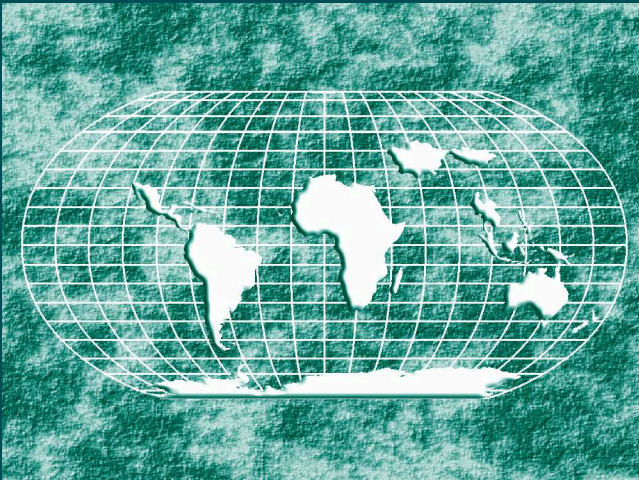




United Nations
Institute for
Disarmament Research
UNIDIR

disarmament
forum

two • 2011



Nuclear-weapon-free zones

The United Nations Institute for Disarmament Research is a voluntarily funded, autonomous institution within the framework of the United Nations.

Through its research projects, publications, conferences and expert networks, UNIDIR promotes creative thinking and dialogue on both current and emerging security challenges.

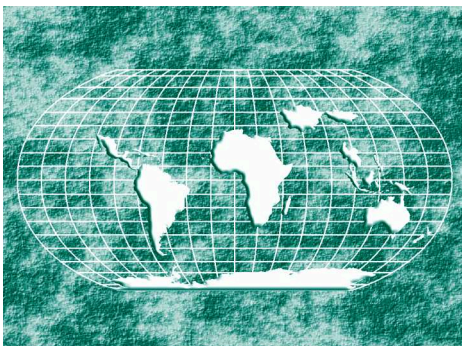
Disarmament Forum is supported by the contributions of the Governments of Finland, France, Hungary, Iraq, Ireland, Luxembourg, Mexico, Norway, the Russian Federation, Switzerland and Turkey.

UNIDIR—ideas for peace and security

www.unidir.org

disarmament *forum*

two • 2011



Nuclear-weapon-free zones

Editor in Chief
Kerstin Vignard

Editor (English)
Ross McRae

French Translator
Valérie Compagnion

Palais des Nations
CH-1211, Geneva 10, Switzerland
Tel.: +41 (0)22 917 31 86
Fax: +41 (0)22 917 01 76
disarmamentforum@unog.ch
www.unidir.org



United Nations
Institute for
Disarmament Research

© United Nations

UNIDIR

The articles contained in *Disarmament Forum* are the sole responsibility of the individual authors.

They do not necessarily reflect the views or opinions of the United Nations, UNIDIR, its staff members or sponsors.

The names and designations of countries, territories, cities and areas employed in *Disarmament Forum* do not imply official endorsement or acceptance by the United Nations.

Printed at United Nations, Geneva
GE.05-00859—June 2011—4,000
UNIDIR/2011/3
ISSN 1020-7287

Printed on recycled paper

Table of contents

- 1 **Editor's note**
Kerstin Vignard

Nuclear-weapon-free zones

- 3 **Peeling the orange: regional paths to a nuclear-weapon-free world**
Michael Hamel-Green
- 15 **The Treaty of Pelindaba: towards the full implementation of the African NWFZ Treaty**
Noël Stott
- 27 **The Arctic: top of the world to be nuclear-weapon-free**
Jan Prawitz
- 39 **Possible elements of an NWFZ in the Middle East**
Nabil Fahmy and Patricia Lewis
- 51 **The role of civil society in promoting a WMDFZ in the Middle East**
Chen Kane

- 63 **UNIDIR focus**

Nuclear-weapon-free zones (NWFZs)—from the 1967 Treaty of Tlatelolco to the 2006 Treaty of Semipalatinsk—are an important and concrete contribution to the nuclear disarmament regime. There has been renewed interest in the establishment of new zones, with talk of a zone in the Arctic and in the Middle East. Progress with current NWFZs is also being made—the protocols to the Treaty of Pelindaba were submitted to the US Senate in May 2011 for consent to ratification, making the United States the final nuclear-weapon state to do so.

