

A Proposal for an Arctic Nuclear- Weapon-Free Zone

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Executive Summary

The Arctic has been a place of imagination for centuries. The heroic stories of the explorers trying to reach the North Pole, the majestic images of polar bears traversing the ice, and most recently, as a central part of the debate regarding climate change. What is often forgotten is that the Arctic has been the home of Indigenous peoples since time immemorial and no one knows its vast expanse better than them. They also know, as the Inuit Circumpolar Conference has maintained since the 1970s, that the Arctic has been the site of numerous nuclear weapons tests, the transit route for nuclear weapons carrying bombers and submarines, the home of the world's two largest nuclear powers (the United States and Russia), and even the site of one of the worst nuclear accidents in history in 1968 near Thule, Greenland.

Since nuclear weapons were first used in Hiroshima and Nagasaki, there has been a global movement seeking their elimination. This strength of this movement has waxed and waned, but an article in the *Wall Street Journal*, including veterans of the Cold War, such as Sam Nunn, has again renewed global interest in working towards the elimination of nuclear weapons. There is now a global movement, including heads of state and government, civil society groups, and international commissions working towards this goal. However, most recognize that it will not be possible to achieve the total elimination of nuclear weapons in one step. Evans and Kawaguchi in their influential *Eliminating the Nuclear Threat*, therefore, propose a two part agenda: minimization, followed by elimination.

This paper contributes to this debate by putting forth a concrete proposal for an initiative that can be included in the medium-term of this process. Its geographic, demographic and strategic character makes the Arctic a prime candidate to be the sixth Nuclear Weapon Free Zone (there are already five treaties covering the majority of the Southern Hemisphere). The framework for a treaty to establish an Arctic Nuclear-Weapon-Free Zone (ANWFZ) is put forth. This includes: setting the geographical limits, defining the "nuclear" in nuclear-weapon-free, designing verification procedures, and outlining surveillance requirements.

Like Evans and Kawaguchi, the authors of this report understand that short-term steps need to be taken to create the political will necessary to achieve the larger goal, in this case an ANWFZ. It therefore proposes an array of confidence-building measures (CBMs) that will help to facilitate the required political will. Among the CBMs proposed are: increasing diplomatic resources for the Arctic region, including the appointment of Arctic Ambassadors from all zonal states; harmonizing relevant regulations, especially those concerning ship requirements; joint operations to secure and safely dispose of nuclear waste, in order to keep it out of the hands of terrorists; scientific cooperation; and economic integration, so as to make the costs of conflict too high.

There are forty-two recommendations made in this report falling under eleven main categories. These include:

1. **Geography:** An ANWFZ should cover all adjacent seas, sea beds, continental shelves, disputed territories, international waters and airspace of Canada, Finland, Greenland, Iceland, Norway and Sweden, as well as Northern Russia and Alaska (United States). Along the edges of this zone, there should also be a gradual “thinning out” of nuclear weapons.
2. **Non-First Use:** All parties to the ANWFZ Treaty should subscribe to a policy of non-first use of nuclear weapons both during peacetime and wartime in the Arctic and the non-nuclear weapon states of the region should renounce the nuclear umbrella.
3. **Defining “Nuclear”:** Nuclear-Weapon-Free should mean all nuclear weapons and armaments, as well as the targeting of nuclear facilities and nuclear testing. The peaceful use of nuclear technology for civilian purposes should continue.
4. **Verification Procedures:** A permanent organization should be established to verify that civilian nuclear technology is not being deferred towards weapon-building capabilities, all nuclear weapons are removed from the zone, there are no new deployments of nuclear weapons within the zone and that the zone is not being transited by vessels carrying nuclear weapons. This organization should be given the necessary resources to operate effectively.
5. **Surveillance Systems:** Joint aerial patrols should be carried out by all party states. As well, an advanced underwater listening system should be accessible to all parties, so that the sharing of relevant information will become commonplace.
6. **Search and Rescue (SAR):** An Arctic Search and Rescue Agreement should be completed and an integrated response management centre should be built to coordinate SAR in the Arctic.
7. **Arctic Rangers:** The Canadian Arctic Rangers should receive additional training and equipment to be able to be first responders and the program could be expanded to be pan-Arctic in scope.
8. **Non-Nuclear Military Activities:** A continued military presence in the Arctic to aid the civilian power and protect against security threats is warranted, but to facilitate confidence-building among the Arctic states joint military exercises should be carried out and if a state undertakes military exercises in the zone it should notify the other states.
9. **Non-Nuclear Weapons of Mass Destruction:** The place of nuclear weapons within the military strategy of the Arctic states should not be replaced with another equally (or more) destructive Weapon of Mass Destruction.
10. **Confidence-Building Measures:** There are many confidence-building measures that should be undertaken in order to build the political will that it necessary to complete the Arctic Nuclear-Weapon-Free Zone Treaty. Some actions that should be taken include:
 - a. Taking nuclear arsenals off high-alert status.
 - b. Appointing Ambassadors for Circumpolar Affairs.
 - c. Improving consular services in the Arctic.
 - d. Establishing a common code for ship design.
 - e. Providing financial and technical support to help Russia safely dispose of its nuclear waste.
 - f. Instituting common training programs for nuclear experts.

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- g. Encouraging economic integration.
11. **Next Steps** : The rules of the Arctic Council should be amended so that it can debate the peace and security issues related to this proposal and if it is not possible to get all Arctic states to ratify the ANWFZ Treaty then those states which support the initiative should sign on to the treaty and continue to lobby non-signatories to sign on.

Introduction

In his April 2009 speech in Prague, Barack Obama gave hope to the world when the US President announced that his administration would work toward “a world without nuclear weapons”¹. Obama and Russian President Dmitry Medvedev continued the momentum with a joint statement announcing a framework for a new reduction in US and Russian arsenals. In September 2009, the United Nations Security Council unanimously adopted a resolution calling for the elimination of all nuclear weapons. This work resulted in a joint announcement by Russia and the United States of a reduction of about a third, from 2,200 nuclear weapons currently to 1,500 each and a new Strategic Arms Reduction Treaty to be signed on April 8, 2010 in Prague. The United States and Russia’s new commitment to deep reductions in existing stockpiles will be a welcome announcement for Nuclear Non-Proliferation Treaty review progress². On April 12-13, 2010, 44 heads of state will also meet in Washington for a global nuclear security summit to focus efforts on securing nuclear materials and preventing terrorists from acquiring weapons of mass destruction. Then in May 2010, in New York, there will a review conference on the Nuclear Non-Proliferation Treaty. As Malcolm Fraser and his colleagues have declared “there has never been a better time to revive total nuclear disarmament”³.

President Obama, however, is not the first leader of a nuclear power to make overtures sparking hope for real progress towards a world in which nuclear threats no longer exist. President Mikhail Gorbachev of the Soviet Union vividly remarked in 1987 that “there would be no second Noah’s ark for a nuclear deluge”⁴. Thus, Gorbachev proposed a “zone of peace”⁵. In a speech in Murmansk, he introduced the idea of an “Arctic Zone of Peace” saying, “let the north of the globe, the Arctic, become a zone of peace. Let the North Pole be a pole of peace”⁶. He set out a six-point program for how this “zone of peace” could be achieved, including: the establishment of a Nordic nuclear-free-zone in Northern Europe; limiting naval activities in the seas adjacent to that region; peaceful cooperation in exploiting the resources of the North and Arctic; scientific research; cooperation in environmental protection; and opening up the Northern Sea Route to foreign vessels⁷. Gorbachev matched his words with concrete

¹ President Obama also committed to: maintaining a safe, secure and effective arsenal for deterrence; reduce the nuclear arsenal; ratify the Comprehensive Test Ban Treaty; conclude a treaty ending the production of fissile material for nuclear weapons; and strengthen the Non-Proliferation Treaty’ and secure vulnerable nuclear materials to keep them out of the hands of terrorists - Secretary, Office of the Press. *Remarks by President Barack Obama*. April 5, 2009. <http://www.whitehouse.gov/The-press-office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/> (accessed January 28, 2010).

² Smith, Mark S. and Robert Burns. “U.S., Russia sign off on nuclear pact”. March 26, 2010. <http://www.theglobeandmail.com/news/world/us-russia-sign-off-on-new-nuclear-pact/article1513074/> (accessed: March 31, 2010).

³ Fraser, Malcolm. “Eliminating Nuclear Weapons: No Longer the Impossible Dream.” Wellington: National Consultative Committee on Disarmament, May 24, 2009.

⁴ Sakwa, Richard. “Gorbachev and the new Soviet foreign policy.” *Global Society*, 1988: 18-29, p. 22

⁵ Gorbachev used the “zone of peace” notion for a number of regional initiatives including” Asia-Pacific (Vladivostok, July 1986), the Arctic and Northern Europe (Murmansk, October 1987), and the Mediterranean (Belgrade, March 1988) – Atland, Kristian. “Mikhail Gorbachev, the Murmansk Initiative, and the Descuritization of Interstate Relations in the Arctic.” *Cooperation and Conflict*, 2008: 289-306, p. 293.

⁶ Gorbachev, “Mikhail Gorbachev’s Speech in Murmansk at the Ceremonial Meeting on the Occasion of the Presentation of the Order of Lenin and the Gold Star to the City of Murmansk” October.

⁷ Vartanov, Raphael V. and, and Alexi Yu Roginko. “New Dimensions of Soviet Arctic Policy: Views from the Soviet Union.” *American Academy of Political and Social Science*, 1990: 69-78, p. 70.

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action, leading one commentator to note that, “more has been done by the Soviet Union to develop Arctic cooperation since the Murmansk speech than during the previous seventy years”⁸.

Reaction in the West to Gorbachev’s Murmansk Speech were mixed as there was both doubt about the authenticity of the security aspects of the speech, but positive feedback on the proposals for functional cooperation in areas such as science and the environment⁹. However, with a President now in the White House who supports a denuclearization agenda, it is perhaps time for both the “West” (i.e. the United States and the other NATO allies of the Arctic region) and Russia to revisit Gorbachev’s idea for an Arctic Zone of Peace as a means to advance the greater agenda of getting to a world in which both the threat of nuclear war and nuclear attack have been eliminated. Subsequently, this paper proposes that a Nuclear-Weapon-Free Zone be established in the Arctic region (ANWFZ), in order to forward the goal of abolishing nuclear weapons.

This paper is divided into five sections. The first reviews the arguments for why nuclear weapons should be eliminated and endorses the phased “minimization and elimination” framework of the *International Commission on Non-Proliferation and Disarmament*. The second introduces the concept of Nuclear-Weapon-Free Zones as a concrete step in the medium-term to build towards the elimination of nuclear weapons. While the third explains why the Arctic should be the next candidate for becoming a NWFZ. A framework for the Arctic NWFZ is given in the fourth section. The fifth section seeks to counter those who argue that the goal of a NWFZ in the Arctic is utopian and unachievable by demonstrating that there is significant support for this concept.

⁸ Vartanov and Roginko, p. 71

⁹ Archer, Clive. "Arctic Cooperation: A Nordic Model." *Security Dialogue*, 1990: 165-173, p. 65

The Case Against Nuclear Weapons

Almost as soon as they were used, the world had a moral revulsion against nuclear weapons. Disarmament is included in the UN Charter (adopted before the first nuclear test) and in the first resolution on January 24, 1946 the UN General Assembly recommended the elimination of all nuclear weapons and other “weapons adaptable to mass destruction”. Randy Rydell makes a good distinction between disarmament – the physical destruction or elimination of particular types of weaponry – and arms control which includes limitations on usage or yield, exclusively on numbers, or confidence-building measures but a primary goal of the international community since the destruction of Hiroshima sixty-five years ago has been to rid human kind of these horrendous weapons with more limited arms control measures being steps toward this goal¹⁰.

In 1962, the world came close to destruction with the Cuban Missile Crisis, threatening nuclear war between the United States and the Soviet Union. But John F Kennedy and Nikita Khrushchev took advantage of the crisis to agree in 1963 to a limited Test Ban Treaty (long recommended by individuals like Andrei Sakharov) which ushered in the first cycle of arms control treaties. In 1968, for example, there was agreement on the Non-Proliferation Treaty.

This subsequent Ost-Politik policy of West Germany reduced tensions further and enabled the confidence necessary for critical advances in the early 1970s which led to the Anti-Ballistic Missile Treaty in 1972.

Cold War conflicts returned, however, and the Soviet Union’s invasion of Afghanistan and deployment of SS-20 intermediate missiles in Europe led to greatly increased tensions in the early 1980s. Mikhail Gorbachev led the way in a second cycle of arms control and disarmament. Gorbachev and Reagan declared in Geneva in 1985 that “nuclear war cannot be won and it must never be fought”¹¹. It took political will to transcend the old nuclear catechism and articulate a new vision. The two leaders agreed on a treaty to eliminate medium and short range missiles in Europe, followed by an agreement on a joint reduction in strategic offensive weapons. At Reykjavik, Iceland in October 1986, the two leaders returned to the goal first posited by the UN General Assembly in 1946 of eliminating nuclear weapons in their entirety.

Progress, then slowed to a standstill, until January 4, 2007 when the essay *A World Free of Nuclear Weapons* by George Schulz, William Perry, Henry Kissinger and Sam Nunn was published in the *Wall Street Journal*. Because these four gentlemen concerned were “not known for utopian thinking,”¹² as Gorbachev noted in supporting the initiative of the former statesmen, and with years of experience in

¹⁰ Rydell, Randy. *The Future of Nuclear Arms: A World United and Divided by Zero*. April 8, 2009. <http://www.armscontrol.org/> (accessed February 18, 2010).

¹¹ Gorbachev, Mikhail. *The Nuclear Threat*. January 31, 2007. <http://www.gsintitute.org/docs/WSJgorbachev.pdf> (accessed January 28, 2010).

¹² Gorbachev, The Nuclear Threat.

shaping the policies of previous administrations, their endorsement “of a world free from nuclear weapons” put nuclear disarmament back on the world’s policy agenda¹³.

The 2007 essay was supported by similar calls for actions by Malcolm Fraser, former Prime Minister of Australia and long-time chairperson of the Interaction Council in an article entitled *A World Free of Nuclear Weapons is Within Reach*¹⁴. Four German statesmen – Helmut Schmidt, Richard von Weizacker, Egon Bahn and Hans-Dietrich Genscher – joined the American and Australian colleagues in unreservedly supporting “the call by Messrs. Kissinger, Schultz, Perry and Nunn for a turn around on nuclear policy, not only in their country”¹⁵. The Interaction Council Expert Group, in May 2009, chaired by the Honourable Jean Chrétien supported the Nunn et al. initiative and added several ideas of their own on getting control of the uranium enrichment process, halting the production of fissile material for weapons and eliminating short-range nuclear weapons in Europe¹⁶. Building on that work Mr. Chrétien and three of his colleagues, like their German and Australian counterparts have put forth the argument for a world free of nuclear weapons in the Canadian press, writing that, “We believe that the future of humanity is as threatened now as it was at the end of the Second World War from proliferation of nuclear weapons. There are many good ideas already on the table to begin to tackle the issues, but unless action is taken now, the situation could become catastrophic”¹⁷. The Interaction Council decided too, to meet in Hiroshima in April 2010, on the 65th anniversary of the bombing to continue to lend their weight to stimulating public debate on nuclear disarmament.

International commissions complemented the public advocacy campaign of former statesmen with detailed roadmaps on how to achieve the goal of a nuclear-free world. In 2006, the International Weapons of Mass Destruction Commission chaired by Hans Blix issued a report with thirty recommendations dealing with nuclear weapons and in April 2009, the members of the Commission met in Washington to refocus attention on its proposal by issuing a declaration praising the Obama administration and the 2007 statement of the bipartisan group of former US statesmen because “they succinctly reminded the US public and the world that the Cold War ended nearly 20 years ago, that it was high time for the US and Russia to draw the right conclusions from its cause and lead the world cooperatively toward real disarmament”. The Blix Commission was followed by the Australian and Japanese initiative of the International Commission on Nuclear Non-Proliferation and Disarmament co-chaired by Gareth Evans and Yoriko Kawaguchi, which recently issued a report with seventy-six recommendations on how to get to a nuclear weapon free world¹⁸.

Malcolm Fraser succinctly summarises the case against nuclear weapons presented in the reports above:

¹³ Schultz, George P, Perry J William, Henry A Kissinger, and Nunn Sam. "A World Free of Nuclear Weapons." *Wall Street Journal*, January 4, 2007: A15.; Gorbachev, The Nuclear Threat.

¹⁴ Fraser, Malcolm et al. "A world free of nuclear weapons is within reach." April 6, 2009.

¹⁵ Schmidt, Helmut, Richard Von Weizacker, Egon Bahr, and Hans-Dietrich Genscher. *Toward a nuclear-free world: a German view*. January 9, 2009. http://www.ipnw2010.org/fileadmin/user-upload/pdf_files/Toward_a_nuclear_free_world_Schmidt_Genscher_Bahr_Weizsaecker.pdf (accessed January 28, 2010).

¹⁶ Chretien, Jean. *How to Prevent a New Cold War*. May 6, 2009. <http://www.interactioncouncil.org> (accessed March 22, 2010).

¹⁷ Chrétien, Jean, Joe Clark, Ed Broadbent and Lloyd Axworthy. “Toward a world without nuclear weapons”. March 25, 2010, <http://www.theglobeandmail.com/news/opinions/toward-a-world-without-nuclear-weapons/article1512296/> (accessed: March 31, 2010).

¹⁸ Blix, Hans. *Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms*. 2006. www.wmdcommission.org (accessed March 23, 2010).

Both in the scale of the indiscriminate devastation they cause, and in their uniquely persistent, spreading, genetically damaging radioactive fallout, nuclear weapons are unlike any other 'weapons'. They cannot be used for any legitimate military purpose. Any use, or threat of use, should be a violation of international humanitarian law. The notion that nuclear weapons can ensure anyone's security is fundamentally flawed. Nuclear weapons most threaten those who possess them, or claim protection from them, because they become the preferred targets for others' nuclear weapons. Accepting that nuclear weapons can have a legitimate place, even if solely for 'deterrence', means being willing to accept the incineration of tens of millions of fellow humans and radioactive devastation of large areas, and is fundamentally immoral. Nuclear weapons cannot be divided into those for use and those for deterrence. Deterrence is predicated on having the demonstrated capacity and will to unleash nuclear weapons, and runs on fallible systems on high-alert which have already almost failed us more than 5 times¹⁹.

