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“ARCTIC SECURITY PROBLEMS – A MULTILATERAL PERSPECTIVE”

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Why would a former diplomat from a tropical Asian island like Sri Lanka, with problems of its own, be concerned about the Arctic thousands of miles away from his country? How does what happens in the Arctic impinge on his country's national interests or his own preoccupations as a busybody writing on international affairs in general and disarmament in particular?

The short answers to these very pertinent questions are –

- First, we live in an increasingly inter-dependent world and the hard evidence of climate change proves that the felling of Amazon forests in Brazil or CO2 emissions in China all have a cumulative global impact whether leading to the disappearance of Tuvalu into the Pacific Ocean or the sinking of the Maldives closer to my own island-country. In a literal sense, therefore, the 17th century English Metaphysical poet John Donne's celebrated line that "No man is an island entire of itself" is truer today than ever before!
- Second, the melting of the Arctic Cap will facilitate the mining of resources, especially oil and gas, and will lead to an increase in commercial shipping. The ownership of the resources and the sovereignty of areas like the Northwest Passage are already being contested and the applicability of the Law of the Sea has to be more sharply defined especially in areas where there is overlap. Developing nations, in whose countries the 'Bottom Billion' live in extreme poverty and who are going to be hit hardest by climate change, see this potential resource exploitation in the context of globalization and its impact on energy costs especially as the UN tries to achieve the Millennium Development Goals (MDGs). Some also see the area outside the territory claimed by the littoral states of the Arctic, as part of the global commons and the common heritage of humankind. A global regime could be established over the Arctic to mitigate the effects of climate change and for the equitable use of its resources in areas outside the territory of the eight circumpolar countries.
- Third, as someone who has devoted most of his working life to the cause of disarmament, and especially nuclear disarmament, I am deeply concerned over the fact that two nuclear weapon states – the United States and the Russian Federation which together own 95% of the nuclear weapons in the world– converge on the Arctic and have competing claims. These claims, together with

those of other US allied North Atlantic Treaty Organization (NATO) countries – Canada, Denmark, Iceland and Norway – could, if unresolved, lead to conflict escalating into the threat or use of nuclear weapons.

And, by the way, 2007-8 has been designated by the UN as International Polar Year reinforcing the multilateral perspective of my remarks today.

The longer answers to the questions I raised as I began will, of course, be the subject of this lecture.

Defining and Describing the Arctic Zone

Let me begin with my own exploration of the Arctic – a region obviously more familiar to a Canadian audience than to me. It is an enormous area around the North Pole spreading over one-sixth of the earth's landmass with more than 30 million square kilometers (approximately the size of Russia, China and India put together or more than three times the size of the whole of Canada!) It also encompasses 24 time zones. It includes the Arctic Ocean (which overlies the North Pole) and parts of Canada, Greenland (a territory of Denmark), Russia, the United States (Alaska), Iceland, Norway, Sweden and Finland. The invaluable Wikipedia tells us that "The word Arctic comes from the Greek word *arktos* (ἄρκτος), which means bear. This is due to the location of the constellation Ursa Major, the "Great Bear", above the Arctic region".

No country owns the North Pole or the region of the Arctic Ocean surrounding it. The Arctic region has a population of about 4 million including over 30 different indigenous peoples who have lived in the region for more than 10,000 years and use dozens of languages some of which are fast disappearing. Organisms living in ice, fish and marine mammals, birds and land animals are amongst the forms of life in this unique ecosystem. The natural resources in the Arctic Zone are vast and untapped. The US Geological Survey estimates that 25% of the world's undiscovered energy resources lie in the Arctic Zone – especially in the submerged plateau called the Chukchi Cap (west of the Beaufort Sea and between the Bering Sea and the Chukchi Sea).

There are numerous definitions of the Arctic region depending on what criteria you use - north of the Arctic Circle (66° 33'N) or the 10°C (50°F) July isotherm, which roughly corresponds to the tree line in most of the Arctic. The Arctic region includes the northern territories of the eight Arctic states, including Lapland, (which I actually did visit some years ago) although some scholars have discovered some vagueness regarding demarcation of

boundaries on maps. Accurate and up-to-date maps of the mineral-rich Arctic seabed are especially needed and the US has undertaken several seafloor mapping exercises.