In this issue of *Disarmament Forum* authors examine positive contributions of NWFZs to regional and global security, developments on the African continent following the entry into force of the Treaty of Pelindaba, as well as the prospect of an Arctic NWFZ. Contributions also focus on the potential for a zone free of weapons of mass destruction in the Middle East, as the international community turns its attention to the 2012 conference on this issue.

Our next issue will focus on children, conflict and security. Among the most intolerable tragedies of violent conflict and its aftermath is its impact on children. Children, both as victims and perpetrators of violent acts, are harmed, exploited and otherwise affected in multiple ways by conflict and insecurity. While much has been learned about addressing the special needs of children in conflict, many facets are still poorly understood, particularly at the levels of appropriate policy and programmatic responses.

Since July 2010 UNIDIR has run a project for the European Union to support the preparatory process and negotiations for an Arms Trade Treaty (ATT) at the United Nations, which is scheduled for 2012. The project aims to ensure concrete recommendations on the elements of the future treaty and to develop expertise to implement effective arms transfer controls. The most recent of seven regional seminars of this two-year project was held in Bali, Indonesia, on 6–8 June 2011, and was entitled “ATT Regional Seminar for Countries in East Asia and the Pacific”. Summaries of the regional seminars are available on our website.

July 2011 saw the conclusion of the UNIDIR project “The Conference on Disarmament: Breaking the Ice”. Organized together with the Geneva Forum, the project was initiated in December 2010 to examine the critical challenges facing the Conference on Disarmament (CD) with the aim to increase understanding of the history and processes of this unique negotiating forum. The project concluded with the seventh briefing of the series, “Ways Ahead: Double or Quits”, which alludes to the growing sense of risk about the CD’s viability. The event was planned to coincide with the annual meeting in Geneva of the UN Secretary-General’s Advisory Board on Disarmament Matters. Full details of all of the briefings are to be found on our website.

Peeling the orange: regional paths to a nuclear-weapon-free world

Michael Hamel-Green

One approach that forms part of wider global strategies to eliminate nuclear weapons is the negotiation by groups or individual states on regional nuclear-weapon-free zones (NWFZs). The zones do not supplant the need for negotiated, universally-applicable frameworks and instruments—such as the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and the Model Nuclear Weapons Convention—for dealing with nuclear threats, but they do serve to gradually limit and delegitimize nuclear weapons at a regional level and to move towards a nuclear-weapon-free world.

The Mexican diplomat and Nobel Laureate Alfonso García Robles explained the concept well—NWFZs not only contribute to averting regional nuclear proliferation but also lead to global nuclear disarmament:

we should attempt to achieve a gradual broadening of the zones of the world from which nuclear weapons are prohibited to a point where the territories of Powers which possess those terrible tools of mass destruction will become “something like contaminated islets subjected to quarantine”.¹

The NWFZ approach can be likened to peeling an orange. First it was the denuclearization of the Antarctic—the area south of the 60° South latitude—achieved with the 1959 Antarctic Treaty. Next it was the whole of Latin America as a result of the 1967 Treaty of Tlatelolco. By the mid-1990s the whole southern hemisphere and large regions in the northern part were NWFZs, following the negotiation of treaties for the South Pacific, South-East Asia and Africa.² More recently has been the establishment of new zones in Mongolia and Central Asia.³ There is a unanimously-supported UN proposal for a weapons of mass destruction free zone (WMDFZ) in the Middle East, which is to be discussed at a UN-sponsored conference scheduled for 2012.