Fraser's concern about nuclear accidents is dramatically illustrated by a dramatic near-miss in the Arctic, which is the geographic focus of this paper. In 1968 a US B-52 bomber carrying four MK28 nuclear weapons, each with a yield of 1.5 megatons doing a routine patrol over Greenland crashed. Miraculously while the bombs did explode, the nuclear reaction necessary to make it a nuclear explosion did not occur. In the massive clean-up operations that ensued many Greenlandic workers were exposed to high levels of radiation, at times as much as three hundred times the US military lower limit. It even became necessary to ship to Greenland polar bear skins, so that the Inuit could replace their clothing, which had become heavily contaminated²⁰. This is just one example of both how the Arctic has been affected by nuclear issues and the damaging effect of nuclear weapons.

The case against nuclear weapons – militarily, economically, and morally – seems incontrovertible. But how to get to a nuclear-weapon-free world and develop a real roadmap for progress is the rub. The Evans-Kawaguchi report *Eliminating Nuclear Threats* has a very useful strategy of "minimization" and "elimination" which is applied to this paper²¹. Minimization begins with a reduction in the roles and strategies of nuclear weapons, though they have not yet completely disappeared. After a period of steady progress on reductions and confidence-building measures, the world will be ready for a leap to elimination.

The Commission proposed a short-term action plan to 2012, a medium-term action plan from 2012 to 2025 and a longer-term plan of getting to zero by 2025.

Short Term (2010-2012): The goal is move nuclear weapons from the foreground of international affairs to the background; to reduce the number of nuclear weapons; to strengthen NPT compliance; bring into force the Comprehensive Nuclear Test Ban Treaty; and end launch on warning.

Medium Term (2012-2025): will continue progress on reducing weapons to 2000 compared to 23,000 now in existence; a declaratory policy of no first use; negotiate an effective Fissile Material Cut-off Treaty; remove all American nuclear weapons from Europe; ensure compliance with existing nuclear-free zone treaties; extend their range to include other weapons of mass destruction and add new non-nuclear zones, such as the Arctic.

¹⁹ M. Fraser

²⁰ Zinglensen, Jens. *Speech at the University of Copenhagen*. July 2009.

http://www.pugwash.org/reports/nw/nwzfz_sept09.pdf (accessed March 24, 2010), p. 1-3

²¹ Evans, Gareth, and Yoriko Kawaguchi. *Eliminating Nuclear Threats: A Practical Guide for Global Policymakers*. 2009. http://www.icnnd.org/reference/reports/ent/pdf/KNND_Annex_A.pdf (accessed March 17, 2010).

Long Term (2025 and beyond): reach the minimization point by 2025 of low numbers of nuclear weapons by 2025, and agreed doctrine of no first use; credible force postures and verifiable deployments. Then create the conditions necessary to move from minimization to elimination²².

This paper concentrates on the second phase of this journey – the medium term – and advocates creating a nuclear-weapon-free zone in the Arctic to add to the existing five treaties that create such a condition. It is important to emphasize that the proposal for an ANWFZ presupposes that the first phase of minimization has been achieved. Obstacles to an ANWFZ, today for example, include: the problem of Russia’s existing nuclear force structure, which relies on missile-firing submarines, which sail under the Arctic Ocean; and the dichotomy of NATO partners like Canada and Norway supporting NATO’s current declaratory policy and nuclear force structure, with the stringent requirements of a nuclear-free zone, but while recognizing and discussing these issues below, we suggest the initiative of an ANWFZ only within the context of a three-phased program to eliminate nuclear weapons. If we can move to a medium phase, it would be important and useful to meet the long-term demands of those who live in the North that their region be nuclear free. Much of the burden of eliminating nuclear weapons, too, falls on the United States and Russia and they are equally major players in the Arctic. But, other states beyond the superpowers have responsibility to help move the minimization and elimination agenda forward, and in the case of the Arctic, Canada, Norway, Sweden, Finland, Denmark, and Iceland can play a useful and complementary role to the big steps hopefully taken by the nuclear superpowers in phase one and two of the minimization approach.

As mentioned above, a perspective that is too often forgotten in discussing issues like a nuclear-weapon-free zone in the Arctic is that it should respond to the demands of those who live there. Disarmament and arms control treaties are the stuff of high politics. They involve prime ministers, diplomats, generals and physicists. Lost in this deadly game of nuclear accountancy is the voice of the people. A tremendous impetus behind the efforts of President Obama, President Medvedev and others to move us to a nuclear free world is the hope of average citizens across the world. Civil society has gotten behind the minimization-elimination agenda. Initiatives like the Global Zero campaign, Mayors for Peace, and many other notable initiatives is to urge concrete steps to end our reliance on nuclear weapons. So too, in the Arctic: as early as 1977 and motivated by the accident at Thule, the Inuit Circumpolar Conference issued a resolution on their goal of a nuclear-free-zone in the Arctic. Wishing to restrict “the Arctic and sub-Arctic to those uses which are peaceful and environmentally safe” the ICC called for no nuclear testing or nuclear devices in the Arctic or sub-Arctic²³. The current generation of Inuit leaders have not lost any of the farsighted wisdom of their predecessors. In April 2009, the Inuit Circumpolar Conference issued a declaration on Arctic sovereignty, which again made the case that “Inuit had been living in the Arctic from time immemorial” and therefore “Inuit consent, expertise, and perspectives are critical to progress on international issues involving the Arctic”²⁴. Our proposal for an ANWFZ is not a southern “do-gooders” idea foisted on the North; it responds in fact, to a deeply and long held view of the Inuit Circumpolar Council.

²² Evans and Kawaguchi

²³ Inuit Circumpolar Council. *Resolution on a Nuclear Free Zone in the Arctic*. 1977. <http://cwis.org/fwdp/Resolutions/ICC/Inuit.txt> (accessed March 23, 2010).

²⁴ Inuit Tapiriit Kanatami. *Circumpolar Inuit Declaration on Arctic Sovereignty*. 2009. <http://www.itk.ca/circumpolar-inuit-declaration-arctic-sovereignty> (accessed March 23, 2010).

An Introduction to Nuclear-Weapon-Free Zones (NWFZs)

This section will provide an introduction to the Nuclear-Weapon-Free Zone (NWFZ) concept by explaining its goals, outlining the principles that the United Nations has set for NWFZs, presenting the arguments for how NWFZs contribute to non-proliferation, introducing the existing NWFZs, and providing a history of NWFZ proposals in the Arctic.

What do NWFZ try to achieve? According to Weerakoon-Gonnewardene, “the aims of the proposal for a ... Nuclear-Weapon Free Zone ... are to raise the nuclear threshold and reduce the risk of escalation in a region where strategic, tactical and conventional weapons are located, and to lessen the danger of a surprise attack...”²⁵. It does so through mandating the non-possession, non-deployment and non-use of nuclear weapons within the zone²⁶. This has the end goal, as so aptly put by Nobel Prize winning Mexican diplomat Alfonso Garcia Robles of gradually increasing the areas “from which nuclear weapons are prohibited to a point where the territories of the powers which possess these terrible weapons of mass destruction will be something like contaminated islets subject to quarantine”²⁷. By isolating nuclear weapon states, NWFZs send the powerful message that there is a consensus against the presence of nuclear weapons and that this should be the norm of the entire world. This momentum could then be used to create a world free of nuclear weapons²⁸.

Nuclear-Weapons-Free Zones contribute importantly towards non-proliferation. They do so through their verification procedures and control measures, while reducing the capacity and attractiveness of having nuclear-capable allies. They do so in a way that is more achievable than general non-proliferation efforts by limiting the number of relevant actors to a small enough group, so that the amount of competing interests and issues involved is kept to a somewhat more manageable level. Often the weakness of disarmament proposals is that they do not address what needs to be done in specific states²⁹. A NWFZ does just that by indicating the rights and responsibilities of each state within the zone and creates reciprocity of obligations and actions³⁰. Thus it has the potential to make a real contribution towards larger non-proliferation goals.

The first way that a NWFZ contributes to non-proliferation is through their more rigorous verification procedures than the International Atomic Agency (IAEA) safeguards. This is because IAEA verification procedures are geared towards ensuring that non-Nuclear Weapon States are not diverting nuclear

²⁵ Weerakoon-Goonewardene. "A Nordic Nuclear-Free Zone." *Global Society*, 1987, p. 26

²⁶ Weerakoon-Goonewardene, p. 26

²⁷ Hamel-Green, Michael. *Existing Regional Nuclear Weapon Free Zones: Precedents that Could Inform Development of an Arctic Nuclear Weapon Free Zone*. August 2009.

<http://www.diis.dk/graphics/Events/2009/Presentation%20Hamel-Green.pdf> (accessed January 26, 2010), p. 2

²⁸ Ikeda, Daisaku. *Say no to nukes in the Arctic*. January 2008. <http://search.japantimes.co.jp/cgi-bin/eo20080131a1.html> (accessed February 4, 2010).

²⁹ Rydell, *The Future of Nuclear Arms: A World United and Divided by Zero*

³⁰ Gorbachev, "Mikhail Gorbachev's Speech in Murmansk at the Ceremonial Meeting on the Occasion of the Presentation of the Order of Lenin and the Gold Star to the City of Murmansk"

materials that are meant for civilian purposes towards building nuclear devices. NWFZ verification procedures extend further to ensure that the sanctity of the NWFZ is not being violated by clandestine import of nuclear weapons or the use of territory within the zones for the manufacturing or testing of nuclear weapons³¹. Consequently, the more stringent verification procedures not only ensure that there are not nuclear weapons related activities occurring within the zone, but they also seek to build confidence that the regime is being respected, something that the IAEA verification procedures cannot boost after numerous problems relating to verification in both Iran and North Korea. Moreover, NWFZs contribute to non-proliferation, because of their stringent control measures. The existing Nuclear-Weapon-Free Zone treaties have opted to set up regional control mechanisms to facilitate the verification regime, as well as information exchange, consultations, and even a complaints procedure for dealing with perceived abrogations to the treaty requirements³².

Most importantly, NWFZs contribute to non-proliferation, because they expand the proportion of the globe where nuclear weapons do not exist. While this is the most evident contribution that NWFZs make towards non-proliferation, there are also a number of different ways in which they reduce global nuclear weapons capabilities. NWFZs often require each party to declare any ability they have to manufacture or test nuclear explosives and destroy these facilities or convert them to peaceful purposes. With the accompanying verification procedures this requirement of a NWFZ reduces the salience of the argument that while it may be a good idea to abolish nuclear weapons, it is impossible that they stay abolished, because the facilities and know-how continue to exist. Xia Liping rightfully asserts that “these measures will return nuclear threshold states or de facto nuclear weapon states to the status of non-nuclear weapon states, and prevent them from going nuclear again” and cites South Africa under the Pelindaba Treaty as a successful example³³. Nuclear-Weapons-Free Zones, therefore, contribute importantly towards non-proliferation efforts by reducing the nuclear-weapons related capacity of the zonal states.

Nuclear-Weapon-Free Zones have a positive spinoff effect for non-proliferation, because they reduce the strength of the argument (though this paper has already shown it to be a weak one) that nuclear weapons serve a useful deterrent function by reassuring states that a potential adversary with a nuclear-armed ally will not allow nuclear weapons to be stationed on its soil. This is because NWFZ treaties require that the area must be free of all nuclear weapons, not just those under the care and control of the government who ratified the treaty³⁴. For example, were Poland to sign onto a NWFZ Treaty it could not permit the stationing of American nuclear weapons on its territory even if the Americans were to maintain full control over these weapons. As such, the fears of Russia about the stationing of nuclear weapons right at its borders would be extinguished, reducing the need of Russia to develop further nuclear capabilities.

Nuclear-Weapons-Free Zones can make an important contribution towards non-proliferation efforts. This is achieved through their extensive verification procedures and control measures. The reduction of nuclear weapons capacity that NWFZs necessitate is also an important factor towards non-proliferation, as is the positive spinoffs that it will have in other nuclear states. However, they also need to be reinforced with more general moves towards the total abolition of nuclear weapons. It is beyond the

³¹ Liping, Xia. *Viewpoint: Nuclear-Weapon-Free-Zones: Lessons for Nonproliferation in Northeast Asia*. 1999. <http://cns.miis.edu/npr/pdfs/xia64.pdf> (accessed January 28, 2010).

³² For example, there is the Organization for the Prohibition of Nuclear Weapons in Latin America (OPANAL), the Consultative Committee of the South Pacific Nuclear-Free Zone, the Commission for the Southeast Asia Nuclear-Weapon Free Zone and the African Commission on Nuclear Energy – Liping, p. 84.

³³ Liping, p. 84

³⁴ Liping, p. 84

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scope of this paper to outline a comprehensive agenda for how this should be accomplished, but the authors are in general in support of the proposals put forward by Gareth and Kawaguchi in *Eliminating Nuclear Weapons*.

In order to help regions achieve NWFZ status, the United Nations Disarmament Commission in its report of April 30, 1999 put forth a set of four principles and guidelines for establishing Nuclear-Weapons-Free Zones. The first principle is that the decision to create a NWFZ should be freely arrived at by the states that make up the region. The second principle is that the proposal to establish a NWFZ should emanate from within the region itself and not be the result of the coercive action of outside actors. Third, it is necessary to consult the Nuclear Weapon States (NWS), so that they may sign and ratify the protocols of the treaty. This would mean that they have made a legally binding commitment to respect the zone and not deploy nuclear weapons against states that are party to the treaty. The fourth and final principle set out by the UN Disarmament Commission is that a NWFZ should not prevent the use of nuclear science and technology for civilian purposes, but should encourage cooperation to ensure that its use remains peaceful³⁵.

There are currently five existing Nuclear-Weapon-Free Zone Treaties. These are: Antarctica (1959), Latin America (1967), South Pacific (1985), Southeast Asia (1995) and Africa (1996)³⁶. This means that it is not permitted to acquire, test, station or develop nuclear weapons in over one hundred countries, including the entirety of the Southern Hemisphere³⁷. The first NWFZ treaty to be concluded was in Antarctica. In this treaty the major powers and the Southern Ocean regional states all agreed to ensure "the use of Antarctica for peaceful purposes only"³⁸. Article V of the *Antarctica Treaty* explicitly prohibits any nuclear explosion or disposal of radioactive material, while Article I prohibits "any measures of a military nature". These are ensured through intrusive inspection provisions³⁹. The Antarctica Treaty should be taken as a starting point for the negotiation of an Arctic Nuclear-Weapon-Free Zone, as the geography and climate create similarities between the two and there is a substantial overlap in key players in both areas. In addition, the Southeast Asia Treaty can serve as a guide, because it includes provisions including to straits and EEZs (Exclusive Economic Zones) within the Zone, which is analogous to the situation in the Arctic of both the Northeast and Northwest Passages⁴⁰. It is helpful to learn from the experiences of the existing NWFZs when designing the Arctic NWFZ⁴¹. However, at the same time, no perfect analogy exists. The Antarctica Treaty relates to a region with no permanent human population, while the other treaties relate to heavily populated areas. The Arctic, however, has a mixture of both. As well, the Arctic is mostly ocean, while the other treaties relate primarily to land⁴². Therefore, an innovative approach that takes into account the best practises and lessons learned from the existing treaties is what is needed to conclude a treaty marking the Arctic as a Nuclear-Weapon-Free Zone, but there will also need to be imagination and foresight by its authors⁴³.

³⁵ United Nations. *Guidelines and Principles for the Nuclear-Weapons-Free Zone*. April 1999.

<http://www.un.org/disarmament/WMD/Nuclear/NWFZ2.shtml> (accessed February 4, 2010).

³⁶ Prawitz, Jan. "A Nuclear-Weapon-Free Zone in Central and Eastern Europe." *PPRN Issue Review*, 1997: 1-8., p 5

³⁷ Hamel-Green, p. 2

³⁸ Hamel-Green, p. 1.

³⁹ Hamel-Green, p. 2.

⁴⁰ Hamel-Green, p. 11

⁴¹ Liping, p. 83; Hamel-Green, p. 13.

⁴² Hamel-Green, p. 13.

⁴³ Borgerson, Scott G. "Arctic Meltdown: The Economic and Security Implications of Global Warming." *Foreign Affairs*, 2008.

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The concept of a NWFZ in the Arctic is not a new one. Proposals have been made as early as 1961 when after Norway and Denmark decided not to deploy nuclear weapons on their territory during peacetime, the Swedish Foreign Minister proposed setting up a club of states, which would agree not to deploy nuclear weapons⁴⁴. According to Hamel-Green, the first proposal for a Nuclear-Weapon-Free-Zone in the Arctic was put forward in the *Bulletin of Atomic Scientists* in 1964⁴⁵. It has subsequently been picked up by Inuit organizations (including the Inuit Circumpolar Conference), regional and international peace organizations, academic researchers and Arctic region specialists⁴⁶. This paper hopes to build on this body of literature to develop a workable framework for a NWFZ in the Arctic, so as to make progress towards the end goal of a world without nuclear weapons⁴⁷.

⁴⁴ Weerakoon-Goonewardena, p. 31-32

⁴⁵ Hamel-Green, p. 3.

⁴⁶ Hamel-Green 2009, p. 3.

⁴⁷ Michael Wallace and Steven Staples have released their own paper on an Arctic Nuclear-Weapon-Free Zone, which is an instructive read for anyone interested in this concept. See: Wallace, Michael, and Steven Staples. *Ridding the Arctic of Nuclear Weapons: A Task Long Overdue*. Toronto: Canadian Pugwash Group, 2010.

Why the Arctic?

The prominent scholar Oran Young once told a Canadian parliamentary committee that “we’re still in the first grade in terms of learning to cooperate in the Arctic”⁴⁸. There is room for more intensified cooperation and one such cooperative project could be a Nuclear-Weapon-Free Zone. The Arctic is a good potential candidate to be the next area covered by a NWFZ because of its history, the challenges of climate change that have led to intensified sovereignty disputes, the level of military engagement in the region, the presence of the two nuclear superpowers, the positive spinoff benefits for global security and the inadequacy of existing arrangements.

The Arctic region has a history of great power conflict. During the Cold War the Soviet and American vast nuclear arsenals would have transited through the Arctic on their flight paths were they ever deployed. In addition to this, the Arctic has been the scene of “great power transit and deployment of strategic nuclear weapons above and below the ice, nuclear weapon accidents, atmospheric and underground nuclear testing, and radioactive waste and fallout contamination (and associated health impacts for indigenous peoples), and displacement of indigenous peoples as a result of military bases and infrastructure”⁴⁹. The example of the Dene people in Deline, Northwest Territories is illustrative of this point. From the 1930s until the 1960s uranium and radium were mined on the shores of Great Bear Lake, including uranium for the Manhattan Project, which would bring into existence the bombs that would eventually be dropped on Hiroshima and Nagasaki. Dene men worked transporting the materials, but they and their communities were never informed of the potential health risks that this entailed. As a result, the Dene people of Great Bear Lake have suffered grossly inflated cancer rates⁵⁰. The Arctic and its inhabitants have been an integral part of the history of nuclear weapons, making this region a fitting place to expand the movement towards a world without nuclear weapons.