The vast ice-covered Arctic Ocean surrounded by treeless, frozen ground has suddenly acquired great importance with the phenomenon of climate change. As a consequence the entire subject of Arctic security, in all its aspects – ecological, military, economic, human rights and social and cultural - has acquired a fresh importance and urgency. In recognition of this the Simons Foundation and the School of International Studies of Simon Fraser University are co-convening a Dialogue Conference on the subject from April 11-12 at which Government representatives, indigenous peoples organizations, academic experts and UN officials will participate.

History has a strange way of repeating itself. The region which is believed to have formed a land bridge across which the earliest human migration took place from Eurasia or Asia to the Americas promises today to be a possible maritime conduit of increased global exchanges in shipping, commerce and other areas as a result of human induced climate change. This has the potential of bringing nations and peoples together for peace and development. It has also the potential for disputes and conflict. At this point we have a unique opportunity to make a choice.

The Cold War and After - Elements for International Governance

There is no doubt that the Arctic was an arena of US-Soviet rivalry during the Cold War in which US allies like Canada played their respective roles subordinating issues of national territorial claims to the larger need for security. Preventing Soviet bomber and missile attacks was the main preoccupation for the West and so the Distant Early Warning (DEW) Line of radar sites stretching from northern Alaska across northern Canada to Greenland and the North American Air Defence Command (NORAD) were key elements of this strategy. The former USSR also had a string of radars on its Arctic coast. In the 1950s and 1960s, the Arctic was often used by submarines of both sides to test new weapons, sonar equipment, and depth capability. The Arctic region was extensively monitored by the United States military and NATO, since it was believed that the first warnings of a nuclear strike from the former USSR would have been indicated by ICBMs launched over the North Pole towards the United States.

On the part of the former USSR, 55 per cent of its total land area lay north of 60° latitude and half of the Soviet coastline was on the Arctic Ocean. Much of the country's production of strategic resources, such as oil, natural gas, and uranium was in the North. The Northern Sea Route along the Soviet arctic coast also provided an east-west transportation corridor less vulnerable to possible Western and Chinese interdiction than the Suez Canal or the Siberian railways. Militarily, the Soviet Union had always been restricted by its lack of access to the open ocean. Its only year-round access to the Atlantic was from the ice-free ports on the Kola

Peninsula through the Barents and Norwegian seas. The Soviet Northern Fleet's Kola bases had submarines (some of them capable of firing ballistic missiles) and major surface warships. In addition to extensive naval facilities, the Kola also had active military airfields. The USSR Navy used the southern reaches of the Barents Sea as a ballistic missile submarine base.

The Arctic Basin and Russian arctic territories remain integral to the maintenance of Russian nuclear forces today. The Barents and Kara seas are the operating areas for the Northern Fleet's ballistic-missile submarines, protected by the ice cover and by the surface naval and air forces based on the Kola. Plesetsk, located inland on the Onega River, is a base for intercontinental ballistic missiles as well as a missile test-site and important space-launch facility. Arctic waters and territory are used for both test launchings and impacts of land-based and sea-based missiles, and underground nuclear tests took place on the island of Novaya Zemlya.

Antarctica, though uninhabited, is governed by the 1959 Antarctic Treaty ensuring that it is used for exclusively peaceful purposes. There is no similar international regime for the Arctic. This was perhaps because of the particular characteristics of the Arctic but also because of the Cold War and the fact that the two superpowers confronted each other across the North Pole.

After the end of the Cold War, security concerns, especially for countries other than the US and Russia, were greatly reduced. They certainly moved to the area of non-military threats to security. Co-operation on the environment was therefore possible and the 8 Arctic countries adopted the Arctic Environmental Protection Strategy (AEPS) in 1991. The objectives of this Strategy were to protect the Arctic ecosystem; to protect, enhance and restore environmental quality and the sustainable use of natural resources; recognize the traditional and cultural needs of the indigenous peoples regarding the state of the environment; and, to identify and reduce pollution.

From the late 1980s Canada had urged the establishment of an Arctic Council to handle environmental, economic development and maritime policy issues. In 1995 Canada proposed transforming the AEPS into a new international organization but the US was not in favour of it. Finally it was agreed to establish the Arctic Council without a legal personality but approximating to a multilateral body