Robles' vision of the way in which NWFZs might gradually spread from region to region and serve to delegitimize nuclear weapons and eventually contribute to their elimination has certainly been vindicated in the subsequent evolution and expanding global reach of NWFZ treaties and by their continued relevance and advocacy. In the context of the difficulties and setbacks affecting wider arms control and disarmament negotiations, the NWFZ approach stands out as something of a success story. It has been a strategy that has demonstrated its viability not only during the tensions of the cold war (1945–1989) but also during the complex politics and conflicts of the post-cold war period.

Michael Hamel-Green is Executive Dean of the Faculty of Arts, Education and Human Development at Victoria University, Melbourne, Australia. His research focus includes regional disarmament, nuclear-weapon-free zones, regional security, and peace movements. He has been active in the Australian peace and disarmament movement. The opinions expressed in this article are the author's own and do not necessarily represent the views of Victoria University or the United Nations.

This has been due to the fact that NWFZ negotiations are not hostage to the hegemony of the nuclear-weapon states (NWSs).⁴ Nor are they subject to the destructive veto of one or two “hold-out” states, who misuse UN consensus processes to block central arms control and disarmament negotiations—as has been the case at the Conference on Disarmament over the past decade. Rather, the negotiations require regional groups or individual states to act in their own right on a nuclear threat by entering into binding treaties to outlaw nuclear weapons in the territories under their control, and seek international and NWS recognition and security guarantees on the basis of their verified, non-nuclear, non-threatening status.

The following article reviews the history of regional NWFZ initiatives, examines the contributions of current zones to security, non-proliferation and disarmament in and beyond their regions, and discusses new directions in the establishment of such zones in the Arctic, Middle East, North-East Asia and South Asia.

History of NWFZ initiatives

The early years

The initial catalyst for the development of the NWFZ concept and strategy occurred during the early years of the cold war, in 1957—just 12 years after the first nuclear weapons were dropped on Hiroshima and Nagasaki. This was at a time when many middle powers and non-aligned states had become dissatisfied with the progress on disarmament on the part of the two major powers, the United States and the Union of Soviet Socialist Republics (USSR), or—at the very least—with their failure to provide guarantees that NWSs would not use or threaten to use nuclear weapons against non-nuclear-weapon states.

The cold war had divided Central Europe into Warsaw Pact member states (Czechoslovakia, the German Democratic Republic, Hungary and Poland) and North Atlantic Treaty Organization (NATO) member states. Towards the end of 1957 the Polish foreign minister, Adam Rapacki, called for the establishment of a Central European NWFZ, which would cover Czechoslovakia, both German republics and Poland.⁵ This was rejected by the United Kingdom and the United States (although positively received by Belgium, Canada, Norway and Sweden), largely on the basis that nuclear weapons needed to be deployed in Central Europe to balance and deter numerically superior Warsaw Pact conventional forces stationed in the region.

Despite the rejection, Rapacki’s innovative concept proved relevant to other regions and was taken up in a number of international forums, and particularly at the United Nations. Many of the essential principles and features of subsequently established regional NWFZ treaties are to be found in the Rapacki Plan. These include the requirement that there be a complete absence of nuclear weapons in the zonal region, that there be adequate and effective inspection, verification and compliance systems, and that the NWSs provide binding guarantees not to use or threaten to use nuclear weapons against zone members.

During the late 1950s and early 1960s, as the cold war nuclear arms race intensified, further NWFZ proposals were advanced for a number of regions, including Africa, East Asia and Europe. In 1959 Romania reiterated its 1957 proposal for a Balkan NWFZ.⁶ In the same year Soviet Union Chairman Nikita Khrushchev advanced proposals for NWFZs on the Korean Peninsula and in the Asian Pacific. All of the proposals were rejected by the Western NWSs on the grounds that regional deployment of nuclear weapons was necessary to counter the numerically superior conventional forces of their cold war adversaries.

Despite the coolness of the Western powers to these initial NWFZ proposals, the first NWFZ to be actually established was an initiative of the United States—the 1959 Antarctic Treaty. The treaty established a nuclear-weapon-free and demilitarized zone by prohibiting military bases, manoeuvres and weapons testing (Article I), and banning nuclear explosions and disposing radioactive waste (Article V).⁷

At this time there was increasing regional and international concern over the health impacts of radioactive fallout from atmospheric nuclear testing in several regions of the world (Central Asia, Oceania and the Sahara). In 1962 the Cuban Missile Crisis greatly heightened international and regional awareness of the risks of a major nuclear conflict. This led to the negotiation of the Partial Test Ban Treaty⁸ and renewed interest in NWFZs.