The Arctic has been construed in the minds of southern defence planners as a “military theatre” in which all interests – including those of the local indigenous population – were subordinated to national security concerns⁵¹. It was also divided clearly into “the West” and “the East”, each belonging to one of the opposing superpowers camps, rather than as a continuous region in its own right⁵². The end of the Cold War and the collapse of the Soviet Union meant that the Arctic Ocean was almost free of nuclear weapons, because the Russians no longer had the capacity and the Americans no longer had the

⁴⁸ Graham, Bill. Report of the House of Commons Standing Committee on Foreign Affairs and International Trade - Canada and the Circumpolar World: Meeting the Challenges of Cooperation in to the Twenty-First Century. April 1997. http://www.parl.gc.ca/35/Archives/committees352/fore/reports/07_1997-04/fore-07-cov-e.html (accessed January 27, 2010).

⁴⁹ Hamel-Green, p. 1

⁵⁰ Impacts of Uranium Mining at Port Radium, NWT, Canada. September 2005. <http://www.wise-uranium.org/uippra.html> (accessed April 6, 2010).

⁵¹ Atland, p. 290

⁵² Atland, p. 290

incentive to transit the region⁵³. A sustained level of nuclear-related activity will return with the changes brought on by climate change and the subsequent disputes over sovereignty.

Climate change has had a discernable effect on the Arctic region. As has been demonstrated in countless documentaries, studies, reports and news pieces, the Arctic ice is receding. Depending on who is consulted the rates at which this is occurring vary remarkably. The Arctic Council's Arctic Climate Impact Assessment in 2004 projected the "near total loss of sea ice in summer for late this century". Rapid ablation of sea ice in recent years and the conclusions of the 2007 Fourth Assessment report of the Intergovernmental Panel on Climate Change has led many to conclude that the Arctic Ocean and its littoral states may be free of ice in summer within the next five to fifteen years. Eventually it is expected that the Arctic Ocean will come to resemble the Baltic Sea, with a thin layer of seasonable ice covering it during the winter months, so that it is navigable year round with the right equipment⁵⁴. The receding ice will enable increased traffic into the region – both military and civilian. For example, the United States Navy has declared that it will increase its Arctic operations as the ice recedes⁵⁵.

The receding ice will not spur increased military activity in the Arctic, because of the greater ease of navigation, but as the ice recedes it becomes increasingly possible to extract the vast amounts of natural resources that lie under the Arctic Ocean. Several states have laid claim to these resources, often in the same area. Sovereignty is the issue *du jour* in the Arctic with boundary disputes and inflammatory domestic legislation abounding⁵⁶. There are several boundary disputes in the Arctic, as neighbouring states lay claim to the same territory. For example, Canada has six outstanding boundary-related disputes, including most significantly in the Northwest Passage, a body of water connecting the Arctic and Pacific Oceans. On September 10, 1985 then External Affairs Minister Joe Clark announced Canada would draw straight baselines around its archipelago and since that time the United States, European Union and Japan have all refuted that claim⁵⁷. To ensure Canada's sovereignty the Canadian Government under Stephen Harper has promised to increase military resources in the region through large procurement programs and increased military activity. Similarly, Russian President Dmitry Medvedev stated on September 17, 2008 that Russia should pass a law to mark its Arctic territory in the disputed areas where significant natural resource deposits can be found⁵⁸.

These competing sovereignty claims do cause concern for increased military activity in the Arctic, but there is little consensus as to whether military conflict in the Arctic is likely or not. There are those who argue that war in the Arctic is a sure thing. For example, Borgerson writes that, "the combination of new shipping routes, trillions of dollars in possible gas and oil resources, and a poorly defined picture of state

⁵³ Wallace, Michael D. "A nuclear-weapon-free Arctic." *Bulletin of the Atomic Scientists*, 2008: 60, p. 60

⁵⁴ Borgerson

⁵⁵ Moore, L. Col. *Defending Canadian Arctic Sovereignty: An Examination of Prime Minister Harper's Arctic Initiatives*. <http://www.wps.cfc.dnd.ca> (accessed October 8, 2008), p. 14

⁵⁶ Sovereignty has been defined by Jean Bodin as "supreme authority over a citizen and subject unrestrained by law". It has historically been viewed in absolute terms. That is to say, one is either sovereign or they are not – Friedheim, Robert L. "The regime of the Arctic - Distributional or integrative bargaining?" *Ocean Development and International Law*, 1988: 493-510, p. 502.

⁵⁷ Friedheim, 503; Huebert, Rob. *Northern Interests and Canadian Foreign Policy*.

<http://www.cdfai.org/PDF/Northern%Interests%and%20Canadian%Foreign%20Policy.pdf> (accessed January 18, 2010), p. 2.

⁵⁸ "We must finalize and adopt a federal law on the southern border of Russia's Arctic zone," Medvedev told Russia's Security Council at the time – Independent. *Medvedev: Russia needs to mark its Arctic territory*. September 2008. <http://www.independent.co.uk/news/world/europe/medvedev-russia-needs-to-mark-its-arctic-territory-933811.html> (accessed October 8, 2008).

ownership makes for a toxic brew”⁵⁹. However, there is equal evidence to suggest that this can be avoided, because disagreements “are being handled in an orderly fashion” and that there is a history of cooperation among the concerned states and interest in preserving the stability of the region⁶⁰. It should be noted, that in May 2008 the five coastal nations bordering the Arctic Ocean agreed to have the United Nations Convention on the Law of the Sea (1982) as the basis for resolving all of their outstanding maritime boundary disputes⁶¹. Therefore, it is hoped that the sovereignty disputes over jurisdiction will be resolved by UNCLOS with no need to resort to military means⁶².

While it is certainly hoped that all border disputes will be resolved through UNCLOS, the level of military engagement in the Arctic is significant and increasing, made possible by submarines, aerial flyovers, increasing spending and an intensified positioning of military assets and personnel in the region. It is this mix of military presence and sovereignty disputes that make the Arctic a prime candidate for the establishment of a Nuclear-Weapon-Free Zone.

The Arctic region, unlike the territories of the other NWFZs is primarily ocean. Thus, the presence of significant quantities of nuclear-capable submarines highlights the need for such a treaty. Underwater deployment of nuclear armed attack and ballistic submarines have been cruising underneath the Arctic ice for many years⁶³. For example, in 2005 a LA-class American submarine, called the *Charlotte* spent two weeks under the North Pole, a feat that they considered to be a technological achievement that will have implications for future missions⁶⁴. It is important to note that only nuclear-powered submarines can stay submerged underneath the thick ice long enough to operate⁶⁵. The amount of nuclear warheads deployed by this system is significant. Russia claims to be carrying 576 nuclear warheads on their fleet of ten submarines, of which between two-thirds and three-quarters are located in the Northern Fleet⁶⁶. At the same time, the United States carries 43% of its nuclear arsenal on submarines⁶⁷. Norris and Kristensen expect that by 2020 there will be a significant reduction in the total number of warheads, but at the same time the percentage of warheads deployed on submarines will increase more than two-fold⁶⁸. However, the strategic benefits of nuclear submarines are being reduced by the melting ice, because the invisibility benefits it provides will be reduced. The Arctic Ocean is a “noisy sea”, leading radar to be less than effective as the background noise from the moving ice interferes with its range. As the anonymity of nuclear submarine patrols in the Arctic is diminished, it is now perhaps in all states’ interests to negotiate a NWFZ in the Arctic⁶⁹.

⁵⁹ Borgerson.

⁶⁰ The Arctic Governance Project. “Arctic Governance Project (AGP) White Paper” January 2010, www.articgovernance.org (2 February 2010), p. 13; Centre for Strategic and International Studies. *Geopolitics in the High North Project: Proceedings of the Global Challenges in the Arctic Conference*. May 2009. http://csis.org/files/attachments/090507_global_challenges_in_the_arctic_proceedings.pdf (accessed January 28, 2010), p. 2.

⁶¹ Penikett, Tony. “At the intersection of indigenous and international treaties” January 2010, www.articgovernance.org (accessed 2 February 2010), p. 14.

⁶² Friedheim, p. 495.

⁶³ Hamel-Green, p. 5.

⁶⁴ Wallace and Staples, p. 4-5.

⁶⁵ Staples, Steven. *Steps Toward an Arctic Nuclear Weapon Free Zone*. August 2009.

<http://www.diis.dk/graphics/Events/2009/Presentation%20Staples.pdf> (accessed January 26, 2010), p. 4.

⁶⁶ Wallace and Staples, p. 6-7.

⁶⁷ Wallace and Staples, p. 7.

⁶⁸ Staples, p. 5.

⁶⁹ Hamel-Green, p. 4.

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In addition to the numerous nuclear submarines that are currently underneath the Arctic ice, above the ice fly nuclear weapons equipped aircraft. Russia alone maintains a fleet of 77 strategic bombers and 63 propeller-powered TU-1985 Bears⁷⁰. These aircraft carry 856 nuclear weapons in the form of air-dropped bombs and cruise missiles and are easily capable of reaching North American airspace⁷¹. The presence of these air capabilities indicates that a nuclear attack would be feasible to carry out in the Arctic and as sovereignty disputes continue it is necessary to re-evaluate the possibility of concluding a NWFZ treaty.

Not only are there these significant nuclear weapons capabilities in the Arctic at present, but governments around the region have been devoting increasing resources to further developing their military presence. Denmark has released a defence position paper recommending the establishment of a dedicated Arctic military contingent drawing on all divisions of its armed forces; Norway has purchased new fighter jets that are suitable for Arctic patrols; and Canada has announced money for patrol vessels and a cold weather training centre along the Northwest Passage⁷². Russia too, has approved the establishment of a stronger military presence in the Arctic in the form of a specially military force designated towards defending Russia's Arctic and the necessary resources to pay for it⁷³. Not only are the states of the region increasing their spending and presence in the Arctic militarily, but other states which have an interest in the resources underneath the Arctic ice or in the potential shorter shipping routes are as well⁷⁴.

The Arctic region is the home of the world's two nuclear superpowers – Russia and the United States. They have numerous nuclear weapons stationed in the region that are capable of reaching each other's territories from home soil. This makes it of particular importance that a NWFZ be established in the Arctic. The Arctic region is unique in that the majority of the states in the region are nuclear-weapon-free states (Denmark, Sweden, Norway, Finland and Canada), while the two others have the largest nuclear arsenals out of any states in the world. It is widely believed that Russia has as many as 3,000 tactical nuclear weapons and as many as 8,000-10,000 nuclear warheads in reserve⁷⁵. The United States also has 500 active warheads⁷⁶. Furthermore, both superpowers are able to hit nuclear strikes against each other from comparatively safe launch sites on their home territory⁷⁷. The presence of these two powers in one region makes it all the more important that a NWFZ be completed.

As former Canadian Minister of Foreign Affairs Joe Clark pointed out during the Cold War, nuclear threats in the Arctic relate to the global context of the larger East-West rivalry, rather than about the Arctic itself. However, while Clark argued that a NWFZ in the Arctic would "do nothing to reduce the threat from these weapons", quite the opposite could be argued in the post-Cold War Era. Were a NWFZ Treaty implemented in the Arctic there would be positive spinoffs for global security by reducing the attractiveness of missile defence systems, leading Russia to feel less threatened and thus less prone to offensive action, due to the fact that they will no longer have a nuclear adversary right at their borders.

⁷⁰ Staples, p. 4.

⁷¹ Staples, p. 4.

⁷² Staples, p. 6; Borgerson.

⁷³ Wallace and Staples, p. 8; Centre for Strategic and International Studies. "Geopolitics in the High North Project: Proceedings of the Global Challenges in the Arctic Conference", p. 2.

⁷⁴ Centre for Strategic and International Studies. "Geopolitics in the High North Project: Proceedings of the Global Challenges in the Arctic Conference", p. 2.

⁷⁵ Arms Control Association. *Arms Control and Proliferation Profile: Russia*.

<http://www.armscontrol.org/factsheets/russiaprofile> (accessed January 26, 2010).

⁷⁶ Bilt, Carl, and Radek Sikorski. "Next, the tactical nukes." *International Herald Tribune*, February 22, 2010: A8.

⁷⁷ Young, Oran R. "The Age of the Arctic." *Foreign Policy*, 1986: 160-179, p. 164.

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Russia has repeatedly voiced its displeasure with US plans to deploy Patriot missiles in Poland. Moscow has in fact threatened to place Iskander missiles in Kaliningrad if the missile defence plan goes through⁷⁸. However, as Kissinger has aptly observed “there is nothing more offensive than Russia on the defensive”⁷⁹. A Nuclear-Weapon-Free Zone in the Arctic would mean that neither Russia nor the United States would directly face a nuclear threat from a neighbour and could lead to an overall diminution of the perceived threat the other might cause (though neither has explicitly stated that it views the other as a threat for some time)⁸⁰. The argument for stationing nuclear weapons along the border elsewhere would be greatly diminished by such a move. Weerakoon-Gonnewardene, therefore rightly concludes that a Nuclear-Weapon-Free Zone “is now seen also as a confidence-building measure (CBM) with political implications in addition to its military significance” and to this the German Group of Four adds that “stable security in the northern hemisphere would certainly defuse global crises and make them easier to resolve”⁸¹. The ANWFZ is a building block towards a more comprehensive peace⁸².

The Arctic is also a favourable candidate for a NWFZ, because while there are existing arrangements covering non-proliferation concerns in the Arctic, including the *Seabed Treaty*, the *Non-Proliferation Treaty* and the *United Nations Convention on the Law of the Sea*, none of these are comprehensive enough to adequately address nuclear issues⁸³. The *Seabed Treaty* (1971) requires that parties to the treaty (which all Arctic states are) do not place on the seabed, ocean floor or subsoil nuclear weapons or facilities designed to store, test, or use nuclear weapons⁸⁴. In addition, the *Nuclear Non-Proliferation Treaty's* Article VII commits the Arctic states (again because they are all signatories) to conclude regional treaties to “assure the total absence of nuclear weapons from their respective territories”⁸⁵. The fact that regional states were able to agree to these non-proliferation efforts is a positive starting point for

⁷⁸ Sweeney, Connor. *Russia denies Baltic fleet boost over U.S. missile plans*. January 2010. <http://www.globeandmail.com/news/world/russia-denies-baltic-fleet-boost-over-us-missile-plans/article1438572/> (accessed February 4, 2010).

⁷⁹ Westdal, Christopher. "Succeeding Putin in Power: Notes for Luncheon Remarks." *Arctic Security Conference*. Vancouver: Simon Fraser University, 2008, p. 29.

⁸⁰ This builds on the argument that one reason that some states chose not to acquire nuclear weapons is that they think that it will encourage other states in their region to do the same (Evans and Kawaguchi, p. 79). Alternatively, this paper argues that by reducing the role of nuclear weapons and eventually abolishing their use that this will encourage other states in the region to do the same.

⁸¹ Weerakoon-Gonnewardene, p. 26; Schmidt, Helmut, Richard Von Weizacker, Egon Bahr, and Hans-Dietrich Genscher, “Declaration on Freedom From Nuclear Weapons”.

⁸² Again, Schmidt et al. supports this notion. They write that, “serious endeavors by the U.S. and Russia towards a nuclear-weapon-free world would make it easier to reach an agreement on adequate behavior with all other nuclear-weapon states, regardless of whether these are permanent UN Security Council members or not” – Schmidt, Helmut, Richard Von Weizacker, Egon Bahr, and Hans-Dietrich Genscher, “Declaration on Freedom From Nuclear Weapons”.

⁸³ Article VI of the Non-Proliferation Treaty does lay down the foundation upon which an Arctic Nuclear-Weapon-Free Zone Treaty could be negotiated. It states that it obliges all parties “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament, and on a treaty on general and complete disarmament under strict and effective international control” – Randy Rydell, “Nuclear Disarmament and General and Complete Disarmament”. In 1996 the International Joint Commission (IJC) issued an advisory opinion that parties to this treaty have the duty to conclude negotiations to achieve the aforementioned goal – Randy Rydell, “The Future of Nuclear Arms: A World United and Divided By Zero”.

⁸⁴ de Queiroz Duarte, Sergio. "Keynote Address." *Arctic Security Conference*. Vancouver: Simon Fraser University, 2008, p. 7.

⁸⁵ De Queiroz Duarte, p. 7.

the negotiation of a NWFZ Treaty. Furthermore, the *Ilulissat Declaration* of May 2008, which states that the *United Nations Convention on the Law of the Sea* will govern territorial disputes, such as delineating the outer limits of the continental shelf, protecting the marine environment and freedom of navigation means that there is a legal framework for addressing the sovereignty disputes that might otherwise be dealt with by military force⁸⁶. The fact that there is already a somewhat robust legal framework governing these activities in the Arctic means that there is a positive foundation upon which a NWFZ treaty can be built. However, these agreements are not wide enough in their scope nor specific enough to address the Arctic's unique security issues⁸⁷. A new Treaty is therefore required.

⁸⁶ European Policy Centre. *Flat, cold and (increasingly) crowded: what policies for the Arctic?* 2009. <http://www.epc.eu/en/r.asp?TYP=ER&LV=293&see=y&t=2&PG=ER/EN/detail&I=&AI=975> (accessed January 26, 2010).

⁸⁷ Vincour, John. *A Heads-Up on Russia's Role in the Arctic*. December 2009. http://www.nytimes.com/2009/12/08/world/europe/09iht-politicus.html?_r=1 (accessed February 4, 2010).

The Framework for a Nuclear-Weapon-Free Zone in the Arctic

This section will provide a framework for what a NWFZ Treaty in the Arctic. The key components it includes are:

- setting the geographical boundaries to be covered by the treaty
- declarations relating to the non-first use of nuclear weapons and the implications of this on NATO states
- redesigning nuclear weapons alert status systems
- illuminating the verification procedures that will be used to ensure compliance
- augmenting surveillance capacities throughout the Arctic region to ensure that non-treaty states are not entering the zone with prohibited materials
- making clear the acceptable overall state of military activities within the zone
- associated confidence-building measures (CBMs), such as: increasing diplomatic resources, harmonizing regulations, developing nuclear waste disposal systems, joint scientific endeavours, and economic integration

Geographical Limits

The geographical limits of the “Arctic” need to be explicitly defined in the treaty. This should take into account traditional definitions of the region, as well as an understanding of which states key actors are

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seen as “legitimate” and thus are willing to engage. Adjacent seas, sea beds, continental shelves, disputed territories, international waters, and airspace should all be covered by the treaty. However, the whole of Russia and the United States need not be included in order for a Nuclear-Weapons-Free Zone in the Arctic to be deemed a success.