Thus the **Arctic Council** was established by the Ottawa Declaration of 1996 as a high level intergovernmental body to be a forum to promote cooperation, co-ordination and interaction among the Arctic States together with the indigenous communities and other inhabitants. The US and Russia were probably responsible for the fact that "matters related to military security" are specifically outside the purview of the Arctic Council. The Council has the eight circumpolar countries as member states and is mandated to protect the Arctic environment and promote the economies and social and cultural well-being of the indigenous peoples

whose organizations are permanent participants. There are six permanent participants at the moment and the number at any time must be less than the number of members. Observers from non-Arctic states, international organizations and NGOs are also included. China is said to be an applicant for Permanent Observer status, presumably out of a strong interest in using the shorter shipping routes to Europe and North America via the Arctic Ocean as well as having access to the resources in the region. There are 6 working groups within the Council dealing with sustainable development; monitoring and assessment; conservation of fauna and flora; emergency prevention preparedness and response; contaminants action and the protection of the Arctic marine environment. The Chair of the Council rotates every two years and the current chair is Norway. Decisions in the Council are taken by consensus. There is no specific dispute settlement mechanism within the Council even for the non-security related issues it deals with.

Additionally there is **the UN Convention on the Law of the Sea (UNCLOS)** which has 155 states parties and which entered into force in 1994. According to UNCLOS the surrounding Arctic states i.e. the US, Canada, Russia, Norway and Denmark are limited to a 200 nautical mile economic zone around their coasts Upon ratification of UNCLOS a country has ten years to make claims to extend its 200 mile zone. Due to this, Norway (which ratified the convention in 1996), Russia (ratified in 1997), Canada (ratified in 2003) and Denmark (ratified in 2004) launched projects to establish claims that certain Arctic sectors should belong to their territories. The US has not ratified UNCLOS as yet although there was some urgency advocated in Washington because of the unresolved issues in the Arctic. Despite conservative opposition to UNCLOS in the US, it was the current Bush Administration that recommended its ratification to the US Senate in 2003. Hearings were held in 2003 and in September 2007 in the Senate Foreign Relations Committee with the State Department, the Pentagon, shipping and mining lobbies supporting the ratification. Although the Senate Foreign Relations Committee recommended ratification, a vote was not taken in the Senate as a whole. A new US Administration may well resubmit UNCLOS to the Senate in 2009 for ratification if no action is taken this year.

The 1971 Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil thereof or **the Seabed Treaty** has all 8 circumpolar countries as parties to it. That means that they all agree not to place nuclear or any other weapons of mass destruction in the seabed, ocean floor or its subsoil outside of a 12 mile seabed zone. Nor will they have structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons.

Some countries claim the Arctic has never been under the political control of any nation, although the militaries of some nations have attached a strategic importance to the region. Canada has an outpost in the region and has long laid

claim to much of the Arctic. Several recent excursions by the Canadian navy have taken place, with more planned to emphasize Canadian sovereignty in the region. On July 9th, 2007, Canada's Prime Minister Stephen Harper announced that Canada will build up to eight armed patrol ships with helicopter pads and a deep water port at a location yet to be disclosed, to reassert Canada's sovereignty over Arctic territories.

In a highly publicized move, on August 2 2007, two Russian bathyscapes, **MIR-1 and MIR-2**, placed a Russian flag made of rust-proof titanium on the Arctic seabed beneath the North Pole. The mission was a scientific expedition, but the ostentatious flag-placing raised concerns of a scramble for control of the Arctic's vast petroleum resources. Denmark also responded with its own territorial claims especially over the Lomonosov Ridge which it claims is a geological extension of Greenland. It is likely that as a result of this resurgence of security concerns in the Arctic, surveillance by all countries and with increasingly sophisticated devices has increased.

The Impact of Climate Change

The Arctic is comparatively unpolluted but because of prevailing worldwide sea and air currents, the Arctic area is the fallout region for long-range transport pollutants, and in some places the concentrations exceed the levels of densely populated urban areas. An example of this is the phenomenon of Arctic haze, which is commonly blamed on long-range pollution. Persistent Organic Pollutants (POPs) accumulate in the Arctic which also acts as a global sink for mercury.

The Arctic Council conducted a four year study – The Arctic Climate Impact Assessment (ACIA) – which was finalized in 2004 and reached the conclusion that the Arctic is warming at an alarming rate. It was the first comprehensive regional assessment undertaken. The phenomenon of climate change has now been studied on a global scale by the 2007 Nobel Peace Prize co-recipient, the Intergovernmental Panel on Climate Change (IPCC), which has published four reports. To summarize their general findings –

It is very likely (in IPCC- speak that means more than 90% likely) that human activities are causing global warming.

- Probable temperature rise by the end of the century will be between 1.8C and 4C (3.2-7.2F).
- Possible temperature rise by the end of the century ranges between 1.1C and 6.4C (2-11.5F) .
- Sea levels are likely (meaning more than a 60% chance) to rise by 28-43cm .
- Arctic summer sea ice is likely (again more than a 60% chance) to disappear in second half of century.