Latin America

While calls for African and Nordic NWFZs made little headway at this time, one very successful regional initiative did emerge. Six months after the Cuban Missile Crisis, five Latin American states—Bolivia, Brazil, Chile, Ecuador and Mexico—called for a multilateral agreement to denuclearize Latin America, following an earlier suggestion from Costa Rica in 1959. The result was the Treaty of Tlatelolco, the first NWFZ treaty to cover a populated region, which was signed by 21 Latin American states in 1967.⁹ Similar to the Rapacki Plan, the key features of the zone included: a ban on nuclear weapons, whether developed or acquired by zone members themselves or introduced by NWSs; an inspection and verification system; and undertakings by NWSs not to use or threaten to use nuclear weapons against states in the zone. The ban on external stationing of nuclear weapons was particularly relevant given the stationing of both tactical and intermediate-range nuclear missiles in Cuba before and during the Missile Crisis by the USSR.

The South Pacific

The late 1960s and early 1970s witnessed major conflicts in Cambodia, Laos and Viet Nam. The potential for conventional wars to escalate to nuclear exchanges was of international concern and generated continued interest in regional denuclearization.

Within the Pacific there were regional concerns focusing on a range of nuclear issues, including French underground nuclear testing in French Polynesia, proposed nuclear waste-dumping and nuclear-armed ship visits to Pacific ports. The successful negotiation of the Treaty of Tlatelolco had served to inspire states in the South Pacific. In 1975 Fiji, New Zealand and Papua New Guinea sought support at the United Nations for a South Pacific NWFZ. In the same year the United Nations brought together government experts from around the world to conduct the first major comprehensive study of NWFZs.¹⁰ This study made a major contribution to clarifying the principles, provisions and applicability of such zones.

Many of the newly independent Pacific islands, such as Fiji, Papua New Guinea and Vanuatu, were strongly in favour of creating such a zone, and peace and disarmament movements in Australia and New Zealand were successful in pressing their governments to actively pursue South Pacific NWFZ negotiations. The result was the 1985 Treaty of Rarotonga, arising from negotiations chaired by Australia. The treaty not only banned the same categories of nuclear weapon activities as the Treaty of Tlatelolco, but also widened the provisions to prohibit nuclear testing anywhere in the zone (including international waters within the zone boundaries) and the dumping of nuclear waste at sea.

The Korean Peninsula

An early (but not pursued) NWFZ proposal was advanced in 1972 by a study of the Korean Peninsula commissioned by the US Arms Control and Disarmament Agency.¹¹ The study cited the Treaty of Tlatelolco as an important precedent and recommended restrictions on the deployment or utilization of nuclear weapons—nuclear-weapon-free-zone or no-first-use agreements. In 1980 President Kim Il Sung of the Democratic People's Republic of Korea proposed a Korean NWFZ in which the testing, stockpiling and use of nuclear weapons would be prohibited.¹² In Vladivostok, in 1985, Soviet President Mikhail Gorbachev proposed an all Asian conference that would include the consideration of NWFZs on the Korean Peninsula and in South-East Asia and the offer of negative security guarantees by NWSs to the states in the region. The proposal was dismissed on the grounds of the need for military flexibility in deploying nuclear weapons regionally to counter numerically superior conventional forces of China and the Democratic People's Republic of Korea.