Oran Young writes that the Arctic encompasses, “Alaska (except for the area known as the Southeast); the Yukon and Northwest Territories, northern Quebec, and all of Labrador in Canada; all of Greenland; Iceland, the northern countries of Norway, Sweden, and Finland (known collectively as Fennoscandia); and all of what the Russians treat as the Arctic and the Russian North.. [as well as] the marine systems of the Arctic Ocean and its adjacent seas, including the Bering, Chukchi, Beaufort, Greenland and Norwegian, Barents, Kara, Laptev, and East Siberian Seas”⁸⁸. Using this definition the “Arctic” comprises 8% or 40 million square kilometres of the earth’s surface, but less than 1% of the world’s population⁸⁹. The majority (approximately 75%) of Arctic inhabitants live in Russia and about 10% are Indigenous peoples who are a majority in Canada’s eastern Arctic, northern Quebec and Greenland⁹⁰.

While it is widely recognized that the states that make up the Arctic are Canada, Finland, Greenland, Iceland, Norway, Russia, Sweden, and the United States, there are a wide variety of states who consider themselves to be relevant actors or stakeholders in the Arctic. This includes countries such as China, Japan, South Korea, France and the United Kingdom, as well as the European Union. These states are considered “relevant actors”, because they have an established interest and developed capability in Arctic science or are “stakeholders”, because they are currently exploiting Arctic resources⁹¹. Russia, and to a certain extent Canada, have traditionally taken an exclusive view towards which states should be consulted on Arctic matters, preferring to limit negotiations to only those states who meet Young’s definition of “Arctic”⁹². This exclusive attitude has generally stemmed from fears regarding sovereignty or access to natural resources. While negotiating a Nuclear-Weapon-Free Zone Treaty, however, such concerns do not exist. The issue of nuclear weapons is truly a global concern. Therefore, while it will ultimately be zonal states who conclude the treaty (in conformity to the United Nations principles), there should also be consultations with relevant actors and stakeholders who may be able to provide assistance towards surveillance and information sharing procedures that ensure compliance with Treaty provisions. As in all NWFZ treaty negotiations, the recognized Nuclear Weapon States under *the Non-Proliferation Treaty* have to be engaged and it would be prudent to engage the de facto nuclear states (i.e. India, Pakistan, Israel and North Korea) as well.

Not only is it necessary to define which states will be involved in the zone, but it is vital to the success of the zone that its precise geographical limits are clearly defined. While this paper takes Gorbachev’s Murmansk speech as its point of departure, it does recognize that there was one fatal flaw in his design. Gorbachev’s “zone of peace” in the Arctic did not include the Arctic Ocean precisely because this area

⁸⁸ It should be noted that this definition was given before the creation of the territory of Nunavut out of the Northwest Territories, but that this area is also covered by Young’s definition. Oran Young quoted in Graham.

⁸⁹ Some have argued that the delineation mark for the Arctic should be anything above 60 degrees North longitude, i.e. the Arctic Circle. However, were this definition to be used all of Finland and Norway, and Sweden down to Stockholm would be included. These areas are either boreal or temperate, due to warming from the North Atlantic Drift and therefore do not have the same profile, concerns, or challenges that make the Arctic region unique – Keskitalo, Carina. “International Region-Building: Development of the Arctic as an International Region.” *Cooperation and Conflict*, 2007: 187-202, p. 192.

⁹⁰ Graham.

⁹¹ Archer, p. 169; Friedheim, p. 494.

⁹² The Arctic Governance Project, p. 7; Centre for Strategic and International Studies. “Geopolitics in the High North Project: Proceedings of the Global Challenges in the Arctic Conference”, p. 2.

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was of vital importance to the success of their strategic nuclear submarine operations⁹³. As it was demonstrated in the previous section, nuclear submarines abound in the Arctic and are the most common delivery mechanism for nuclear weapons. It is therefore essential to the success of an Arctic NWFZ that adjacent seas – the Arctic Ocean – be included in its territory in addition to the land territory and airspace above both⁹⁴.

Included in the zone should also be all continental shelves of party states. The *Bangkok Treaty* which set up the Nuclear-Weapon-Free Zone in Southeast Asia in 1995 included this provision, because there were areas under jurisdictional dispute between the contracting parties⁹⁵. A similar situation exists in the Arctic where, for example, both Canadian and Russian continental shelves overlap leading to disputes over where their respective jurisdictions end. Precisely because continental shelves are the potential source of conflict, they should be included in a NWFZ Treaty. This, however, should not be difficult to secure as it has already been mentioned all Arctic states are signatories to the *Seabed Treaty*, which forbids nuclear weapons being stationed on the Arctic Ocean floor⁹⁶.

For much the same reasoning international waters adjacent to zonal states should be nuclear weapon free and thus covered under the treaty. While some credit the exclusion of international waters from the Pelindaba Treaty which set up a NWFZ in Africa, for its quick ratification, it is integral to the success of an Arctic NWFZ that they be included⁹⁷. This is because of the unresolved legal status of the Northwest Passage. The Northwest Passage winds through the islands of the Canadian Arctic archipelago connecting the Atlantic and the Pacific. It is anticipated that as the Arctic ice recedes this will become an active area for international shipping as it greatly reduces freight times between Europe and Asia and can accommodate larger vessels than the Panama Canal. Canada considers this area to be its internal waters, but the United States and others do not agree. The source of US concerns is that if it agrees that the NWP is Canadian internal water, it would set a negative precedent for other straits around the world⁹⁸. The United States, therefore, argues that the NWP is an international strait meeting the definition set by the International Court of Justice in the Strait of Corfu Judgement. In that case the ICJ ruled that an international strait is “a body of water that joins two international bodies of water and is used by international shipping”⁹⁹. This is significant because under UNCLOS all states have a “right of passage” in an international strait¹⁰⁰. However, the argument can be made that it is in all concerned states interests to have this area covered by a Nuclear-Weapon-Free Zone, because if UNCLOS rules that it is an international strait than it gives all international actors the right to transit, including those with nuclear weapons or those carrying dangerous nuclear materials. Furthermore, because the Northwest Passage is narrow and shallow it is unfavourable for submarines, which are the main method of deployment for nuclear weapons¹⁰¹. Consequently, the NWP is already more or less nuclear-weapon-free and therefore the major nuclear players in the region have little to lose by including it within the

⁹³ Atland, p. 298.

⁹⁴ Xia Liping, p. 89.

⁹⁵ Xia Liping, p. 90.

⁹⁶ Robson, Matt. *Arctic Nuclear Weapons Free Zone*. August 2009.

<http://www.scoop.co.nz/stories/PO0908/S00129.htm> (accessed February 4, 2010).

⁹⁷ Xia Liping, p. 90.

⁹⁸ Friedheim, p. 502.

⁹⁹ Huebert, p. 6.

¹⁰⁰ Hamel-Green, p.5.

¹⁰¹ Buckley, Adele. *Toward a Nuclear-Free Arctic*.

http://www.pugwashgroup.ca/index.php?option=cpm_content&view=article&id=149:toward-a-nuclear-free-arctic&catid=39:the-arctic&Itemid=79 (accessed January 19, 2010).

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zone, but much to gain from ensuring that other nuclear powers are unable to transit this area with all of the attendant security and environmental problems that this creates¹⁰².

Michael Wallace, an Executive Member of the Canadian Pugwash Group has written that there are two main realities on the ground which complicates an Arctic Nuclear-Weapon-Free Zone. First, both the United States and Russia frequently deploy nuclear-capable submarines throughout the Arctic waters. Second, the most important naval base for Russian ballistic missiles and submarines, known as Zapadnaya Litsa, is located just north of the Arctic Circle on the Kola Peninsula¹⁰³. This base houses Russia's most advanced ballistic missile submarines¹⁰⁴. Therefore, in order for a Nuclear-Weapon-Free Zone to be created it would be necessary that Russia remove its nuclear-capable submarines from this base¹⁰⁵. By far it would be preferable that Russia decide to decommission these submarines, but in the interest of securing a deal it would be sufficient to have Russia remove them from the area delineated by the zone. The base, however, need not be shut down completely. It provides an important source of revenue for the region and its complete closure would have significant impacts on the local population¹⁰⁶. As will be discussed below, there remains a role for conventional forces in the Arctic region, just not a nuclear one and for this reason the nuclear-capable submarines based in Zapadnaya Litsa should be relocated to another port. The United States, alternatively, does not deploy nuclear weapons in its Arctic territory at present¹⁰⁷.

This issue of the Zapadnaya Litsa raises perhaps the biggest challenge for setting the geographical limits of an Arctic Nuclear-Weapon-Free Zone: is it possible to include only parts of the two Nuclear Weapon States? Wallace and Staples believe that "...it is almost unimaginable that the Americans would agree to *declaring* any portion of their territory free from nuclear weapons"¹⁰⁸. Xia Liping explains that there are two reasons that the Chinese government has strongly opposed proposals to include parts of its territory in a Nuclear-Weapon-Free Zone for Northeast Asia (NWFZNEA). The first, she writes, is that "it is almost impossible, under the current circumstances, for the United States, Russia, and China to exclude their nuclear weapons from portions for their territory, as it would mean giving up sovereignty

¹⁰² Such an agreement would not preclude Canada and the United States concluding an agreement to jointly manage the Northwest Passage as a non-for-profit in the same way as the St. Lawrence Seaway, which is a popular proposal in policy circles – Calamai, Peter. *Keeping tabs on the Arctic*. September 18, 2007. <http://www.thestar.com/article/286025> (accessed October 8, 2008).

¹⁰³ Staples, p. 7.

¹⁰⁴ Buckley; Huebert, p. 9.

¹⁰⁵ Wallace and Staples argue that the fact that most of the submarines be located in the Northern Fleet, "... is unlikely to change, as the poor transportation infrastructure connecting central Russia with the Far East, and the cost of building new facilities at such a distance, make the transfer of additional submarine bases and their support structure to the East an unattractive proposition for the Russian Navy in an era of strained budgets" (Wallace and Staples, p. 7). It is true that moving the Russian fleet will be quite costly. However, if the other regional states are truly committed to a world without nuclear weapons, then it is likely that they can find the funds to support these kinds of activities.

¹⁰⁶ This mirrors the well-publicized concerns of the people of Sevastopol where Russia has promised to remove its Black Sea Fleet. For example a BBC report states that: "Local officials estimate that some 20,000 Ukrainians rely on the Black Sea Fleet for their jobs." "If the Russian armed forces left, this town would be finished," says Natalia, a local shopkeeper. "There are so many areas like this one where everyone, all the shops, survive on the Russian military. If they left, that would be the end of us. We'd be left out on the streets, without work." BBC News. "Fleet gives Russia Crimean clout" February 2008, <http://news.bbc.co.uk/2/hi/europe/7239206.stm> (Accessed: 5 March 2010).

¹⁰⁷ Wallace and Staples, p. 10.

¹⁰⁸ Wallace and Staples, p. 10.

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and there will not be sufficient mutual political trust among them to do so in the foreseeable future”¹⁰⁹. The second reason that Xia Liping gives is, “it would be very difficult for governments of the three NWS to explain to their peoples why certain portions of their countries should be included in the NWFZ-NEA, and why other nuclear powers can offer security assurances to these portions, but not to other areas”¹¹⁰.

The first issue that Xia Liping raises is essentially one of political will. Giving up sovereignty will be a tough sell in many constituencies. The Canadian Prime Minister Stephen Harper has won praise among sections of the Canadian population for his “use it or lose it” slogan when it comes to Arctic sovereignty, though Indigenous leaders have made the obvious point that they had been “using” it for thousands of years. Sheila Watt-Cloutier, for example, rightly asserts that, “Inuit have been instrumental in exerting Canadian sovereignty in the Arctic. Our use and occupation of the land was complete; as nomadic people, my ancestors travelled the length and breadth of the Arctic”¹¹¹. While the Canadian Prime Minister may be advised to argue that Canada’s sovereignty over the Arctic is based on Inuit use and occupation, this shift will not occur until it is seen to be politically beneficial. Therefore, political will must be facilitated. Political will is integral to moving forward on all Arctic security issues. That is why the framework for the NWFZ that is proposed in this paper (to be detailed below) includes a significant amount of confidence-building measures (CBMs). It is hoped that these CBMs will instil the trust that is necessary for the Nuclear Weapon States to relinquish the sovereignty required to implement a NWFZ in the Arctic.

The second issue that Xia Liping raises is how the inhabitants of the Arctic NWFZ will react to the fact that their fellow citizens continue to live under the nuclear umbrella, but they themselves are left outside it. The intent of the NWFZ proposal is not to create two classes of citizens, with one entitled to more security than another. The reasoning behind it is that nuclear weapons pose more risk to human life and dignity than they do security and it is therefore necessary that they be abolished. However, it recognizes that the major nuclear weapon powers – the United States and Russia among them – are not yet willing to relinquish their entire arsenal. It therefore recommends a minimization approach, whereby the use of nuclear weapons is gradually scaled down until Nuclear Weapon States are at a point where they feel comfortable fully surrendering their arsenal. From this logic it is hoped that the exact opposite of what Xia Liping reasons will occur. It is hoped that those citizens who are left under the nuclear umbrella will be unhappy that they must live with the risks that living under such an umbrella implies, while their fellow citizens have been liberated from these fears, because as has already been argued in this paper – the deterrence factor of nuclear weapons in the post-9/11 era are minimal, while the threat of their use is maximal.

There is no doubt that the conclusion of a treaty to create a Nuclear-Weapon-Free Zone in the Arctic will be difficult, both diplomatically and politically, because it does include only parts of the two major nuclear weapons superpowers¹¹². However, the goal is not to create a “zone of peace” free from nuclear weapons in the Arctic and then have a build-up of nuclear weapons right on its border. That would defeat what the zone is trying to achieve. Consequently, it would also be necessary to have what Prawitz

¹⁰⁹ Xia Liping, p. 87.

¹¹⁰ Xia Liping, p. 87.

¹¹¹ Watt-Cloutier, Shiela. Inuit, Climate Change, Sovereignty, and Security in the Canadian Arctic. January 2002, <http://www.inuitcircumpolar.com/index.php?ID=91&Lang=En> (accessed: April 6, 2010).

¹¹² Ekeus, Rolf. "Military Security in the Arctic." *Arctic Security Conference*. Vancouver: Simon Fraser University, 2008, p. 39.

calls a “thinning out” of nuclear weapons in the territories just outside the zone¹¹³. According to Prawitz, “ ‘thinning out’ arrangements imply that those nuclear weapon systems whose clear purpose is to attack targets within the zone, or that have short ranges and are deployed very close to the zone, thus implying that their primary purpose is for use against the zone, should be withdrawn”¹¹⁴. Such a move is necessary, because without it the goals of the NWFZ in the Arctic cannot be realized. This “thinning out” proposal will ensure that the spirit of the NWFZ initiative is respected and if the two largest nuclear weapon powers are able to agree to include part of their territories within such a zone, this would have positive knock-on effects outside of just the Arctic, perhaps providing an incentive for the Chinese to conclude a NWFZ in Northeast Asia.

To summarize, a Nuclear-Weapon Free Zone in the Arctic should include the territories of Canada, Greenland (Denmark), Iceland, Norway, Sweden, and Finland, as well as Alaska and Northern Russia. Key players and stakeholders from outside the zone, such as Japan and South Korea, as well as the nuclear weapon states (UK, France, and China especially) should be consulted. The area to be covered includes all land, airspace, adjacent seas (including the Arctic Ocean), the seabed, continental shelves and international waters, including the Northwest Passage. It will include only parts of the two nuclear weapon states in the region, which will require a “thinning out” of nuclear weapons along the border of the region.

A Policy of Non-First Use of Nuclear Weapons

A non-first use policy is an essential component of an Arctic NWFZ Treaty, as the doctrine of first use does not fit with a policy of increasing partnership between NATO and Russia, even if nuclear weapons are not used¹¹⁵. This will require changes to American, Russian, and NATO policies, but it should be recognized that it does not prohibit NATO military cooperation in the region. Moscow has sent somewhat unclear messages on its policy of first use of nuclear weapons. The Soviet Union had a policy of non-first use, but the Russian Federation that followed renounced this pledge in 1993. Since that time, Moscow has both said that it would not use nuclear weapons against states that do not possess them, but at the same time they have warned that they remain open to using nuclear weapons if other means fail to “repulse armed aggression”¹¹⁶. Similarly, the United States also has a policy of first use and has threatened to use nuclear weapons to retaliate against adversaries who attack US troops abroad, or US allies, with WMDs¹¹⁷. Due to the fact that only parts of the Nuclear-Weapon States will be covered by the ANWFZ Treaty, both Russia and the United States should declare that the sole purpose of their remaining nuclear weapons (as long as they exist) is to deter the use of nuclear weapons against itself¹¹⁸.

Complicating the non-first use policy is that many of the zonal states are members of the NATO alliance, which has a stance of first use of military weapons¹¹⁹. Both Denmark and Norway have committed themselves to not deploy nuclear weapons on their territory during peacetime. Gorbachev recognized that “this stance, if consistently adhered to, is important for lessening tensions in Europe”¹²⁰.

¹¹³ Prawitz, p. 5-6.

¹¹⁴ Prawitz, p. 6.

¹¹⁵ Schmidt, Helmut, Richard Von Weizacker, Egon Bahr, and Hans-Dietrich Genscher., “Declaration on Freedom From Nuclear Weapons”.

¹¹⁶ Arms Control Association.

¹¹⁷ Xia Liping, p. 89.

¹¹⁸ Evans and Kawaguchi, p. 65.

¹¹⁹ Weerakoon-Gonnewardene, p. 27.

¹²⁰ Gorbachev.

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Unfortunately for a NWFZ to be successful this stance does not go far enough. States must commit to not deploying nuclear weapons on their territory both during peacetime and wartime.

Does this mean that zonal states must withdraw from NATO? Perhaps not. Wallace and Staples argue that, "it might well be possible to draft an Arctic NWFZ Treaty that does not conflict with the *letter* of NATO members' commitments to the Alliance's Strategic Concept, but ... it is clear that membership in a NWFZ would be incompatible with its spirit"¹²¹. Therefore, it does warrant a discussion about reconfiguring the NATO's Strategic Concept on Nuclear Weapons. According to Prawitz the first use policy "confirms the supreme guarantee of the security of the allies is provided by the strategic forces of the alliance; that new measures will share the benefits and responsibility from this in the same way that all other allies in accordance with the Strategic Concept; and that 'new members will be expected to support the concept of deterrence and the essential role nuclear weapons play in the Allies strategy of war prevention as set forth in the Strategic Concept'"¹²². NATO leaders, with President Obama taking the lead, should revisit this policy. However, as an interim step it would be possible to have NATO become a signatory to the Arctic NWFZ Treaty, so that it will commit to no first use or indeed use at all of nuclear weapons throughout the zone. This could be achieved by zonal states signing a protocol waving their rights to protection under the strategic concept. Russia would also have to renounce its right to the first use of nuclear weapons in the zone. Russia and NATO consider each other to be the major threat in terms of nuclear weapons in this region of the world. A tit-for-tat renunciation of a first use policy would improve the safety and security of both and thus it should be adopted.