- It is very likely (that is more than 90% likely) that parts of the world will see an increase in the number of heat waves.
- Climate change is likely (more than a 60% chance) to lead to increased intensity of tropical storms.

In summarizing its findings for both polar regions the IPCC reported that

- The main projected biophysical effects are reductions in thickness and extent of glaciers and ice sheets and sea ice, and changes in natural ecosystems with detrimental effects on many organisms including migratory birds, mammals and higher predators.
- For human communities in the Arctic, impacts, particularly those resulting from changing snow and ice conditions are projected to be mixed.
- Detrimental impacts would include those on infrastructure and traditional indigenous ways of life.
- In both polar regions, specific ecosystems and habitats are projected to be vulnerable, as climatic barriers to species invasions are lowered.

Let me quote from the last report of the IPCC on the Arctic specifically, "Contraction of the Greenland ice sheet is projected to continue to contribute to sea level rise after 2100. Current models suggest ice mass losses increase with temperature more rapidly than gains due to increased precipitation and that the surface mass balance becomes negative (net ice loss) at a global average warming (relative to pre-industrial values) in excess of 1.9 to 4.6°C. If such a negative surface mass balance were sustained for millennia that would lead to virtually complete elimination of the Greenland ice sheet and a resulting contribution to sea level rise of about 7 m. The corresponding future temperatures in Greenland (1.9 to 4.6°C global) are comparable to those inferred for the last interglacial period 125,000 years ago, when paleoclimatic information suggests reductions of polar land ice extent and 4 to 6 m of sea level rise."

The Arctic is especially vulnerable to the effects of global warming as has become apparent in the melting sea ice in recent years. The Inter-governmental Panel on Climate Change (IPCC) states that satellite data since 1978 shows that the annual average Arctic sea ice has shrunk by 2.7 % per decade with larger decreases in summer of 7.4%. Just last summer the Arctic ice cover was the smallest ever recorded. Climate models predict much greater warming in the Arctic than global average. This fact has attracted significant international attention to the region. In particular,

there are concerns that Arctic shrinkage, a consequence of melting glaciers and other ice in Greenland, could soon contribute to a substantial rise in sea levels worldwide. Because the Arctic sea ice is collapsing at an unprecedented rate, recent estimates suggest the possibility that the Arctic sea could be ice-free in the summer sooner than later in this century. Some scientists expect that the Arctic ice cover may be gone by 2015 due to Arctic shrinkage - a first time occurrence in hundreds of thousands of years. Professor Michael Byers of the University of British Columbia, who undertook a voyage of the astonishingly ice-free Bellot Strait in Canada's far North in October 2006, said at a recent conference that between September 2006 and September 2007 an area larger than the state of California of Arctic sea ice had melted. Scientific expeditions of many countries are surveying the impact of climate change in the Arctic and we can expect more information in the coming months.

Apart from concerns regarding the detrimental effects of climate change in the Arctic, some potential opportunities have gained attention as well. The melting of the ice is making the so-called Northwest Passage, the shipping routes through the northern-most latitudes, more navigable, raising the possibility that the Arctic region will become a prime trade route. In addition it is believed that the Arctic seabed may contain substantial oil fields which may become accessible if the ice covering them melts. These factors have led to recent international debates as to which nations can claim sovereignty or ownership over the waters of the Arctic.

The Arctic and Antarctica

Comparisons between the Arctic and Antarctica as the two polar regions with similar characteristics are normal despite the Arctic being an ocean surrounded by a landmass and Antarctica being a landmass surrounded by ocean. The heroic stories of the exploration of both the North and South Pole have excited the imagination of many generations. It is pertinent to raise the issue as to why, a multilateral treaty was negotiated and signed in 1959 in respect of Antarctica and not the Arctic. Several possible reasons may be attributed and they are important in so far as they remain valid in respect of any multilateral efforts to arrive at co-operation over the Arctic.

- The Arctic is populated while Antarctica is not. The existence of indigenous peoples in the land areas of the Arctic makes it more difficult to arrive at an agreement on an international regime.
- The super powers during the Cold War confronted each other across the North Pole and the Arctic became a key strategic area for nuclear armed submarines and other naval vessels. The Arctic remains an important strategic region for the US and Russia.
- Antarctica was a considerable distance away from the nearest countries such as Australia and Argentina and there was little incentive to colonize

the frozen territory. Consequently territorial claims could be held in abeyance and, as the Preamble to the Antarctic Treaty says, "...it is in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord".