Despite these previous US concerns, the two Koreas agreed in 1992 on a Joint Declaration on the Denuclearization of the Korean Peninsula. This would have established an NWFZ in the region, but the agreement failed to be implemented—in part due to a growing mistrust between the parties over inspection issues, but also due to the absence of key elements of an NWFZ, which included rigorous compliance mechanisms and non-use or threat of use guarantees from the NWSs. While the subsequent Six-Party Talks reached further agreements on Korean Peninsula denuclearization, these too were to founder on continued mistrust and non-implementation of agreed steps. The Democratic People's Republic of Korea subsequently went on to withdraw from the NPT in 2003 and conduct nuclear weapons tests in 2006 and

2009. Over the last decade academic institutes, media commentators and regional peace organizations have continued to advocate strongly for NWFZ arrangements in the North-East Asian region.¹³

The Arctic and Northern Europe

Soviet President Mikhail Gorbachev advanced a major initiative for denuclearization of the Arctic and Northern Europe in his 1987 Murmansk speech. He proposed that the Arctic be transformed into an international zone of peace through a range of measures, including the establishment of a Northern Europe NWFZ, agreements to restrict naval activities in Arctic seas and cooperation on scientific research and indigenous affairs.¹⁴ This initiative was supported by neither the Western NWSs nor their NATO, Arctic littoral allies (Canada, Denmark and Norway).

South-East Asia

The Treaty of Bangkok evolved from the earlier 1971 Zone of Peace, Freedom and Neutrality in South-East Asia (ZOPFAN) initiative of the Association of Southeast Asian Nations (ASEAN) advanced by the five founding members (Indonesia, Malaysia, the Philippines, Singapore and Thailand).¹⁵ This was in response to concern about NWS military bases and nuclear weapon transit by plane and sea in the region. When the NWSs with military bases in the region—the Russian Federation in Viet Nam and the United States in the Philippines—closed their bases, implementation of the zone became more feasible politically. The Treaty of Bangkok in 1995 established an NWFZ with the same key denuclearization features as the Treaty of Rarotonga and the Treaty of Tlatelolco—but went further by extending the zone’s provisions to cover the exclusive economic zones of states parties to the treaty. This move has complicated the willingness of NWSs to provide the sought-after security guarantees.

Africa

Like the South-East Asian zone, the African NWFZ Treaty—the Treaty of Pelindaba—took many years before it was signed in 1996, and it was only made possible by major changes in the African political landscape. Calls for an African NWFZ began in the early 1960s, at the time of French testing in the Sahara. Later, fresh concerns began to arise about South Africa’s nuclear intentions and programmes. South Africa commenced a nuclear energy development programme in 1948, progressed to uranium enrichment in 1970, weapons development in 1977, and by the early 1990s had a stockpile of six nuclear weapons. As early as 1964 the Organization of African Unity (OAU, now the African Union) issued a Declaration on the Denuclearization of Africa.¹⁶ In 1990 the UN General Assembly approved a new resolution calling for the implementation of the 1964 declaration and the establishment of a meeting of experts “for the preparation and implementation of a convention or treaty on the denuclearization of Africa”.¹⁷

The Treaty of Pelindaba contains similar denuclearization provisions to the Treaty of Rarotonga and the Treaty of Tlatelolco. However, it also contains special provisions for the dismantling of existing nuclear-weapon-related facilities. It was also the first zone in which the United Nations had played a direct role in facilitating successful NWFZ negotiations through its joint chairing of the negotiations with the OAU.

Mongolia

Mongolia declared itself a single-state NWFZ in 1992, and sought recognition for this status at the United Nations through negotiations at the United Nations Disarmament Commission and subsequent General Assembly resolutions.¹⁸ In 1998 there was unanimous support at the General Assembly for Mongolia's NWFZ status, while the NWSs declared their support bilaterally.¹⁹

Central Asia

A major breakthrough in Central Asia was the Treaty of Semipalatinsk in 2006, after nine years of negotiations.²⁰ This was made possible by Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan gaining independence in 1991, following the collapse of the USSR, which had formerly controlled and administered the whole region. The region was utilized extensively by the USSR for a range of nuclear-weapon-related activities—including nuclear testing, missile testing, processing of nuclear fuels, stockpiling of strategic and tactical nuclear weapons, uranium mining and plutonium stockpiling. As the former UN Under-Secretary-General for Disarmament Affairs, Jayantha Dhanapala, noted, the zone's establishment was "all the more significant given that this region once reportedly hosted over 700 tactical nuclear weapons—not to mention the over 1,400 former Soviet strategic nuclear weapons that Kazakhstan returned to Russia before joining the NPT in 1995".²¹