A renunciation of the first use of nuclear weapons by NATO states in the Arctic region does not mean that these countries will no longer be under the NATO umbrella or that they would not be permitted to uphold their obligations to fellow NATO states. For example, Roscini has concluded in his international legal analysis of the Central Asian NWFZ that, "the combined effect of the two paragraphs of Article 12 is that only those provisions of previous treaties that do not prejudice the effective implementation... of the Treaty are preserved...therefore, the Central Asian denuclearized States parties to the Tashkent Treaty still have an obligation to provide military assistance to the other parties (including Russia) in case of aggression, but this assistance cannot include the acceptance of nuclear explosive devices on their territory"¹²³. According to this precedent, zonal states would be able to continue to provide military assistance and be protected by the mutual assistance provisions of the *Washington Treaty*, without the accompanying pitfalls of nuclear weapons. The conventional weapon superiority of the United States and the NATO Alliance ensures that a policy of deterrence and mutual aid will persist¹²⁴. A non-first use clause must therefore, be included in the Treaty, as should an explicit declaration that the purpose of the remaining nuclear weapons outside of the zone is purely for deterring against the use of nuclear weapons against itself¹²⁵.

However, the non-nuclear weapon states in the Arctic should renounce immediately their protection under the First Use Policy of NATO and the American nuclear umbrella¹²⁶. It is hypocritical to at once

¹²¹ Wallace and Staples, p. 10.

¹²² Prawitz, p. 2.

¹²³ Roscini as quoted in Hamel-Green, p. 13.

¹²⁴ Evans and Kawaguchi, p. 66.

¹²⁵ Evans and Kawaguchi, p. 65.

¹²⁶ Kataoka Katsuko makes this point about Japan, writing that: "Japan must abdicate its dependence on American nuclear deterrence and support voices in the U.S. to reduce and abolish nuclear weapons". Kataoka, Katsuko. "Toward Abolishing Nuclear Weapons: Message from Hiroshima." *International Symposium for Peace*. Hiroshima: Interaction Council, August 1, 2009.

demand that the zone be nuclear weapon free and then on the other hand maintain the policy of operating under the NATO/American nuclear deterrence¹²⁷. Furthermore, the adherence to this policy is contrary to the normally strong stance that countries like Norway, Sweden, Denmark and Canada take towards international and humanitarian law. The International Court of Justice gave an advisory opinion in 1996 that “the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law”¹²⁸. The current stance of these states towards the first use policy is therefore severely out of step with the rest of their foreign policy and should be altered immediately.

Defining the “Nuclear” in Nuclear-Weapon-Free Zone

Weerakoon-Gonnewardene cautions that when drafting the Arctic NWFZ Treaty “it would be necessary to define this term ‘nuclear weapon’ very carefully. Usually it applies to nuclear bombs and warheads – explosives – only”¹²⁹. Clearly, when defining what “nuclear” means in the context of a Nuclear-Weapon-Free Zone it is necessary to make sure that the scope is broad enough so that it is not possible for states to quickly rebuild their nuclear weapons capacity again after they are dismantled¹³⁰. Therefore, it is recommended that “nuclear” should include prohibiting conventional weapons attacks on nuclear installations and nuclear weapons related research, but should not include the civilian use of nuclear material for energy purposes.

Not only should an Arctic NWFZ prohibit the use of nuclear weapons, but it should also prohibit conventional weapons attacks on nuclear installations. This is because the environmental and health fallouts from the latter would resemble the former. It is also necessary to decommission nuclear weapons facilities. This will help to ensure that once nuclear weapons are removed from the zone, they will be unlikely to return.

In addition, because one of the goals of the NWFZ is to create movement towards a complete abolition of nuclear weapons, the treaty should include prohibitions on the conduct of nuclear weapons related research. This seems like a logical conclusion, but to date the existing NWFZ treaties have been “weak or silent” on this provision¹³¹. The Arctic region has been the theatre of large-scale nuclear testing, especially in the 1950s¹³². The Treaty should end this practise by including a provision affirming all zonal states support for the *Comprehensive Test Ban Treaty*, which has yet to come into force, because the necessary states have not yet ratified¹³³. The United States, specifically, needs to ratify the CTBT, as the Senate failed to vote in large enough numbers for ratification when it voted in October 1999¹³⁴. President Obama committed his administration to bringing about the quick ratification of this treaty in his Prague speech in April 2009, so there is hope that US ratification is forthcoming. Furthermore, it is relatively simple to verify that no tests have been carried out, because of the sophistication of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO). This organization includes 337

¹²⁷ Japan's Initiative for Mutual Assured Dependence. *Toward Nuclear Disarmament and Non-Proliferation: 10 Proposals from Japan*. Global Partnership of Japan Foundation, 2009.

¹²⁸ Evans and Kawaguchi, p. 59.

¹²⁹ Weerakoon-Gonnewardene, p. 28.

¹³⁰ Podcast: *Her Majesty Queen Noor and Ambassador Richard Burt discuss Zero at LSE*.

<http://www.globalzero.org/en/podcast-her-majesty-queen-noor-and-ambassador-richard-burt-discuss-zero-lse> (accessed March 25, 2010).

¹³¹ Hamel-Green, p. 13.

¹³² Vartanov, p. 73.

¹³³ Evans and Kawaguchi, p. 82.

¹³⁴ Evans and Kawaguchi, p. 102.

monitoring systems and has proven itself sensitive enough to detect even the smallest of nuclear tests¹³⁵.

While it is important to safeguard against nuclear installations becoming targets and research into nuclear weapons technology, a NWFZ in the Arctic should in no way interfere with a member state's ability to use nuclear technology for peaceful civilian purposes. Experts predict a doubling of nuclear power plants by 2030 and both the *Non-Proliferation Treaty* and the existing Nuclear-Weapon-Free Zone treaties do permit for the peaceful application of nuclear energy¹³⁶. Nuclear energy is deemed integral to the strategy to produce energy at a lower greenhouse gas emissions rate, so as to address the catastrophic effects of climate change¹³⁷. However, there are those who would argue that there is a direct correlation between increased nuclear energy production and the proliferation of nuclear weapons. Kate Hudson goes as far to say that "increasing nuclear power and decreasing nuclear weapons is an oxymoron" and the respected former President of the USSR Mikhail Gorbachev has called for the elimination of "all aspects of energy programs that have a nuclear use"¹³⁸. Equally there are those who argue that "not even a tenfold increase in power reactors will have a significant impact on nuclear proliferation"¹³⁹. However, signatories to the *Non-Proliferation Treaty* have the obligation not to divert nuclear technology from peaceful uses to military purposes¹⁴⁰. Since, the goal of the Nuclear-Weapon-Free Zone is not to get rid of all nuclear installations it is to protect citizens against the destructive power of nuclear weapons the choice of whether a zonal state chooses to use nuclear technology for *peaceful* purposes should be the choice of the individual state.

Verification Procedures

Due to the fact that the NWFZ treaty envisioned by this paper allows for the peaceful civilian use of nuclear technology, while making illegal the production and testing of nuclear weapons technology an essential element of the framework must be verification procedures to ensure that these differences are being respected. The verification system must ensure that all parties are complying with the conditions of the treaty.

There are several areas that should be subject to verification. First, zonal states should be subject to surveillance to ensure that their peaceful activities, including those related to nuclear energy, are not being diverted towards nuclear weapons¹⁴¹. Second, that all nuclear weapons present in the zone had been removed and that there has been no new deployment of nuclear weapons in the zone¹⁴². Due to the fact that the geographical boundaries that were delineated for the zone included all airspace, adjacent seas, and international waters it is also necessary to put in place verification procedures to

¹³⁵ For example, when North Korea did a small-scale test in 2006, 22 IMS seismic stations (including one 7,000km away) detected the test and a minute quantity of gas was even detected in Canada twelve days later, according to Evans and Kawaguchi – p. 104.

¹³⁶ Fréchette, Louise. "Global Governance and the Future of Nuclear Energy." Toronto: Munk Centre, March 3, 2010; Prawitz, p. 6.

¹³⁷ Fréchette.

¹³⁸ Podcast: Her Majesty Queen Noor and Ambassador Richard Burt discuss Zero at LSE.

<http://www.globalzero.org/en/podcast-her-majesty-queen-noor-and-ambassador-richard-burt-discuss-zero-lse> (accessed March 25, 2010). Gorbachev.

¹³⁹ The type of nuclear reactor used by states has a significant impact on the likelihood that reactors can contribute to non-proliferation. Therefore, states should be encouraged to use those technologies least adaptable to creating nuclear weapons – See: Evans and Kawaguchi, p. 50-55.

¹⁴⁰ Evans and Kawaguchi, p. 83.

¹⁴¹ Prawitz, p. 6.

¹⁴² Prawitz, p. 6.

make sure that other states are not transiting the zones with nuclear weapons. This is essential for the credibility of the zone, because it is not only necessary to have the zonal states keep nuclear weapons out of the zone, but that there are no nuclear weapons in the zone – period¹⁴³.

The form of the verification regimes of the existing Nuclear-Weapon-Free Zone treaties vary. The preferable model is that of the Latin American NWFZ. It sets up a permanent organization to oversee verification. The benefit of this model is that the verification is ongoing and not ad hoc. It helps to sustain the political will that gave rise to the regime in the first place, by keeping the issue in the mind of the political leadership. Hamel-Green argues that “the creation of a similar agency for an Arctic zone would be particularly important in view of the need to promote and secure enduring regional and international commitment to simultaneous efforts to address nuclear, environmental, resource and indigenous issues”¹⁴⁴. Consequently, it is recommended that such an organization be established in the Arctic, with the required resources to do its important verification job.

A benefit of a permanent verification organization is that it can adapt to new technologies to expand how it verifies that nuclear weapons are not in the zone. For example, since submarines are the main delivery system for nuclear weapons critics would point out that detecting submarines is a “nearly impossible” task and that for this reason the existing NWFZ treaties have chosen to make no reference to submarines transiting its region¹⁴⁵. The technology may not currently exist to ensure that there are no submarines under the Arctic ice, but that is not to say that this technology cannot be developed. When it is the organization can incorporate it into its verification procedures, without having to go back to all the zonal states and get their agreement to an additional protocol to the NWFZ. The mandate of the organization should include provisions that allow it to adapt to evolving technologies.

An additional benefit of the permanent organization model is that it can liaise with the existing Nuclear-Weapon-Free Zones, as well as the leadership of various regions and nuclear weapons states. Best practises can be shared through these contacts and cooperation will help to make sure that the zones are not violated through information-sharing. The success of this network of organizations whose mandate it is to ensure that nuclear weapons are not used it is hoped that eventually this will result in a complete and total abolition of nuclear weapons.

Moreover, the Arctic Treaty verification procedures should also take lessons from the Antarctica Treaty. Under the provisions of the Antarctica Treaty each signatory has the ability to send observers to check out all bases within the zone to ensure compliance. This has proven to be a powerful confidence building measure in Antarctica and should be replicated in the Arctic¹⁴⁶.

Verification procedures are the key to the success of a Nuclear-Weapon-Free Zone. The verification procedures should be extensive. A permanent organization will facilitate a strong and robust verification regime. If this happens it will go a long way towards creating a positive political environment for a movement towards a global abolition of nuclear weapons.

Surveillance Systems

Not only are verification procedures essential to the success of a Nuclear-Weapon-Free Zone, but so are surveillance measures to ensure that the zone is not breached and that the zone is free from conventional weapons threats. Surveillance is underdeveloped in the Arctic and in the need of

¹⁴³ Weerakoon-Gonnewardene, p. 29.

¹⁴⁴ Hamel-Green, p. 9.

¹⁴⁵ Wallace and Staples, p. 13.

¹⁴⁶ De Queiroz Duarte, p. 7.

development. Joint surveillance mechanisms – in the air and under the sea – combined with information sharing should be included in an Arctic NWFZ Treaty as a confidence-building measure between the participating states.

Zonal states should initiate a joint system of aerial patrols. Russian aircraft have consistently been flying over the Arctic Zone. The Canadian General Renuart has said that “from the end of the Cold War to 2006, there were 10 or 11 or 12 Russian patrols up in the Arctic region. Since 2007, there have been a total of 30”¹⁴⁷. Similarly, NATO aircraft frequently flew in Arctic airspace during the Cold War, causing concern in Soviet military circles¹⁴⁸. Instead, of having these flights be of concern to the security of both major factions in the Arctic, these aircraft should be flying wing-to-wing jointly patrolling the vast Arctic. In addition to patrolling together, these aircraft can also participate in joint responses to potential aircraft highjackings over Arctic airspace and joint search and rescue drills¹⁴⁹.

Joint surveillance patrols are warranted not only in the air, but also under the sea. Surveillance under the Arctic ice is a complicated task. Much of the traditional military technology is not capable of acting in the specific conditions of the Arctic. For instance the Arctic Ocean is “noisy”. Grinding and cracking of the sea ice means that acoustic monitoring methods and sonar devices are unable to function effectively¹⁵⁰. Moreover, the opaqueness of the ice means that visual monitoring is not a suitable alternative¹⁵¹. There is a need to install advanced underwater listening system to verify that nuclear weapon capable submarines are not in the Arctic. Such systems are quite costly. For example, Canada attempt to build an underwater network of listening devices in order to track the nuclear submarines transiting its area, but the hundreds of million dollar price tag meant that the project did not go through¹⁵². This left Canada with no means of knowing whether a foreign submarine was in its waters¹⁵³. As such, there would be no way to respond perceived threats, because they would not know that they exist. The cost of the surveillance systems and the vast territory to be covered means that all zonal states would be better served by joint patrols.

These joint patrols should undertake the kinds of activities that are currently being carried out under the Proliferation Security Initiative (PSI). The PSI is an American initiative started in May 2003. It aims to intercept ships, aircrafts and vehicles that are believed to be carrying nuclear weapons, as well as other weapons of mass destruction. It does so by allowing the ninety-five signatory states to detain and search suspicious vessels as they enter their territory, waters or airspace. However, many question the validity of this agreement saying that it unnecessarily interferes with the freedom of navigation¹⁵⁴. Therefore, to provide it with increased legitimacy it should be included within the Nuclear-Weapon-Free Zone Framework, so that it will be sanctioned under the United Nations regime.

In the interest of verification measures and joint surveillance of the region, a NWFZ Treaty should also include information sharing procedures as a confidence-building measure. For example, NATO notifies member states’ submarines of other submarines that are in the area that they are in. However, it only notifies submarines that are in the same area¹⁵⁵. It would be possible to expand this program to include

¹⁴⁷ Staples, p. 3.

¹⁴⁸ Atland, p. 298.

¹⁴⁹ Westdal, p. 29.

¹⁵⁰ Freidheim, p. 496.

¹⁵¹ Young, p. 163.

¹⁵² Staples, p. 4.

¹⁵³ Huebert, p. 9.

¹⁵⁴ Wallace and Staples, p. 96-97.

¹⁵⁵ Huebert, p. 10.

sharing information with Russia and all other zonal states. It would not be necessary to share information about where all NATO submarines are globally, but could limit its information sharing to the Arctic. In addition to this, zonal states could voluntarily share with other Treaty signatories with the surveillance related information that they gather from their individual tracking systems¹⁵⁶.

To summarize, in addition to the intensive verification procedures that should be in place in an Arctic Treaty to ensure compliance with its conditions, the zonal states should also work together to jointly survey the Arctic. This would be a significant confidence-building measure, as well as providing the functional benefit of being better able to cover the millions of kilometres of the Arctic through a pooling of resources.

Search and Rescue (SAR)

Michael Byers in “An icy SOS, our tepid response” explores the need for increased Search and Rescue (SAR) capabilities by illustrating the story of David Idlout an Inuit hunter who survived three days at thirty below zero after being caught on an ice floe drinking away from the shore. While Idlout, according to Byers was “...as comfortable as a city dweller on a broken-down bus”, for him the incident raised questions about what would happen if non-Inuit, for example, the dozens of cruise ships that head North with their large numbers of elderly patrons or the ever-more present commercial flights that take “transpolar” or “high latitude” routes were to have an unfortunate accident. Writing about Canada, Byers argues that the 2700km that SAR aircraft have to traverse to get to the North from their base in Winnipeg is simply too much to adequately deal with SAR requirements when they do arise¹⁵⁷.

The Arctic Council has recognized this as a potential issue. Representing the Arctic Council the Norwegian Foreign Minister Jonas Gahr has said, “As human activity in the Arctic increases, we need new policies”. In its Tromso Declaration, the Arctic Council has therefore decided to negotiate an international instrument on Search and Rescue. The Declaration “approve[ed] the establishment of a task force to develop and complete negotiation by the next Ministerial meeting in 2011 of an international instrument on cooperation on search and rescue operations in the Arctic”¹⁵⁸.

As part of the Task Force the Coastal Response Research Centre out of the University of New Hampshire convened a conference in cooperation with the United States Coast Guard Office of Spill Planning and Preparedness and the United States Research Commission in order to identify strategies relating to both SAR and environmental cleanup in the Arctic. The Conference Report highlighted key issues, such as the fact that much of the tourist ships transiting the region fly flags of convenience, the age of many of the passengers, language barriers and the fact that no all-encompassing multilateral SAR treaty exists. Among their many recommendations, the Arctic Council should pay careful attention to the following :

1. Conclude an Arctic Search and Rescue Agreement that includes all Arctic nations.
2. Establish an integrated response management centre to coordinate SAR among all Arctic states.
3. Perform regular multilateral drills to practise SAR techniques in the Arctic.

¹⁵⁶ An example of this would be the information that Canada has been gathering since May 2009 through its RADARSAT II program. RADARSAT II tracks surface vessels that are present in Canada’s northern waters. Moore, p. 18.

¹⁵⁷ Byers, Michael. *An icy SOS, our tepid response*. January 27, 2010. <http://byers.typepad.com/arctic/2010/01/an-icy-sos-our-tepid-response.html> (accessed March 22, 2010).

¹⁵⁸ Arctic Council. *Tromso Declaration*. April 29, 2009. <http://arctic-council.org/filearchive/Tromsoe%20Declaration-1..pdf> (accessed March 22, 2010).

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4. Work to improve and update navigational charts to reduce the risk that SAR activities will need to be undertaken and improve their capacity to respond when they are.
5. Impose a tariff on ships operating in the region to cover the immense costs of SAR activities in the Arctic's unique climate.
6. Designate ports of refuge and rank them based on seasonal environmental conditions.
7. Develop a system for quickly deploying supplies in order to relieve the stress on local resources, which can be overwhelmed quickly¹⁵⁹.