The pragmatic need to pre-empt claims and counter-claims in the Arctic and a possible conflict over the area outside the territory demarcated under UNCLOS will be widely accepted internationally. In 1991 the Madrid Protocol on Environmental Protection was adopted by the Antarctic Treaty signatories and entered into force in 1998. The Protocol:

- designates Antarctica as a 'natural reserve, devoted to peace and science',
- establishes environmental principles for the conduct of all activities,
- prohibits mining for a minimum period of 50 years,
- subjects all activities to prior assessment of their environmental impacts,
- provides for the establishment of a Committee for Environmental Protection,
- requires the development of contingency plans to respond to environmental emergencies,
- provides for the elaboration of rules relating to liability for environmental damage.

This serves as an example of how Arctic territorial and mining issues could be handled. Greenpeace, the activist environmental NGO, says the Arctic should be designated a World Park, including a marine reserve. Large-scale marine reserves are areas closed to all extractive practices, such as fishing and mining, as well as disposal activities. There is a growing body of scientific evidence demonstrating that the establishment of large-scale networks of marine reserves could be the key to preventing and reversing global fisheries collapse.

Economic and Social Consequences

Shipping in the Arctic is expected to increase as a result of climate change. Writing to the Financial Times on January 16, 2008, Professor Robert Wade said "Opening the northern route is attractive for reasons of both distance and security. Shanghai to Rotterdam via the north-east sea route across the top of Russia is almost 1000 miles shorter than via Suez". Polar routes for the Japanese and East Asian countries will make sense both from an economic point of view as well as from a security perspective. However shipping experts feel that the current legal regime for Arctic shipping is not sufficiently developed to accommodate a huge increase in the volume of shipping. Operational regulations and marine environmental protection are among the aspects that will have to be strengthened especially with oil tankers

navigating the Arctic waters. A major oil spill like the Exxon Valdez incident (when a petroleum oil tanker, the Exxon Valdez, struck a reef off the coast of Alaska on March 24, 1989 spilling 10.8 million gallons of crude oil into the sea in a major environmental disaster) could cause major damage to the fragile ecosystem of the Arctic. The International Maritime Organization (IMO) will have to be actively engaged in the search for viable solutions. With increased shipping come the problems of illicit immigration, terrorism, piracy, smuggling of drugs and weapons – all of which will have to be controlled through an international regime at best or some form of enhanced international co-operation. Current surveillance of activities in the Arctic waters by the states of the region does not provide any encouragement that these problems will be met effectively.

Tourism is another sector that will expand with climate change in the Arctic. Polar tourism has already shown an increase and that in itself carries dangers of environmental degradation. A UN report stated that the number of tourists in the Arctic had increased from one million in the early 1990s to 1.5 million today. This poses challenges for the infrastructure and for effective management which will ensure conservation of the environment as well as the well-being and livelihood of the indigenous communities. Greater co-ordination among the Arctic countries to ensure sustainable tourist policies before the cruise lines begin to bring in large numbers is vital.

Oil and gas deposits in the Arctic are reported to be substantial and their exploitation will increase activity in the region with environmental consequences. The discovery of diamonds in the Northwest Territories of Canada is another contributory factor to the new 'gold rush' in the Arctic.

Fishing in the Arctic will also be influenced by climate change and the littoral countries will have to agree on conserving stocks and regulating their fishing fleets.

The applicability of the International Whaling Convention – administered by the International Whaling Commission from which Canada withdrew in 1982 - will also have to be borne in mind with Japan and Norway asserting their rights to conduct whaling for 'scientific purposes'. Whaling has gone on in the Arctic on a commercial basis since the late 19th century but following the IWC in 1946 it has been regulated with exceptions being made for scientific purposes and for aboriginal peoples where quotas have been established. Climate change will make whaling easier and attempts to circumvent the regulations now in force may create disputes among the international community and not just within the Arctic countries.

Scientific research in the Arctic goes on under the aegis of the Arctic Council but international co-operation involving non circumpolar countries is also conducted under the UN. For example the International Polar Year 2007-8 is a programme of the International Council for Science and the World Meteorological Organization. In January this year a UN Environment Programme supported polar research boat

Tara was in the Arctic to gauge the impact of global warming and pollution.

