely that Russia will be able to fund the envisaged expansion of its navy and even the Canadian and Norwegian plans for the F-35 combat aircraft may be curtailed for financial reasons.

This review of current and projected military forces in the Arctic region points to a process of modernization and the creation of new capacity to address challenges associated with the environmental, economic and political changes anticipated in the region, rather than as a response to major threat perceptions. Conventional military forces specially adapted to the harsh Arctic environment are projected to remain small scale, especially given the size of the Arctic region, and will remain in some cases considerably below cold war levels.

This notwithstanding, an increase of military forces in a region where several states claim maritime zones that are expected to contain extensive natural resources does give some reasons for concern, including for unexpected incidents between claimants. In order to help mitigate negative perceptions about security policies in the region as well as the possibility of misunderstandings, the Arctic littoral states need to be clear about their military policies, doctrines and operational rules and should include military confidence-building measures in their bilateral or multilateral relations associated with the Arctic.

<sup>100</sup> United Nations Convention on the Law of the Sea, opened for signature 10 Dec. 1982, entered into force 16 Nov. 1994, *United Nations Treaty Series*, vol. 1833 (1994). Countries claiming continental shelf under UNCLOS must support their claim with scientific data on the sea bottom. Walsh, D., ‘Race to the North: who owns the Arctic Ocean’, *Proceedings of the United States Naval Institute*, vol. 137, no. 11 (Nov. 2011), p. 84.



## Abbreviations

AFB	Air Force Base
ALCOM	US Alaskan Command
NATO	North Atlantic Treaty Organization
NORAD	North American Aerospace Defense Command
NWT	Northwest Territories
OPV	Offshore patrol vessel
SSBN	Nuclear-powered ballistic missile submarines
USPACOM	US Pacific Command
USARAK	US Army Alaska
USNORTHCOM	US Northern Command

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SIPRI BACKGROUND PAPER

# MILITARY CAPABILITIES IN THE ARCTIC

SIEMON T. WEZEMAN

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