It would also be instructional for the Arctic Council to pay attention to lessons learned in the Antarctic, where the Antarctica Treaty sets up five Rescue Coordination Centres (RCCs) in the five countries which share responsibility for SAR activities in the region: Argentina, Australia, Chile, New Zealand and South Africa. They have found that it would be beneficial to receive and regularly monitor position reports – one in the morning and one in the evening – rather than having to look for the information when an emergency occurs¹⁶⁰. This kind of practical experience is instructive for the Arctic Council as it seeks to establish an expanded Arctic SAR capability and the two organizations should liaise with one another. The very structure of the RCCs should also be replicated in the Arctic.

Expand the Rangers

One useful idea in responding to the heightened threats of accidents, oil spills, cruise ship difficulties in the Arctic is to better utilize traditional know-how by providing the Arctic Rangers with increased resources and training. The Arctic Rangers are a group of approximately 4000 Aboriginals in the Canadian North who use traditional survival skills, snowmobiles and vintage riffles to patrol the north¹⁶¹. They should be adequately equipped and trained to be first responders to deal with these kinds of emergencies. If this idea has merit in Canada, the Arctic Rangers program should be expanded into a pan-Arctic initiative, so that the vast Arctic is more adequately monitored. This program has proven to be a cost-effective means of patrolling a vast territory, while taking into consideration the traditional practises of the residents of the Arctic. Therefore, the Rangers should become a pan-Arctic program to provide surveillance and emergency response to the vast and generally unpopulated Arctic regions.

The Non-Nuclear Military Presence in the Arctic

Complete demilitarization of the Arctic is not a realistic option, nor does a Nuclear-Weapon-Free Zone require such. Confidence-building measures already exist in the Arctic and these combined with new measures should be supported and enhanced in order to reduce the likelihood of military incidents in the Arctic¹⁶². The Canadian Department of Foreign Affairs and International Trade has explicitly stated that “the Government does not support the demilitarization of the Arctic, as this would entail an abandonment of the Canadian military presence in the north. A degree of military watchfulness across the Pole is therefore likely to be a more or less permanent feature of circumpolar reality”¹⁶³. This is a

¹⁵⁹ Coastal Response Research Centre. *Opening the Arctic Seas: Envisioning Disasters and Framing Solutions*. Durham: University of New Hampshire, 2008.

¹⁶⁰ Antarctic Treaty Consultative Meeting. *Towards Improved Search and Rescue Coordination and Response in the Antarctic*. April 17, 2009. http://www.comnap.aq/publications/comnapatcm/2009/32atem_up047_search-and-rescue-workshop_en.pdf (accessed March 22, 2010).

¹⁶¹ CTV. “Denmark calls for Talks on Arctic Island Dispute”. http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1122473659796_117882859/?hub=TopStories (accessed: March 22, 2010).

¹⁶² The Arctic Governance Project, p. 14.

¹⁶³ Department of Foreign Affairs and International Trade. *Toward a Northern Foreign Policy for Canada*. September 1998. <http://www.international.gc.ca/polar-polaire/final4.aspx?lang=en> (accessed January 28, 2010).

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correct assessment as the military plays an important role in aiding the civilian power in the unique climate of the Arctic. Militaries are used to support civil authorities in responding to natural and human-caused disasters, as well as serving search and rescue functions. The latter is becoming of growing importance because of the increase in air traffic transiting the area. The number of over-flights is expected to grow further upon Russia opening its northern airspace to international aviation¹⁶⁴.

Moreover, a continuing military presence in the Arctic is warranted, because while a Nuclear-Weapon-Free Zone seeks to eliminate nuclear weapon related threats, its conclusion does not mean that the Arctic region will become free from all threats. There will remain security threats involving non-state actors, including for example, drug smugglers¹⁶⁵. This may seem somewhat far-fetched when the harsh environment and expansive distance is taken into account¹⁶⁶. It is true that it is much more likely that a non-state actor would attempt to gain access through southern approaches, but it is also conceivable that if all of these approaches were adequately clogged (which is the intent of many of the post-9/11 security initiatives) that they might be willing to try to gain access through an undefended north¹⁶⁷. Nuclear weapons have little utility in deterring incidents of this kind, but there is still a role for conventional forces to play.

While the Arctic environment still warrants an active military presence, there are confidence building measures that should be taken to help to facilitate the political will that is necessary if a NWFZ treaty is to become reality. A few have already been mentioned, including joint patrols and information sharing. Another would be to have joint exercises between zonal states. For example, Danish officers have recently participated in a Canadian military exercise on Ellesmere Island¹⁶⁸. For this approach to be truly effective, however, considerations should be given to holding joint NATO-Russia exercises in the Arctic. Such an exercise could be accommodated under the existing Partnership for Peace initiative. At a more basic level zonal states should notify one another before they undertake major military exercises within the territory covered by the zone and should invite other states to send observers, in incidences where the practising military does not wish to fully integrate foreign officers into their exercises for whatever reason¹⁶⁹.

In addition to joint measures, it may be in all Arctic countries interest to initiate a joint program of military research in the Arctic. Much of the traditional military technology is unable to function fully under the extreme weather conditions which are found in the North. For instance, this paper has already explained how listening devices are not fully functional in the Arctic. There are significant financial costs associated with developing new technologies. As a confidence-building measure, therefore, zonal states could share the financial burden of developing these technologies.

Demilitarization is not a likely option for the Arctic, because of the role that militaries play in supporting the civilian authorities in this unique climate. Confidence-building measures are therefore required in

¹⁶⁴ Department of Foreign Affairs and International Trade. *The Northern Dimension of Canada's Foreign Policy*. <http://www.international.gc.ca/polar-polaire/ndfp-vnpe2.aspx> (accessed January 28, 2010).

¹⁶⁵ Byers. *Wanted: mid-sized icebreakers, long-range choppers, perspective*. http://www.pugwashgroup.ca/index.php?option=com_content&view=article&id=153:cooperate-in-the-arctic&catid=39:the-arctic&Itemid=79 (accessed January 19, 2010).

¹⁶⁶ Moore, p. 8.

¹⁶⁷ Huebert, p. 17.

¹⁶⁸ White, Patrick. *Danes Join Canadians in the Arctic*. <http://www.theglobeandmail.com/news/national/danes-join-canadians-in-arctic-mission/article1488994/> (accessed: March 24, 2010).

¹⁶⁹ Atland, p. 299.

order to help create and sustain the political will required for a Nuclear-Weapon-Free Zone in the Arctic. This should include such things as joint exercises and common research initiatives.

Non-Nuclear Weapons of Mass Destruction

Rydell writes that, “history is replete with countless other instances of military implements each in its day heralded as the last word – the key to victory – yet each in its turn subsiding to its useful but inconspicuous niche. Today machines hold the place formerly occupied by the jawbone, the elephant, armour, the long bow, gun powder, and latterly, the submarine. They too shall pass”¹⁷⁰. This is to say that decreasing nuclear weapons in the Arctic should not culminate in a race towards developing a new weapon of mass destruction or a build-up of conventional forces in the region¹⁷¹.

Conclusion

This section has provided a proposed framework for an Arctic Nuclear-Weapon-Free Zone Treaty. It recommends that the geographical limits of the treaty encompass Alaska, Northern Russia, as well as the entire territories of Canada, Iceland, Norway, Sweden, and Finland. In addition to the land, airspace, adjacent seas, including the Arctic Ocean, seabeds, continental shelves and international waters should all be covered by the treaty. The definition of “nuclear” needs to be as clearly defined as does the geographical scope. Nuclear-Weapon-Free in the context of the zone should mean prohibiting attacks on nuclear installations, as well as the prohibiting nuclear weapons in the traditional forms. Intensive verification procedures based on the Latin American NWFZ Treaty model should be set up to ensure compliance with the treaties requirements and extensive cooperation in terms of surveillance should occur in order to support these procedures.

¹⁷⁰ Randy Rydell. “The Future of Nuclear Arms: A World United and Divided By Zero”.

¹⁷¹ Japan’s Initiative for Mutually Assured Dependence. “Towards Nuclear Disarmament and Non-Proliferation: 10 Proposals From Japan”.

Confidence-Building Measures

Make no mistake, while creating a zone free of nuclear weapons makes sense in light of destructive power of nuclear weapons and the human suffering they can cause, it will still not be easy for states, especially the world's two largest nuclear powers, to give up what many within their jurisdictions still see as the safety of the nuclear umbrella. It is precisely for this reason that extensive and far-ranging confidence-building measures must accompany any attempts to reach an agreement on setting up a Nuclear-Weapon-Free Zone throughout the Arctic.

Avoid Measures That Do Not Build Confidence

Not only is it important to build confidence. It is also important to avoid activities that reduce confidence. The Arctic has been a scene of too many of these kinds of incidents in the recent past. These range from grandiose stories of invaded airspace, titanium flag planting on the seabed floor, and the burying of bottles of spirits.

One example is that a Canadian news source reported in 2007 that, "from the vast expanses of the Pacific to the icy reaches of the Arctic, the Russian bear is back and playing its Cold War game of aerial cat and mouse with U.S., British and Canadian fighter aircraft"¹⁷². The same media report goes on to say that the Russians had flown just up to Canadian airspace to test how long it would take NORAD (North American Air Defence System) to respond¹⁷³. While the Canadian government was not the source of this story they did do anything to dispel this version and perhaps even promoted it. An alternative version was offered by the US Commander of NORAD, General Gene Renuart who said that "the Russians have

¹⁷² Canwest Mediaworks. *A Cold War relic returns*. August 2007.

<http://www.canada.com/nationalpost/news/story.html?id=3e41d966-03e9-4c29-87a0-06bde9f1229d&k=0> (accessed January 26, 2010).

¹⁷³ CanWest Mediaworks.

conducted themselves professionally; they have maintained compliance with the international rules of airspace sovereignty and have not entered the internal airspace of either of the countries” and the former UN ambassador for disarmament and Canada’s former Ambassador to Russia Christ Westdal added that Canada “should stop picking fights where none need be with Russia”¹⁷⁴. This is because the Russians did give advanced warning to the United States under the regulations of the 1991 START Agreement. Therefore, the fact that Canada did not know about the flights was a NORAD problem, not a case of the Russians wanting to take brash action in the Arctic¹⁷⁵. However, the fact remains that Russian pilots continue to train for nuclear missions, even in the Arctic and according to Wallace and Staples, “the increased activity of Russian aircraft in the Arctic is part of a carefully designed signal that Russian claims in the Arctic will be pursued with great vigour, and enforced if necessary with military might”¹⁷⁶.

Another incident occurred in 2007 when during a Russian election campaign the Kremlin dispatched a nuclear-powered icebreaker accompanied by two nuclear submarines to plant a titanium flag on the North Pole’s Sea floor¹⁷⁷. This move caused significant outrage among the general public, with one public opinion poll stating that 56% of Canadians wanting to “plant a flag on the Arctic Seabed, just as Russia did”¹⁷⁸. This is not the only public relations stunt occurring in the Arctic, however. Canada and Denmark have an outstanding dispute over tiny Hans Island. Michael Byers explains that “The Danes always leave a bottle of schnapps for us there, and we in turn leave them a bottle of Canadian Club”¹⁷⁹. These sorts of incidents do not build confidence among the relevant actors in each other’s intentions and they must stop.

Added on top of these political stunts is an unhelpful political rhetoric. The Canadian Prime Minister Stephen Harper has stated repeatedly that, “Canada has a choice when it comes to defending our sovereignty over the Arctic. We either use it or lose it. And make no mistake, this government intends to use it”¹⁸⁰. In addition, Canadian government communications have increasingly referred to Canada as an “Arctic Power”¹⁸¹. This kind of rhetoric only seeks to harden the stance of the other political actors. It is at its core unhelpful, as are actions by Russian flying up to NORAD airspace, flag planting and the burying of bottles of liquor. These actions threaten the Nuclear-Weapon-Free Zone project by making scoring political points contingent on bold and rash moves in the Arctic rather than for combating the threat that nuclear weapons pose. The benefits of a Nuclear-Weapons-Free Zone are to be reached these anti-confidence-building measures must stop.

Stand Down of the Nuclear Arsenals

A confidence-building measure that should be adopted to promote goodwill during the negotiations of the treaty for the NWFZ in the Arctic is for both Russia and the United States to stand down their

¹⁷⁴ Staples, p. 2.

¹⁷⁵ Wallace and Staples, p. 4.

¹⁷⁶ Wallace and Staples, p. 5.

¹⁷⁷ Byers, Michael. *Russia and Canada: Partners in the North?* December 2009.

http://www.pugwashgroup.ca/index.php?option=com_content&view=article&id=187:russia-and-canada-partners-in-the-north&catid=39Lthe-arctic&Itemid=79 (accessed January 19, 2010); Borgerson; Fenge and Penikett, p. 66.

¹⁷⁸ Angus Reid. *Canadians Adamant on Arctic Sovereignty*. August 22, 2008. http://www.angus-reid.com/polls/view/canadians_adamant_on_artic_sovereignty/ (accessed October 8, 2008).

¹⁷⁹ White, Patrick. “Danes join Canadians in Arctic Mission” March 2009, <http://www.theglobeandmail.com/news/national/danes-join-canadians-in-arctic-mission/article1488994/> (4 March 2010).

¹⁸⁰ CNN. *Canadian PM vows to defend Arctic*. August 2007.

<http://www.cnn.com/2007/WORLD/americas/08/09/canada.arctic.ap/index.html> (accessed: October 8, 2008).

¹⁸¹ Michael Wallace and Steven Staples, p. 4.

nuclear weapons from high alert status¹⁸². Much of the two powers nuclear arsenals remain on high alert status, which is a holdover from the Cold War. The situation is extremely dangerous. These systems have almost failed on several occasions¹⁸³. The world is actually quite lucky that there has not yet been an accidental deployment of nuclear weapons. It is almost hard to believe that there has not yet been an accident when the timelines that the leadership has to make the decision of whether or not to deploy weapons is analyzed¹⁸⁴. In the United States, military personnel have only two to three minutes to determine if a warning that appears in the system is valid. They then have ten minutes to locate and advise the President on the situation. This means that the total time from detection to deployment is approximately twenty-minutes. Twenty minutes to make a decision that will cause a 300 foot deep and 1,200 foot diameter crater with a fire ball stretching half a mile in diameter taking hundreds of thousands of lives¹⁸⁵. In addition to taking these weapons off of high alert they should have their guidance systems unfixed from targets within the other proposed zonal states' territories. The stepping down of the nuclear weapons' status and the unfixing of the target systems are both positive confidence-building measures that should be put in place while the NWFZ in the Arctic is under negotiation.

Diplomatic Resources

Negotiating the Nuclear-Weapon-Free Zone and arranging the associated confidence-building measures will be a labour intensive job. There will be much to do for all the diplomats involved. In order to show a real commitment to the zone and to facilitate a positive relationship between the countries involved diplomatic resources for such a project should be substantial and sufficient to get the job done. This could take the form of appointing an Ambassador for the Circumpolar Region by each of the countries involved. The Office of the Circumpolar Ambassador is not a new idea. Canada used to have this position before it was disbanded by the current Harper Government¹⁸⁶. However, when the office was established it was designed to enable the government to conduct outreach activities within the country, so that all Northern constituents were kept aware of issues transpiring in Circumpolar affairs and provide information about the government's response to them. In addition to this task, the Circumpolar Ambassador contributed to the country's stance on Circumpolar issues¹⁸⁷. By appointing an Ambassador to specifically deal with Arctic-related issues, the countries of the region would be sending a strong message that the conclusion of a NWFZ and the implementation of the advised CBMs is a priority and will not be lost within all the other work that foreign ministries have going on. As such, it would be necessary to appoint an Ambassador that has the ear of the country's leadership.

Providing the opportunity for people-to-people contacts is an important confidence-building measure. These contacts need to happen at the elite level, but they also need to happen at the more grassroots level. Researchers should be encouraged to meet with other researchers from across the region and the Indigenous population should be encouraged to strengthen their ties with one another. Such people-to-people contacts, however, require consular services and support. This includes being assured access to the various regions, which has historically been an issue. For example, as late as the mid-2000s access to areas of Barents and Kara Seas was denied by Russia to Norwegian fishery research vessels¹⁸⁸. There are an abundance of quality research facilities that are being built by the various Arctic governments and in

¹⁸² Gorbachev.

¹⁸³ Fraser.

¹⁸⁴ Kataoka Katsuko.

¹⁸⁵ McNamara, Robert S. "Apocalypse Soon." *Foreign Policy*, 2005: 29-35.

¹⁸⁶ Fenge and Penikett, p. 68.

¹⁸⁷ Graham.

¹⁸⁸ Atland, p. 302.

the interest of collaboration researchers should have access to these facilities¹⁸⁹. However, increased people-to-people ties also require diplomatic and consular support. Action should be taken to strengthen consulatory presence across the region to provide support for those who wish to explore areas outside of their home in the Arctic¹⁹⁰.

Furthermore, special visa arrangements should be made to facilitate cross-border exchanges where zonal states do not enjoy visa-free travel with one another, building on the positive example of the Bering Strait Regional Commission, which was set up in 1989 between the United States and the former Soviet Union. Under the auspices of this organization, an agreement was signed in 1992 giving the Indigenous inhabitants from Iultinsky, Providensky, Chukotsky Rayons, and the eastern part of Anadyrsky Rayon in Russia the ability to travel visa-free for up to ninety days to Alaska¹⁹¹. Similarly, the Nordic Saami Convention, which “hold[s] the vision that the national boundaries of the states shall not obstruct the community of the Saami people and Saami individuals” should be supported as an important confidence-building measure. To facilitate the Saami vision and cross-border Arctic travel, an expansion of organizations like the Bering Strait Regional Commission should be underway¹⁹².

Harmonization of Policies on Arctic-Related Issues

Another confidence-building measure that should be implemented in the lead-up to the negotiations for a Nuclear-Weapon-Free Zone in the Arctic is a harmonization of policies in the areas pertinent to the Arctic. This will get states from the region “on the same page”. The first step towards doing this is a ratification of the relevant international agreements¹⁹³. Most prominently, the United States Senate should ratify the *United Nations Convention on the Law of the Sea*. This would facilitate the peaceful resolution of the sovereignty dispute, as the *Ilulissat Resolution* indicates the zonal state’s commitment to have it arbitrate the issue. This is because without ratifying UNCLOS the United States cannot formally assert rights beyond its exclusive economic zone nor can it address the United Nations Commission which adjudicates on such claims¹⁹⁴. Therefore, in order to ensure a peaceful resolution of the sovereignty disputes and thus create a positive environment for the conclusion of a NWFZ Treaty in the Arctic.