The initial proposal for the NWFZ was advanced by Uzbek President Islam Karimov at the 1993 General Assembly, following an early 1992 suggestion from Mongolia that such a zone be created. In 1997 the five Central Asian presidents issued the Almaty Declaration, which called for the creation of an NWFZ. As in the case of the other treaties in populated zones, the treaty bans the development or acquisition of nuclear weapons by regional states and the stationing of nuclear weapons. However, it goes further by prohibiting the conduct of research on nuclear weapons, and explicitly including the more intrusive IAEA additional protocol safeguards.

NPT Review Conference

Most recently the NWFZ approach was strongly endorsed at the 2010 NPT Review Conference. Article VII of the NPT affirms that there is nothing stopping states parties to the treaty

concluding “regional treaties in order to assure the total absence of nuclear weapons in their respective territories”. In addition, the Review Conference stated:

The Conference reaffirms the conviction that the establishment of the internationally recognized nuclear-weapon-free zones on the basis of arrangements freely arrived at among the States of the region concerned enhances global and regional peace and security, strengthens the nuclear non-proliferation regime and contributes towards realizing the objectives of nuclear disarmament.²²

The Review Conference also welcomed the entry into force of the more recent African and Central Asian NWFZs; welcomed new efforts to reach agreement with the NWSs on outstanding issues relating to the relevant protocols for both these zones, and the South-East Asian NWFZ; and called upon the NWSs to bring into effect the security assurances provided by NWFZ treaties and their protocols.

A particularly important NWFZ decision at the 2010 NPT Review Conference was to call for a Middle East conference to be held in 2012. The conference, which would be attended by all Middle East states, would examine a WMDFZ for the region, supported by the NWSs. This decision, agreed unanimously at the review conference, was crucial in implementing the long-delayed 1995 NPT Review Conference decision to move towards establishing such a zone.

NWFZ contributions to non-proliferation and disarmament

Treaty of Tlatelolco

In Latin America two of the largest countries in the region, Argentina and Brazil, have both large nuclear power industries and the potential capability to develop nuclear weapons. The Treaty of Tlatelolco provides a confidence-building framework and regional non-proliferation norm which has helped defuse a potential nuclear arms race between these two key regional states. Together with the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) bilateral treaty between Argentina and Brazil, the Treaty of Tlatelolco has created a regional non-proliferation regime that has highly effective verification and compliance provisions, which should greatly reduce the chance of nuclear proliferation in this region.

Treaty of Rarotonga

The South Pacific NWFZ has served to reduce the risk of future nuclear-weapon rivalry between states parties and neighbouring regions. The Treaty of Rarotonga has not only served to reinforce Australia’s commitment to non-proliferation—despite Australia having

considered nuclear weapon development in the 1960s to early 1970s—but it also prohibits NWSs conducting nuclear tests in the region.²³

Treaty of Bangkok

For South-East Asia the Treaty of Bangkok similarly confirms and reinforces the non-proliferation commitments of the ASEAN group, and creates major legal and political barriers to any potential break-away state. It also prevents NWSs from again stationing nuclear-capable forces at military bases in the region, as was the case during the Viet Nam war.

While the Treaty of Rarotonga and the Treaty of Bangkok have yet to secure complete ratification of the relevant protocols by the NWSs, there were signs of renewed willingness at the 2010 NPT Review Conference either to undertake the necessary ratification or, in the case of the Treaty of Bangkok, enter into fresh negotiations on the protocols.

Treaty of Pelindaba

In Africa the Treaty of Pelindaba has contributed to reversing and preventing proliferation, as had already started in South Africa in 1989. The zone also prevents a repeat of the use of African territory for nuclear weapons testing, stationing and deployment.