Unlike Antarctica, it has been noted already that the Arctic is inhabited and the indigenous peoples will have their way of life seriously threatened by climate change and by increased human activity in the Arctic region. The presence of circumpolar indigenous peoples organizations in the Arctic Council with equal status augurs well for the serious consideration of their concerns. Within the UN system in the context of human Rights indigenous peoples also have a voice that is being heard.

Territorial issues

The North Pole is claimed by Denmark while other disputes surround the North West Passage, the Beaufort Sea, Hans Island, the Barents Sea, and the Bering Sea among others. Article 76 of the UN Convention on the Law of the Sea on the Continental Shelf governs the claims that can be made beyond the territorial waters of a state. Since no country's shelf extends up to the North Pole one possible solution is the median line method, which would divide the Arctic Sea between countries according to their length or nearest coastline. This would award the North Pole to Denmark but some considerable area to Canada as well. Unsurprisingly Canada and Denmark are said to favour this method. Another method – the sector method – would take the North Pole as the centre and draw lines south along the longitudes. The implementation of this method would favour Norway and to a lesser extent Russia but would penalize Canada.

Then there is the dispute between the US and Canada on the **North West Passage** which will become increasingly important for maritime commerce especially between the Pacific and Atlantic Oceans. A similar dispute exists over the Beaufort Sea between Canada and the US and a potential dispute between Russia and the US over the North East Passage.

Hans Island – a small island in the Nares Strait between Canada's Ellesmere Island and Greenland – is claimed by both Canada and Denmark. Russian claims to the **Barents Sea** established during the Stalin era are being questioned by others while the 1990 US-Russian agreement over the **Bering Sea** is now disputed by Russia. Nuclear contamination from dumped Russian naval reactors is an environmental concern in the Barents Sea.

What is important is that in all cases involving continental shelves the UN Commission on the Limits of the Continental Shelf exists as a mechanism for dispute settlement. The ratification of UNCLOS by the US will place all the circumpolar countries within the jurisdiction of this UN convention. **The relevant Article 76 (8) of UNCLOS is very explicit –**

“Information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured shall be submitted by the coastal State to the Commission on the Limits of the Continental Shelf set up under Annex II on the basis of

equitable geographical representation. The Commission shall make recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf. The limits of the shelf established by a coastal State on the basis of these recommendations shall be final and binding.”

It is also possible that the disputes could be referred to the International Court of Justice in The Hague as recommended in Chapter VI of the UN Charter as one of the ways open to member states of the UN for the peaceful settlement of disputes. Recourse to this will demonstrate a respect for international law and will help set an example to other regions of the world. In the case of Antarctica where all territorial claims were frozen this will not be possible in the Arctic with mounting pressure to explore and exploit resources, expand shipping routes and engage in strategic maneuvering for military purposes.

Military Security Concerns and the Nuclear Weapon Free Zone Proposal

After the immediate post Cold War lull in the strategic maneuvers in the Arctic there has now been a marked resurgence of interest and activity. Increased patrolling and submarine activity has been detected. On 12 August 2000 the K-141 Kursk – a Russian nuclear cruise missile submarine – sank in the Barents Sea with all its men but it was denied that there were nuclear warheads on board. The US Ballistic Missile Defence programme has added a new dimension with the proposed use of the Greenland base Thule – just 800 miles from the North Pole – as a component in the programme. This has not only raised the fears of the Inuit population in Greenland but has caused acute concern for Russia and other countries opposed to the US plan. Russia has resumed its Cold War practice of sending its bomber aircraft on long-range flights after a 15-year suspension and this has been widely noticed. Exercises over the North Pole by Russian strategic bombers have also begun.

At an early stage the indigenous peoples themselves proposed a nuclear weapon free zone in the Arctic. In 1958 then Soviet Prime Minister Bulganin had proposed a zone in Northern Europe free from “atomic and hydrogen bombs”. In October 1987, USSR President Gorbachev in an important speech in Murmansk, called for an Arctic “zone of peace” directing his appeal especially to the Nordic countries. He offered Soviet concessions such as the withdrawal of submarines from the Baltic Fleet and proposed a meeting of interested states. Some of Gorbachev's proposals have been overtaken by events such as the formation of the Arctic Council but his security related proposals remain viable and relevant despite the lukewarm Western reaction to them at the time. A Nordic Nuclear Weapon-free zone was also discussed mainly in academic circles without ever becoming the subject of inter-governmental negotiations.