In addition to ensuring that the zonal states have ratified the relevant international treaties, it would also be a prudent confidence-building measure for Arctic states to harmonize regulations on issues that are of concern to all. This could include designing a common code for ship design for vessels operating within Arctic waters. Such a code would lay out the required hull thickness, engine strength and navigation equipment that vessels must have if they wish to transit the Arctic¹⁹⁵. This code would work to reduce the likelihood of costly accidents in terms of both the environmental and human costs. Such

¹⁸⁹ For example, Norway has set up a world-class research facilities in the Svalbard Islands in the North Atlantic – Kaludjak, Paul. *Sovereignty and Inuit in the Canadian Arctic*. November 18, 2006. <http://www.arcticpeoples.org/2006/11/18/sovereignty-and-inuit-in-the-canadian-arctic/> (accessed October 8, 2008).

¹⁹⁰ Graham.

¹⁹¹ Visa-free travels between Chukotka and Alaska. http://www.chukotka.org/en/no_visa/ (accessed: April 6, 2010).

¹⁹² Nordic Saami Council. *Nordic Saami Convention Translation 2006*, <http://www.saamicouncil.net/?newsid=2223&deptid=2192&languageid=4&news=1> (accessed: April 6, 2010).

¹⁹³ Graham.

¹⁹⁴ Borgerson.

¹⁹⁵ Borgerson.

coordination would facilitate cooperation and help to develop the positive working relationships that would be integral to concluding the negotiations of a NWFZ Treaty.

The Disposal and Safety of Nuclear Waste

Throughout the 1990s the international community provided substantial resources to Russia through the *Cooperative Threat Reduction Program (CTRP)* and the *G8 Global Partnership* to safeguard against threats towards its nuclear material and waste, especially that which exists in the fragile Arctic environment¹⁹⁶. The safe disposal of nuclear waste and safeguarding nuclear materials from falling into the wrong hands remains a grave concern¹⁹⁷. The high costs associated with such programs necessitates that programs such as the Cooperative Threat Reduction Program be supported financially by zonal states, so that the benefits of a NWFZ can be fully realized. As Nunn, Perry and Habiger have written the world needs to know that nuclear weapons are “safe, secure and accounted for”¹⁹⁸. This equally applies to nuclear waste.

The size of the challenge of nuclear waste in the Arctic should not be underestimated¹⁹⁹. For example, a decommissioned Russian nuclear submarine sunk into the Barents Sea with ten crew on board, as well as two nuclear reactors. Despite the fact that Russian officials assured the international community that there were no nuclear weapons onboard, concerns remained about the danger of nuclear contamination. This incident was not isolated, three years previously a nuclear submarine sank in the Barents Sea killing all 118 crew onboard²⁰⁰. International Atomic Energy Agency data indicates that there are 150 nuclear reactors in decommissioned submarines just waiting in the ports of Murmansk and Arkhangelsk waiting to be dismantled. Furthermore, the same agency estimates that there are more than 8500 tons of highly enriched spent fuel that needs to both be reprocessed and properly stored²⁰¹. Some estimate that there is enough uranium and plutonium in Russia to make 40,000 weapons²⁰². There are already eighteen nuclear reactors at the bottom of the ocean, which Russia dumped between 1958 and 1992 fully loaded with nuclear fuel²⁰³. These statistics are intended to reveal the sheer scale of the amount of nuclear waste in just the Russian Arctic and the enormity of the task of not only cleaning up this waste, but ensuring that it does not fall into the wrong hands.

Upgrading the security of the nuclear icebreaker fleet fuel storage facilities in Russia has been the subject of international cooperation since 1996. Icebreaker fuel is thought to be weapon-grade uranium²⁰⁴. There is concern in light of revelations that there has been extensive smuggling of fissile materials by the AQ Khan black market network, which facilitated the spreading of centrifuges for enriching uranium and Chinese nuclear weapons designs that all of the nuclear waste in the Russian

¹⁹⁶ Centre for Strategic and International Studies. “Geopolitics in the High North Project: Proceedings of the Global Challenges in the Arctic Conference”, p. 1).

¹⁹⁷ Schultz, George P, Perry J William, Henry A Kissinger, and Nunn Sam. "A World Free of Nuclear Weapons."

¹⁹⁸ Nunn, Sam, William Perry, and Eugene Habiger. *Still Missing: A Nuclear Strategy*. May 21, 2002.

<http://belfercentre.ksg.harvard.edu/files/nunnperryhabiger-wpost-052102.pdf> (accessed January 28, 2010).

¹⁹⁹ Gizewski, Peter. “Military Activity and Environmental Security: The Case of Radioactivity in the Arctic” in *Northern Perspectives*. Vol. 1, No. 4, p. 16-21.

²⁰⁰ BBC News. *Russian submarine sinks in Arctic*. August 2003. <http://news.bbc.co.uk/2/hi/europe/3193625.stm> (accessed January 26, 2010).

²⁰¹ Department of Foreign Affairs and International Trade. “Northern Dimension of Canada’s Foreign Policy”.

²⁰² Hurd, Douglas, Malcolm Rifkind, David Owen and George Robertson. “It won’t be easy, but a world free of nuclear weapons is possible”. *The Times*. June 30, 2008

²⁰³ Borgerson.

²⁰⁴ Burkharin, Oleg. "Russia's Nuclear Icebreaker Fleet." *Science and Global Security*, 2006: 25-31, p. 29.

Arctic that is not adequately protected could be stolen and/or directed toward extremist groups²⁰⁵. Experts have indicated while it may not be possible for extremist groups to create a fully fledged nuclear bomb from this material, but that it would be possible to create a “dirty bomb” that would cause significant loss of life. The psychological impacts that such an attack would have should not be underestimated²⁰⁶. Under United Nations Security Council *Resolution 1540* states are obliged to improve the security of their stockpiles and includes provisions to facilitate specialists being deployed to those countries that do not have the infrastructure or experience to deal with their stockpiles²⁰⁷. This could form the basis of cooperation to help Russia to secure its nuclear arsenal and waste.

Another major problem in this regard is that the number of experts trained in nuclear-related issues is rapidly diminishing²⁰⁸. This is caused by the changing demographics of the aging workforce and the fact that recruitment has not kept up with the retirement replacement rates²⁰⁹. The Three Mile Island and Chernobyl incidents made studying in the nuclear-related fields unpopular for a significant amount of time²¹⁰. Evans and Kawaguchi have written that, “it is simply not acceptable or safe that international assurance of non-proliferation is ultimately dependent on a handful of aging experts...”²¹¹. As part of the NWFZ CBMs the Arctic states should work together to recruit new nuclear professionals. This can be facilitated by joint educational programs. Such a program would not only assure that the costs of training are manageable, but will increase confidence because all zonal states will have access to the same nuclear-related information. This will reduce and hopefully eliminate scepticism that their neighbours are employing nuclear experts that are using their nuclear knowledge for weapons-related means, as was the case with AQ Khan network.

The enormity of the nuclear waste problem that needs to be dealt with and the deadly consequences of not resolving the issue make it crucial that this issue is resolved. All parties recognize the need to act, but the costs are prohibitive. The simple fact of the matter is that “the Russian Government cannot afford to keep them, but it also cannot afford to dispose of them safely, without international assistance”²¹². Consequently, Arctic states should extend technical and financial assistance to Russia to address this issue. It is expected that this investment will yield positive results by reducing the threat that the unsecure and untreated nuclear waste causes, while facilitating a positive relationship between Russia and the other Arctic states. For example, Canada and the United States have been working closely with South Korea to create a proliferation-resistant method of recycling spent fuel in what is known as the DUPIC process²¹³. It is exactly this kind of technology that a NWFZ would facilitate sharing, because it meets the common objective of ensuring safety through effectively dealing with nuclear waste issues.

Economic Integration

Due to the importance of the Arctic region to the Russian economy another key confidence-building measure is strengthening economic through the region. This could take the form of an Arctic Chamber of Commerce, but should reflect Indigenous beliefs, especially those related to sustainability. The

²⁰⁵ Fraser.

²⁰⁶ BBC News. “Russian submarine sinks in Arctic”.

²⁰⁷ Hurd, Douglas, Malcolm Rifkind, David Owen and George Robertson., “Start worrying and learn to ditch the bomb”.

²⁰⁸ Fréchette; Evans and Kawaguchi, p. 90.

²⁰⁹ Evans and Kawaguchi, p. 91.

²¹⁰ Evans and Kawaguchi, p. 91.

²¹¹ Evans and Kawaguchi, p. 91.

²¹² BBC News. “Russian submarine sinks in the Arctic”.

²¹³ Evans and Kawaguchi, p. 128.

Russian North is key to the success of its economy. President Medvedev has even gone as far to say that Russia's development and ability to remain globally competitive depends on its ability to extract resources from the Arctic²¹⁴. The Russian North accounts for 20 percent of Russia's GDP with only 8 percent of the Russian population²¹⁵. Due to the fact that the Russian economy is dependent on Northern resources an important confidence-building measure would be to facilitate a program of closer economic linkages. The premise behind this idea is the same of that which has contributed to over fifty years of peace in Europe, a continent that had previously been torn apart by two "wars to end all wars". This is to say that economic integration facilitates peaceful exchanges, because the costs of going to war would be too high.

A possible means of facilitating this economic integration would be to establish an Arctic Chamber of Commerce that would attract business to the area²¹⁶. The Barents Euro-Arctic Council would also be an appropriate venue for undertaking these types of tasks. The Barents Euro-Arctic Council is an intergovernmental organization launched in 1993 to encourage cooperation in order to ensure long-term stability in political and other relations. The Barents Euro-Arctic Council and its members: Denmark, Finland, Iceland, Norway, Russia, Sweden and the European Commission have worked with representatives from the Sami, Nenets and Vespians, as well as observer countries Canada, France, Germany, Italy, Japan, Netherlands, Poland, United Kingdom and United States to develop the region both socially and economically. Its permanent secretariat, which was set up in 2008 could serve as the organizational impetus to facilitate this economic cooperation²¹⁷. Whatever form this economic development takes it must be in congruence with Indigenous beliefs. This means respecting the health of the land, wildlife, plant and people²¹⁸.

Conclusion

Vital to creating the political will necessary to reach a conclusion on the treaty are confidence-building measures. These measures will create the confidence and facilitate the cooperation that is required for countries to work together to rid the Arctic region of nuclear weapons. Such measures as avoiding "stunts" like planting flags on the seabed floor, increasing diplomatic resources, harmonizing regulations and working jointly to deal with nuclear waste should occur immediately, but should also continue once the treaty is negotiated. To ensure that these projects continue it would be best to include some confidence-building measures within the treaty framework itself.

²¹⁴ Deutsche Welle. *Harper warns of Russian claims to Arctic*. September 2008. http://www.dw-world.de/dw/function/0,2145,12215_cid_3658520,00.html (accessed October 8, 2008).

²¹⁵ Department of Foreign Affairs and International Trade. "Northern Dimension of Canada's Foreign Policy".

²¹⁶ Department of Foreign Affairs and International Trade. "Northern Dimension of Canada's Foreign Policy".

²¹⁷ Barents Euro-Arctic Council. "Barents Euro-Arctic Council".

<http://www.beac.st/contentparser.asp?deptid=25225> (accessed: March 30, 2010).

²¹⁸ Joanne Barnaby in The Arctic Governance Project. "Arctic Governance Project (AGP) White Paper" January 2010, www.articgovernance.org (accessed February 2, 2010), p. 13.

Getting to “Yes”

The task of “getting to ‘yes’” is by no means an easy one. Hamel-Green, however, gives hope that this can be achieved when he writes that, “however, in all the existing zones, a number of factors, including skilful diplomats and visionary leaders, and, in some instances, vigorous grassroots campaigns from non-governmental academics, peace movements and indigenous communities, have, successfully won out against traditional arms race advocates of nuclear-based deterrence and ‘security’”²¹⁹. While there are opponents to the idea of a NWFZ in the Arctic, on balance the support is with the idea. The major players, Indigenous communities and civil society are all on board. For this reason, a NWFZ in the Arctic *is* possible.

What Are States Looking For?

What is it that states are looking for when it comes to nuclear weapons? They are looking for security²²⁰. Many states still ascribe to the Cold War way of thinking that says that they are more secure when they live under a nuclear umbrella. For example, Norway’s opposition to a Nordic NWFZ was stated as such: “with justification it can be argued that the prospects of the Nordic Nuclear-Weapon-Free Zone stand or fall to the degree that Norwegian security requirements can be satisfied”²²¹. Therefore, an important part of “getting to yes” is convincing states that the arguments made in the first section of this paper – that nuclear weapons are more of a security threat than a protection against security threats – are valid. If states believe that their security interests are better served by living within a zone without nuclear weapons, then they will sign on to the treaty with all of its incumbent rights and obligations.

The states of the Arctic region spent much of the last sixty years geographically and politically caught in between the two nuclear superpowers of the region – the United States and Russia. Oran Young has characterized this as a fear “of being sandwiched between the great powers in the Circumpolar

²¹⁹ Hamel-Green, p. 3.

²²⁰ Evans and Kawaguchi, p. 61.

²²¹ Weerakoon-Gonnewardene, p. 29.

North”²²². While the end of the Cold War went a long way towards alleviating these fears, the fact remains that for a nuclear weapon launched in the United States to reach Russia (were such a move ever contemplated) it would first have to fly over Canadian airspace. Any error in the guiding systems of these weapons could mean disaster for the Arctic states that are caught in the middle of any great power conflict. Due to the fact that these Arctic states do not possess nuclear weapons (nor do they intend to develop this capacity), they would be more protected from great power conflict with the conclusion of a NWFZ than are remaining under the US/NATO nuclear umbrella. Due to this fact, their signature to the treaty is likely forthcoming.

Achieving Government Buy-In

Integral to “getting to yes” is achieving buy-in from the highest echelons of the leadership in all Arctic regional states. While opponents do exist, there is a coalition of supports in the Canada, the Nordic countries, and yes, even in the United States and Russia.

Literally one minute before midnight of the day of Barack Obama’s inauguration, the Bush Administration issued a *National Security Presidential Directive (NSPD 66)*, which outlined a United States Arctic Region Policy. NSPD 66 stated that the United States should develop “greater capabilities and capacity” in the Arctic in order to protect US borders and that military vessel and aircraft mobility and transport throughout the Arctic should be preserved. Furthermore, it urged the Senate to ratify the United Nations Convention on the Law of the Sea to ensure military transportation and sovereignty over resource-rich areas²²³. This directive was important because it elevated the posture of the Arctic within American foreign policy priorities, which has the potential to expand even further when the United States assumes the chairmanship of the Arctic Council in 2015²²⁴. This lends additional weight to the United States as an actor in Arctic cooperation and it is imperative that Washington shows leadership in moving towards an Arctic Nuclear-Weapon-Free Zone treaty²²⁵.

The United States has previously laid down conditions for its support of any Nuclear-Weapon-Free Zone. There are three specific conditions that must be filled in order for the US to support a NWFZ. According to Wallace and Staples, these are:

1. The content of a NWFZ Treaty should in no way disturb existing security arrangements or interfere with the rights of individual or collective self-defence guaranteed to states under Article 51 of the UN Charter.
2. A zone should not affect the rights of the parties under international law to grant or deny transit privileges, including port calls and over flights.
3. No restrictions should be imposed on the high seas, freedom of navigation and over flights by military aircraft, the right of innocent passage through archipelagic seas, and the right of transit through international straits²²⁶.

Based on these criteria, it seems unlikely that the United States would sign on to the proposed ANWFZ, as all three conditions are contravened by the proposed treaty. The first is contravened by the fact that it calls for rethinking of the NATO Strategic Concept. The second and third are contravened because the goal of the zone is to deny transit to all vessels and aircrafts transporting nuclear weapons or materials.

²²² Graham.

²²³ Hamel-Green, p. 7.

²²⁴ Department of Foreign Affairs and International Trade. “Toward a Northern Foreign Policy for Canada”.

²²⁵ Borgerson.

²²⁶ Wallace and Staples, p. 10-11.

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Subsequently, a change in US policy will be absolutely essential if the ANWFZ is to move forward. This will require political leadership that is willing to use much political capital to accomplish this.

There is real hope that the kind of leadership that is needed is now in the White House. President Barack Obama has indicated that his outlook is amendable at least entertaining the policy stance advocated in this paper. In Prague he outlined a vision of a world in which nuclear weapons would not have the prominent role that they do today²²⁷. To this end, Obama has proposed an extensive working program for the United States on nuclear non-proliferation which indicates a move in a positive direction. His working program includes reducing the US arsenal, reducing the role of nuclear weapons in the national security strategy and promising to ratify the Comprehensive Test Ban Treaty²²⁸. The hopes have been high for the Obama Administration. Many believed that he would change the world. He won the Nobel Prize after only a few months in office for changing the tone of global politics. However, he has also been criticized by his base for failing “to break away from Bush era national security policy in some fundamental ways”²²⁹. His support for this initiative would be a legacy issue and he is best placed out of any President to conclude these type of negotiations, because he is expected to change the way that America acts on the international stage.

This combination of increased attention on Arctic related issues in US defence policy analysis as spurred on by the Bush Administration’s Directive and the progressive outlook on nuclear weapons by President Obama combine to make the current context ripe for negotiations on an Arctic NWFZ to begin.

The initiative for an Arctic NWFZ was initially that of the great Russian leader President Mikhail Gorbachev in a speech that he gave in Murmansk. It is time that the current Russian leadership take up the “zone of peace” initiative once more. Given Russia’s ever-present fears regarding NATO expansion, its perceived self-isolation and its disadvantage in terms of conventional forces, the Arctic NWFZ would be a chance for Russia to adequately put to rest many of its perceived security concerns, by ensuring that at least its Northern area, which really is the motor behind the Russian economy, is free from the fear of nuclear attacks. Therefore, Russia should take advantage of the opening that currently exists in the White House for the negotiation of a Nuclear-Weapon-Free Zone in the Arctic.

Support from the remainder of the Arctic states would likely be easily forthcoming if the United States and Russia are both seen to be onboard. None of the other Arctic states have nuclear-weapon capabilities. Both Norway and Denmark (and therefore Greenland) have committed to not positioning nuclear weapon devices on their territory during peacetime. All Arctic zonal states have expressed apprehension about nuclear weapons and have been supportive of the global abolition movement generally. They have signed on to all relevant international protocols that have sought to reduce international threats, including the *Non-Proliferation Treaty* and the *Comprehensive Test Ban Treaty* and actively support efforts internationally to have their provisions enforced. Support from these states will likely be strong and sustained as long as they perceive that the United States and Russia are bargaining in good faith and that there is a chance of concluding a treaty, so that the time and energy of these small-to-medium states are not floundered on unattainable goals²³⁰.

²²⁷ Office of the Press Secretary. *Remarks by President Barack Obama*.

²²⁸ Office of the Press Secretary. *Remarks by President Barack Obama*.

²²⁹ Sanger, David E, and Thom Shanker. *White House Is Rethinking Nuclear Policy*. February 28, 2010. <http://www.nytimes.com/2010/03/01/us/politics/01nuke.html?pagewanted=1&sq=nuclear&st=cse&scp=2> (accessed March 9, 2010).