Treaty of Semipalatinsk

In Central Asia the Treaty of Semipalatinsk has played a critical role in averting further proliferation in a strategic region that has extensive access to fissile materials, plutonium stockpiles and nuclear-weapons-related facilities dating back to the Soviet administration, and nuclear expertise. In signing and ratifying the treaty, the Central Asian states have greatly reduced proliferation risks within the region and moved to prevent the NWSs from once again using the region for nuclear weapons testing and stationing. As in the case of the Korean Peninsula, a continued failure of the Western NWSs to offer the Central Asian zone states negative security guarantees against use or threat of use of nuclear weapons could well be counterproductive in the longer term. It may prompt one of the Central Asian states to make the same decision that the Democratic People's Republic of Korea appears to be making—that nuclear weapons need to be acquired to insure against nuclear attack.

Future directions

Beyond the direct non-proliferation and security contributions within a particular region, NWFZs contribute importantly to wider regional and global efforts to eliminate nuclear weapons. States parties to existing zones can make a contribution in sharing expertise and experience to make the zones stronger and more effective, especially in the areas of verification

and compliance. This involves not only changes to organizational machinery, but also ancillary agreements and bilateral measures, such as the ABACC agreement.

Yet another role that NWFZs can play is fostering awareness and education of nuclear threats and issues. It is likely that one of the main barriers to regional and global denuclearization is the lack of awareness of the catastrophic impacts and aftermath of even a limited nuclear exchange.

The most obvious need is to expand the reach of NWFZs, particularly in areas of the world where nuclear threats are increasing, and where regional conflicts could unleash a nuclear war through escalation of a conventional war, miscalculation or deliberate pre-emptive attack. There are three such regions: the Middle East, North-East Asia (including the Korean Peninsula) and South Asia. In each of these cases there has been much reflection and many long-standing proposals for establishing NWFZs.

The Middle East

There is a surprising degree of consensus on the establishment of an NWFZ in the region. First proposed in 1974 by Egypt and Iran, the concept has been unanimously endorsed at the United Nations. The 2010 NPT Review Conference agreed that the United Nations would sponsor a major regional conference on the Middle East NWFZ in 2012. Israel, while long insisting that there must be peace settlements with all its Arab neighbours before it will enter into negotiations on a Middle East NWFZ, has agreed to participate so long as it is not singled out.

Presently, Israel is believed to have covertly developed nuclear weapons and has so far sought the best of both worlds: on the one hand, acquiring its own perceived nuclear deterrent—not that it appears to have had much deterrent value against conventional attacks, rocket attacks or suicide bombings; and on the other hand, relying on the global NPT non-proliferation regime to prevent Arab neighbours and Iran from acquiring similar nuclear capability. Given new risks of regional proliferation in the context of Iran's acquisition of uranium enrichment capabilities, increasing interest in nuclear power among Arab states, and conceivable future Arab and Iranian withdrawals from the NPT, the question for Israel is whether its longer term security would not be better served by a rigorously verified Middle East NWFZ than by relying on its own nuclear deterrent.

North-East Asia

A second region for which the NWFZ approach would seem very applicable is North-East Asia, including the Korean Peninsula. This is a region that was the first to experience nuclear war directly—at Hiroshima and Nagasaki. More recently there has been regional proliferation in the form of the acquisition of nuclear weapons by the Democratic People's Republic of Korea—

confirmed by the underground tests. Unlike the Middle East, there is no consensus among the governments of the region on creating an NWFZ, although both Koreas did at one point sign the Joint Declaration on the Denuclearization of the Korean Peninsula.

Proponents of a North-East Asian NWFZ argue that the present policies of encirclement and military pressure on the Democratic People's Republic of Korea are only likely to intensify its determination to acquire significant stockpiles of nuclear weapons as insurance against perceived threats. In the longer term this acquisition could lead to Japan or the Republic of Korea acquiring nuclear weapons, a breakdown in the wider non-proliferation regime, and an increased risk of nuclear war as a result of escalation or miscalculation. Opponents counter that the Democratic People's Republic of Korea is not likely to give up its nuclear weapons, and has proved inconsistent in following up on previous commitments.