In August 2007, as a sequel to the flurry of claims and counter-claims in the Arctic, the Canadian National group of

the Nobel Peace Prize laureate organization Pugwash issued a paper calling for an Arctic Nuclear Weapon-free zone. Advocating multilateral confidence-building measures to retard the pace of militarization while awaiting the strengthening of the Arctic legal regime, the group called for NWFZ in the territory and waters north of the Arctic Circle beginning, as a first step, with the waters of the North West Passage. Citing the precedents of the 1967 Treaty of Tlatelolco for Latin America and the Caribbean; the 1985 Treaty of Rarotonga for the South Pacific, the 1997 Treaty of Pelindaba for Africa, the 1996 Treaty of Bangkok for south-east Asia and the 2006 Treaty of Semipalatinsk for Central Asia the paper drew special attention to the Antarctic Treaty of 1959 which made the uninhabited area of Antarctica a NWFZ. It recognized the obstacles posed by the US and Russian nuclear submarine patrols in the Arctic and nuclear capable aircraft flights but saw the expiry of the START treaty in 2009 as an opportunity for negotiations to begin between the US and Russia. This could be preceded by campaigns conducted by civil society and pressure from other Governments. The NATO nuclear doctrine was another obstacle identified.

The Canadian Pugwash initiative has been supported by articles that have appeared in Australia and Japan. Professor Ramesh Thakur of the University of Waterloo, writing to the Canberra Times in October 2007 said, "The motivation behind all such zones is disengagement before the fact: put in place legal regimes and oversight mechanisms that prevent disputes and problems from arising in the first place... An ANFZ would be an exemplary means of foreclosing competitive militarization and perhaps even competitive nuclearisation without treading on the existing status of claims over territory, resources and transit rights". More recently Daisaku Ikeda, President of Soka Gakkai International, writing to the Japan Times in January 2008 called on Japan to take the initiative in working with other countries to create an Arctic NWFZ.

Article VII of the NPT provides for "the right of any group of states to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories". The existing NWFZ treaties cover some 113 countries converting most of the Southern Hemisphere and Central Asia into nuclear weapon-free areas. Protocols to the Treaties have to be signed by the five nuclear weapon states in the NPT respecting the NWFZs and providing the countries with negative security assurances. The agreed guidelines to the conclusion of such NWFZs require that there is agreement among a group of regional countries to have a NWFZ. Achieving such agreement in a group of Arctic states, that includes the two countries that together own 95% of the nuclear weapons in the world and NATO countries subscribing to the current nuclear doctrine of that organization, would be very difficult. However if the non-nuclear countries among the group together with the indigenous people living in the region combine with civil society sufficient pressure could be exerted on the US and Russia to agree to a ANWFZ primarily as an environmental measure to safeguard the Arctic. It could also be placed in

the context of the negotiations that could begin now to replace the US-Russian Strategic Arms Reduction Treaty (START I) which expires on December 5, 2009 and Strategic Offensive Reductions Treaty (SORT) which expires in 2012. Such negotiations, depending on the outcome of the Presidential Elections in USA, could well be accelerated in 2009 with both countries under new leaders with new policies.

The model of the **Antarctic Treaty** is there for adaptation. It has a two-tier membership with some countries designated as Consultative members under Article IX through a demonstration of their interest in Antarctica by conducting scientific research activity through the establishment of a scientific research station or the dispatch of a scientific research expedition. These countries, as distinct from other signatories, can attend consultative meetings held at regular intervals to exchange information, to hold consultations on matters pertaining to Antarctica and to recommend measures in furtherance of the principles and objectives of the treaty. A similar two-tier structure can be adopted for an ANWFZ with the 8 circumpolar countries in a special category and other countries such as major maritime nations and nations with mining and oil and gas exploration interests in another category. The nuclear weapon states not amongst the circumpolar countries will have to sign protocols to respect the ANWFZ.

Further compromises may be possible if the ideal NWFZ cannot be super-imposed in a region so fraught with power rivalries and strategic importance. While ensuring the usual prohibitions such as that nuclear weapons are not stationed or that nuclear waste is not dumped in the region, the right of transit may be permitted to the nuclear weapon states as the **1985 Treaty of Rarotonga** does in the South Pacific Nuclear Weapon-free Zone. Article 5 (2) of that Treaty says – "Each Party in the exercise of its sovereign rights remains free to decide for itself whether to allow visits by foreign ships and aircraft to its ports and airfields, transit of its airspace by foreign aircraft, and navigation by foreign ships in its territorial sea or archipelagic waters in a manner not covered by the rights of innocent passage, archipelagic sea lane passage or transit passage of straits." It was this provision that enabled Australia to join the treaty while at the same time allowing US nuclear weapon armed ships to call at its ports, while most other parties to the treaty disallow such visits, and New Zealand went as far as to prohibit and criminalise any support or involvement in nuclear weapons.