²³⁰ For example, the Department of Foreign Affairs and International Trade in Canada has stated in “Towards a Northern Foreign Policy for Canada” that “The Government recognizes that a northern foreign policy can be

Indigenous Inhabitants of the Arctic Region

It is essential that the role of Indigenous peoples, such as the Inuit are respected in the decision-making process related to the negotiation of a Nuclear-Weapon-Free Zone Treaty in the Arctic and this means that their governance structures are incorporated and respected in the process. The Inuit are a powerful ally in the process to keep nuclear weapons out of their homeland and have been supportive of such postures consistently throughout the past.

It *must* be understood that the Arctic is not just a strategic region in the global campaign to abolish nuclear weapons. The Arctic is the homeland to several Indigenous groups who have maintained their way of life there since time immemorial. It is imperative that they not be treated as just another “interest group” or “stakeholder” in this process, but that their consent and knowledge are “a critical and necessary element of decision-making in relation to the Arctic”²³¹. An Arctic NWFZ needs to be actively endorsed from Indigenous Arctic communities, rather than just being “one more case of policies framed in a southern metropolis designed to dominate a northern ‘hinterland’”²³². To ensure that this is the case Indigenous communities should be thoroughly involved in the negotiation of the Treaty in a way that takes into account their own governance structures and philosophies even where this is not mandated by domestic law²³³. Traditionally fears over the self-determination aspirations of Indigenous communities have precluded Traditional Knowledge (TK) from being incorporated into legally-binding international agreements applied to the Arctic²³⁴. However, it is Indigenous use and occupancy of the Arctic, upon which the Arctic states all-important sovereignty is predicated and therefore it must be recognized that this is their territory and that they should have a rightful say over the presence of such destructive devices as nuclear weapons within it. Historically, Inuit organizations and councils have been supportive of denuclearization which gives hope that they would support this initiative²³⁵. This is reflected in the formal resolution of the Inuit Circumpolar Conference supporting such an initiative, as this paper discussed in its first section.

Civil Society

In order to create the public awareness necessary on this issue to create and sustain the political will that is required to initiate and complete treaty negotiations, there needs to be an active segment of civil society campaigning on the issue. There exists a growing coalition in civil society, including the Pugwash Group and Global Zero, which are making positive steps in this direction. The Pugwash Group is a Nobel Peace winning organization that seeks to provide “scholarly insights into the prevention and resolution

sustained and properly supported in political and resource terms only if it emanates from and resonates with core Canadian values and long-term national objectives that are not subject to being overtaken by events for made irrelevant by external developments” – Department of Foreign Affairs and International Trade. “Towards a Northern Foreign Policy for Canada”.

²³¹ Barnaby, p. 2; Fenge and Funston in The Arctic Governance Project. “Arctic Governance Project (AGP) White Paper” January 2010, www.articgovernance.org (accessed 2 February 2010), p. 25.

²³² Graham.

²³³ For example, the Tlicho Agreement with the Dogrib, the Government of Canada has committed that, “prior to consenting to be bound by an international treaty that may affect a right of the Tlicho Government, the Tlicho First Nation, or a Tlicho Citizen, flowing from the Agreement, the Government of Canada shall provide to the opportunity for the Tlicho Government to make its views known with respect to the international treaty either separately or through a forum” – Penikett, p. 5.

²³⁴ Fenge and Funston, p. 15.

²³⁵ Hamel-Green, p. 10.

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of armed conflict, including nuclear abolition and nuclear and conventional disarmament...²³⁶. This group has already made calls for the creation of an Arctic Nuclear-Weapon-Free Zone in 2007 and is therefore a potential source of the civil society pressure needed to encourage government action²³⁷.

The Pugwash Group, however, is not alone. It was joined in December 2008 by the media-savvy and celebrity led Global Zero. This group has secured the support of an unlikely cast of characters, including some of the most notable Cold War Warriors, who once were the strongest supporters of the nuclear deterrent ideology. Global Zero is working to develop a step-by-step plan to eliminate nuclear weapons, conduct two-track diplomacy and generate worldwide public support through media and online communication and grassroots²³⁸. Global Zero is an invaluable partner in the quest towards a NWFZ in the Arctic and is an example of a civil society organization that would likely support such an initiative.

The public engagement work that these civil society organizations do so well will not be as up-hill a battle as it is on many other files. Public opinion polls indicate that there is a strong global majority who are against the use of nuclear weapons and 76% of people around the world support getting rid of nuclear weapons²³⁹. Wallace agrees with this assessment and puts it clearly that if “it [NWFZ] repackages arms control from the arcane calculus of nuclear priesthood into a measure easily understood by the public – and is likely to have considerable practical appeal”²⁴⁰. This indicates that there is a distinct possibility that there is enough civil society support to encourage politicians to take up the policy proposals cited in this paper. This must be achieved if the political will necessary to achieve the goal is to be found²⁴¹. However, there is still much to be done to popularize the discourse on this issue, so that the situation becomes analogous to that which exists in Japan, where “the memory of the horror of Hiroshima and Nagasaki remain strong – domestic public opinion is so strongly opposed to nuclear weapons that it is almost inconceivable that it could be ignored” and in this regard groups like Pugwash and Global Zero have an important role to play²⁴².

²³⁶ Canadian Pugwash Group. *About*.

http://www.pugwashgroup.ca/index.php?option=com_content&view=article&id=50&Itemid=53 (accessed March 24, 2010).

²³⁷ Wallace, p. 60; Wallace and Staples, p. 9.

²³⁸ Ambassador Burt. *Podcast: Her Majesty Queen Noor and Ambassador Richard Burt discuss Zero at LSE*.

²³⁹ *Podcast: Her Majesty Queen Noor and Ambassador Richard Burt discuss Zero at LSE*.

²⁴⁰ Wallace, p. 60.

²⁴¹ Kataoka Katsuko, “Toward Abolishing Nuclear Weapons: Message From Hiroshima”.

²⁴² Evans and Kawaguchi, p. 79.

Is an Agreement Possible?

The process towards concluding an Arctic Nuclear-Weapon-Free Zone Treaty is not “doomed”. It is true that debates and negotiations on nuclear disarmament issues are often shut down outright by those who do not think that the major nuclear weapon states like Russia and the United States would be willing to ever give up their freedom to act in terms of the use of nuclear weapons. They envision any process working towards this end as “naive” and “doomed” from the outset²⁴³. Such a view is both overly deterministic. There has been process made towards restricting nuclear weapon use, including the pledge by all five nuclear-weapon states to negative security assurances to not attack or threaten to attack with nuclear weapons those that do not have them²⁴⁴. Few expected the collapse of the Soviet Union and many saw the day that there would be a black President of the United States of America as a day off in the distant future. But, today there is a President of a Russian Federation, not the United Socialist Soviet Republics and there is indeed a Black President in the White House. A zone free of nuclear weapons that encompass part of these states is too, possible.

The progress towards the completion of the NWFZ Treaty is not likely to be linear. There will be progress made, but there will also be setbacks. It should be expected that the progress towards completing the treaty will likely be “two steps forward, one step back”. It is also possible, as Hamel-Green has argued that even if Russia and the United States were not willing to include their territories within the zone that the remaining Arctic states could establish a NWFZ in their regions and continue to push the two nuclear weapons superpowers to join²⁴⁵. The United Nations criteria for NWFZ does not prohibit this kind of strategy, because it simply mandates that it is desirable that all states in the region are involved, not that they must be involved²⁴⁶. While this is not an ideal solution, it is a means by which there can be forward progress, instead of standing still in the dangerous position which exists today.

²⁴³ Hamel-Green, p. 14.

²⁴⁴ Prawitz, p. 3.

²⁴⁵ Hamel-Green, p. 14; Wallace and Staples, p. 13.

²⁴⁶ Wallace and Staples, p. 12-13.

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The chances of the successful conclusion of the treaty will be greatly enhanced by positive framing and communications. Michael Byers has said that “the Russian government seeks to remind people that Russia is a powerful country...” by strengthening its Arctic posture²⁴⁷. Communications and engagement strategies must be cognoscente of this fact and threat Russia as the great power that it is in the Arctic. There is a distinct fear that they will lose their international status if they agree to eliminate their nuclear arsenals, and so to get Russia engaged there needs to be great sensitivity to this fact²⁴⁸. Furthermore, the argument has rightfully been made that “great power status” is no longer contingent on the possession of a large nuclear arsenal. Citing the “peaceful rise of China,” which is believed to have one of the smallest arsenals out of the nuclear weapon states the argument is made that it is economic strength that demarcates who is and who is not a great power²⁴⁹. Consequently, instead of trying to get Russia to relinquish Great Powers ambitions, communication strategies and diplomatic interactions with Russia should emphasize that it can maintain its great power ambitions despite committing to an Arctic NWFZ.

An important part of “getting to yes” is to not become deadlocked in circular argumentation. The argument that it is necessary to get rid of all conflict and only then will it be possible to get rid of arms is fallacious²⁵⁰. The very presence of nuclear weapons encourages their use. Rydell argues that there is little logic to the argument that the elimination of nuclear weapons or any other weapon of mass destruction “is to await the prior establishment of world peace and security...”²⁵¹. It is thus necessary to get rid of nuclear arms, because only then can there be a world without nuclear war.

There exists a real possibility of “getting to yes”. There is supported that can be fostered and nourished within the major players and regional states who are made to believe that their security stance and protection from great power conflict is enhanced by the treaty will be likely to sign on. There are civil society movements, like Pugwash and Global Zero, that can create the coalition necessary to help create and sustain the political will needed for this treaty and the public education campaigns to engage citizens (who are generally positive to eradicating nuclear weapons). It is essential that Indigenous groups are given access to their rightful seat at the table. The factors, combined with an understanding that progress will neither be linear or easy, and effective communications strategies lead to the distinct possibility of “getting to yes” on an Arctic Nuclear-Weapon-Free Zone Treaty.

²⁴⁷ CTV. Arctic Sovereignty an ‘important issue’: Harper. August 2007.

http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20070802/arctic_claims_070802/20070802?hub=TopStories (accessed October 8, 2008).

²⁴⁸ Evans and Kawaguchi, p. 69.

²⁴⁹ Ambassador Burt. *Podcast: Her Majesty Queen Noor and Ambassador Richard Burt discuss Zero at LSE*

²⁵⁰ Randy Rydell, “Nuclear Disarmament and General and Complete Disarmament”.

²⁵¹ Randy Rydell, “Nuclear Disarmament and General and Complete Disarmament”.

Putting Ideas Into Action – Next Steps

This paper has outlined: ‘why’ nuclear weapons are undesirable, ‘what’ should be done to help diminish their use (NWFZ Arctic) and ‘who’ needs to be involved in this process. This section addresses the ‘how’. How do we move towards this goal? The first thing that needs to be done is to identify a forum in which the important questions related to this initiative can be discussed and debated, which all participants agree is a legitimate forum²⁵². While the Arctic states participate in many multilateral forums together, for the most part the Arctic is tangential at best to their activities²⁵³. The most relevant forum, therefore, is the Arctic Council. The Arctic Council counts among its membership all of the Arctic states, as well as permanent representation from a number of Indigenous organizations. However, the Arctic Council currently is prohibited from discussing security issues, because it was excluded from its original mandate in order to secure US buy-in. This provision is outdated and unnecessary. It should be immediately changed, so that the Arctic Council can begin debating the important issue of abolishing nuclear weapons from the region. This organization could get the ball rolling. It meets the United Nations criteria that the idea for a NWFZ is indigenous to the region setting up the zone. It also shelters the Arctic states from undue interference or the complicating presence of non-zonal states during the initial stages of negotiation. It is therefore recommended that the embargo on debating of security-related issues be lifted and that the Arctic Council become the organizational mechanism through which the NWFZ Treaty is debated. Once this is done it would be possible to expand negotiations to another forum in which all nuclear weapon states are engaged, which could perhaps be the proposed Office for Disarmament Affairs in the United Nations Secretariat that was proposed by Secretary General Ban Ki-Moon in 2007²⁵⁴.

²⁵² Evans and Kawaguchi, p. 75.

²⁵³ Archer, p. 168.

²⁵⁴ Randy Rydell, “Nuclear Disarmament and General and Complete Disarmament”.

Conclusion

The Canberra Commission on the Elimination of Nuclear Weapons powerfully wrote in 1996 that:

So long as any state has nuclear weapons, others will want them. So long as any such weapons remain, it defies credibility that they will not one day be used, by accident, miscalculation or design. And any such use would be catastrophic for our world as we know it²⁵⁵.

This paper has taken this idea that nuclear weapons are “catastrophic” for our world and sought to contribute to the extensive literature on how to eliminate them. It seeks to build on Evans and Kawaguchi’s framework of minimization followed by elimination, by putting forth a concrete proposal for the medium-term. The Indigenous population whose home the Arctic is has been a proponent of this idea for some time and as the agenda develops it could be a powerful part of the second phase. As a result, this paper makes a proposal for a possible framework for an Arctic Nuclear-Weapon-Free Zone, including its geographical limits, the scope of what “nuclear-free” really means, verification procedures and surveillance mechanisms.

Opponents would argue that the idea of making such a militarily strategic region free of nuclear weapons is utopian. It is true that at present the political will for concluding such a treaty does not exist. It is for that reason that this paper has proposed a variety of confidence-building measures. These include: establishing joint Search and Rescue patrols, expanding the Arctic Rangers, increasing diplomatic resources, harmonizing regulations, multilateral efforts to deal with nuclear waste, scientific cooperation, and economic integration. These CBMs are designed to lay the groundwork for intensified cooperation among the Arctic states in order to create the environment in which a NWFZ Treaty becomes conceivable.

While it should be recognized that the United States and Russia have important roles to play in this process as not only the two most powerful states in the region, but also because they are the world’s two largest nuclear weapon powers, this should not distract from the impact that other regional states can have on this issue. The middle powers, like Canada and Norway, should also work hard to facilitate movement towards this treaty and as the Ottawa Process to Ban Landmines demonstrates, they can be successful. Civil society groups like Pugwash and Global Zero also have important roles to play in stimulating public opinion. Above all, however, it must be recognized that the Arctic is more than a

²⁵⁵ Evans and Kawaguchi, p. 61.

strategic theatre, it is the home - and has been since time immemorial – of Indigenous peoples and they should be at the table when these initiatives are debated and discussed.

Recommendations

Geography

1. The Nuclear-Weapon-Free Zone should cover all adjacent seas, sea beds, continental shelves, disputed territories, international waters and airspace of Canada, Finland, Greenland, Iceland, Norway and Sweden. Northern Russia and Alaska (USA) should also be covered by the Treaty.
2. Along the edges of the zone, there should be a gradual “thinning out” of nuclear weapons.

Non-First Use

3. All zonal states and NATO should subscribe to a policy of non-First Use of nuclear weapons both during peacetime and wartime in the Arctic.
4. Non-nuclear weapon states in the region should renounce the nuclear umbrella.

Defining “Nuclear”

5. “Nuclear Weapon Free” should mean all nuclear weapons and armaments, as well as the targeting of nuclear facilities and nuclear testing.
6. The peaceful use of nuclear technology for civilian purposes should continue.

Verification Procedures

7. Verification procedures need to ensure that civilian nuclear technology is not being deferred towards weapon building capabilities.
8. All nuclear weapons must be removed from the zone.
9. There should be no new deployment of weapons.
10. Transiting the zone with nuclear weapons should not be permitted.
11. A permanent organization should be established to ensure verification of the rules and this organization should have the resources that it needs to operate fully.

Surveillance Systems

12. Joint aerial patrols of the region should be carried out.
13. An advanced underwater listening system built by and accessed to by all zonal states should be created.
14. Information-sharing of relevant information should be commonplace.

Search and Rescue (SAR)

15. Conclude an Arctic Search and Rescue Agreement that includes all Arctic nations.
16. Establish an integrated response management centre to coordinate SAR among all Arctic states, along the lines of the Rescue Coordination Centres set up by the Antarctica Treaty.
17. Perform regular multilateral drills to practise SAR techniques in the Arctic.
18. Work to improve and update navigational charts to reduce the risk that SAR activities will need to be undertaken and improve their capacity to respond when they are.
19. Impose a tariff on ships operating in the region to cover the immense costs of SAR activities in the Arctic's unique climate.
20. Designate ports of refuge and rank them based on seasonal environmental conditions.
21. Develop a system for quickly deploying supplies in order to relieve the stress on local resources, which can be overwhelmed quickly.
22. Coordinate with the SAR bodies set up by the Antarctica Treaty.

Expand the Arctic Rangers

23. The Arctic Rangers should receive additional training and equipment in order to be first responders to emergencies in the Arctic.
24. Having proven its worth in Canada, the Arctic Rangers program should be expanded to be pan-Arctic in its scope.

Non-Nuclear Military Activities

25. The NWFZ should not prohibit all military activities in the Arctic. A continued military presence to aid the civilian power and protect against security threats is warranted.
26. Joint military exercises should be done to facilitate confidence-building.
27. All Arctic states should be informed when a military exercise is occurring within the zone.
28. Zonal states should work collaboratively towards military research.

Non-Nuclear Weapons of Mass Destruction

29. The place of nuclear weapons within the military strategy of the zonal states should not be replaced with another equally (or more) destructive Weapon of Mass Destruction (WMD).

Confidence-Building Measures (CBMs)

30. Measures that do not build confidence (i.e. flag planting, whiskey burying and fly-bys) should be avoided.
31. Both the United States and Russia should take their nuclear arsenals off high alert status.
32. Nuclear Weapon States should unfix the guidance systems of their weapons from targets within the zone immediately.
33. An Ambassador for Circumpolar Affairs from each state should be appointed to handle negotiations.
34. Consular services and support should be increased within the region and researchers and Indigenous Peoples should have simplified access to visas.
35. The United States should ratify the United Nations Convention on the Law of the Sea to facilitate a peaceful resolution to the existing sovereignty disputes in the region.
36. A common code for ship design should be agreed upon in order to mitigate the chances of environmental damage.
37. Financial and technical support for programs such as the Cooperative Threat Reduction Program that aims to safely dispose of nuclear waste in the Russian North should be forthcoming from all zonal states.

38. The security of nuclear fuel storage facilities should be bolstered.
39. Common training programs for nuclear officials should be initiated in order to create the people with the required expertise to carry out the other recommendations.
40. Economic integration should be encouraged. One possible method would be for an Arctic Chamber of Commerce to be established or through the Barents Euro-Arctic Council Secretariat.

Next Steps

41. If it is not possible to get all Arctic states to ratify the NWFZ Treaty then those states which support the initiative should sign on to the treaty and continue to lobby non-signatories to sign on.
42. Russia should be treated as a “great power” both in communications and diplomatic relations.
43. The rules of the Arctic Council should be amended to allow for debates concerning peace and security issues.

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