While this will not ensure that accidents involving nuclear weapon armed vessels will not take place, it will preserve for circumpolar countries who are NATO members a welcome compromise for which a precedent exists. It will be a compromise that will apply equally to Russian vessels transiting Arctic waters thereby attenuating, but not eliminating, growing competition between the US and Russia.

Another possibility is to convert the current Agreement between the US and the former USSR on the Prevention of

Incidents on and over the High Seas into a multilateral treaty. This “**Incidents At Sea**” Treaty was one of the successful treaties negotiated and implemented during the Cold War. Specifically, the agreement provides for:

- steps to avoid collision;
- not interfering in the "formations" of the other party;
- avoiding maneuvers in areas of heavy sea traffic;
- requiring surveillance ships to maintain a safe distance from the object of investigation so as to avoid "embarrassing or endangering the ships under surveillance";
- using accepted international signals when ships maneuver near one another;
- not simulating attacks at, launching objects toward, or illuminating the bridges of the other party's ships;
- informing vessels when submarines are exercising near them; and
- requiring aircraft commanders to use the greatest caution and prudence in approaching aircraft and ships of the other party and not permitting simulated attacks against aircraft or ships, performing aerobatics over ships, or dropping hazardous objects near them.

The agreement also provides for: (1) notice three to five days in advance, as a rule, of any projected actions that might "represent a danger to navigation or to aircraft in flight"; (2) information on incidents to be channeled through naval attaches assigned to the respective capitals; and (3) annual meetings to review the implementation of the Agreement.

The protocol to this agreement grew out of the first meeting of the Consultative Committee established by the agreement. Each side recognized that its effectiveness could be enhanced by additional understandings relating to nonmilitary vessels. In the protocol signed in Washington, D.C., on May 22, 1973, each party pledged not to make simulated attacks against the nonmilitary ships of the other.

Like other confidence-building measures, the Incidents at Sea Agreement does not directly affect the size, weaponry, or force structure of the parties. Rather, it serves to enhance mutual knowledge and understanding of military activities; to reduce the possibility of conflict by accident, miscalculation, or the failure of communication; and to increase stability in times of both calm and crisis. It did serve to reduce the number of incidents between the two navies substantially.

A similar agreement but applicable to all countries using the Arctic waters if incorporated in the Arctic Nuclear Weapon-free Zone Treaty or negotiated separately would be a significant.

Conclusion

It is time I conclude.

Security today is much broader than military security alone and encompasses international peace and security, human rights and development. It is also a co-operative and common security where one region's insecurity inevitably impacts on the security of other regions of the world. And so Arctic security is inextricably interwoven with global security giving us all a role as stakeholders.

From Jared Diamond's impressive book, *Collapse*, one learns that not every society faced by environmental collapse has in fact gone under like Norse Greenland or the Mayan civilization. The Inuits did much better on Greenland than the Norse did and they are still with us. Of the possible contributing factors to societal collapse, Diamond identifies society's response to its environmental problems as the most significant. It is this that makes collapse far from inevitable with long term planning and a willingness to reconsider core values. It is the same lesson that Arnold Toynbee provided us in his multi-volume *Study of History* with a description of the challenges humankind faced throughout history and its responses.

The point, of course, is that we do have solutions to the problems of Arctic security but they are solutions based on multi-disciplinary and multilateral co-operation. The UN Climate Change Conference held in Bali, Indonesia in December 2007 agreed to adopt the “Bali Roadmap” which includes the Bali Action Plan under which new negotiations for a secure climate future are to be concluded by 2009. Despite this there is an unmistakable air of ‘business as usual’ in the policies being pursued. We know that the developed world contributed disproportionately to the carbon emissions that have caused climate change. Developing countries – notably China and India – are poised to follow this bad example. The Arctic circumpolar countries are developed countries and they could set a major precedent by taking steps to achieve co-operative solutions to the problems of Arctic security across the entire gamut of political, economic, ecological, social and cultural aspects. It will be an example that will be welcomed by the rest of the global community. An all encompassing Arctic Treaty signed almost a half century after the Antarctic Treaty would be a major achievement.

To those sceptics who will dismiss this as unrealistic and impossible let me quote the great Norwegian explorer, scientist and Nobel Peace Prize winning diplomat Fridtjof Nansen who said, “The difficult is what takes a little time; the impossible is what takes longer.”

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