Current NWFZ proposals for the region range from denuclearization proposals for just the Korean Peninsula, wider proposals to include most of North-East Asia and Japan, and even wider zones that would include Mongolia and the Taiwan Province of China.

South Asia

Both India and Pakistan have already acquired significant stockpiles of nuclear weapons, have been locked in long-standing regional conflicts over Kashmir and have suffered terrorist incursions. Each year from 1974 to 1997 there were General Assembly resolutions on the establishment of an NWFZ in South Asia. When voting occurred, Pakistan supported the resolutions—but they were rejected by India on the grounds that such a zone would not address its security concerns about Chinese nuclear weapons. Such a zone was also endorsed by the 2000 NPT Review Conference.²⁴ However, following the nuclear tests conducted by both Pakistan and India in 1998, Pakistan ceased to support such a zone and joined India at the United Nations in opposition. However, there has been continued call for the creation of a South Asian NWFZ—despite opposition from India and Pakistan. One proposal might be for Bangladesh, Nepal and Sri Lanka to declare themselves national NWFZs—like Mongolia—with international recognition.²⁵ Alternatively, the Treaty of Bangkok could be extended to cover Bangladesh and Sri Lanka.

The Arctic

The Middle East, North-East Asia and South Asia are all regions where there are existing conflicts affecting large populations. Yet the Arctic is another region where an NWFZ would make much sense. This is a region where both the Russian Federation and the United States deploy nuclear weapon forces, and which is becoming increasingly contested, as a result of the receding Arctic ice cap and subsea mineral resources becoming far more accessible. Many indigenous peoples in Arctic territories may have already suffered radiation-related health effects from radioactive contamination as a result of radioactive-waste disposal in the

region, nuclear tests and nuclear weapon accidents. A number of organizations have called for the Arctic to be declared an NWFZ in much the same way as the Antarctic.

Conclusion

Nuclear-weapon-free zones are quietly peeling back the nuclear orange. The progress is slow—perhaps too slow—given the unthinkable deadliness of nuclear war, and the unforgiving nature of its aftermath—the radiation and nuclear winter consequences reaching far beyond the national borders of nuclear adversaries. Yet since the historic Antarctic Treaty and the Treaty of Tlatelolco, we are gradually—region by region—discovering the ways and the will to recloth our planet in a patchwork quilt of NWFZs, whose leaders, diplomats and peoples have found the wisdom and foresight to renounce reliance on nuclear weapons.

Notes

1. General Assembly, *First Committee provisional verbatim record of the Two Thousand and Eighteenth Meeting*, UN document A/C.1/PV.2018, 13 November 1974, p. 32.
2. The South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga) was signed on 6 August 1985 and entered into force on 11 December 1986. The Treaty on the South-East Asia Nuclear Weapon Free Zone (Treaty of Bangkok) was signed on 15 December 1995 and entered into force on 27 March 1997. The African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) was signed on 11 April 1996 and entered into force on 15 July 2009.
3. General Assembly and Security Council, *Annex I: Law of Mongolia on its nuclear-weapon-free status, adopted on 3 February 2000*, UN document A/55/56-S/2000/160, 29 February 2000; the Treaty on a Nuclear-Weapon-Free Zone in Central Asia (Treaty of Semipalatinsk) was signed on 8 September 2006 and entered into force on 21 March 2009.
4. The five states are China, France, the Russian Federation, the United Kingdom and the United States.
5. The Polish government issued a memorandum on the 14 February 1958 regarding its proposal for an NWFZ in Central Europe. This would later be known as the Rapacki Plan.
6. General Assembly, *Comprehensive study of the question of nuclear-weapon-free zones in all its aspects*, UN document A/10027/Add.1, 8 October 1975.
7. The Antarctic Treaty was signed on 1 December 1959 and entered into force on 23 June 1961.
8. The treaty, known fully as the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, was signed on 5 August 1963 and entered into force on 10 October 1963.
9. The treaty, known fully as the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean, was signed on 14 February 1967 and entered into force on 25 April 1969.
10. General Assembly, *Comprehensive study of the question of nuclear-weapon-free zones in all its aspects*, UN document A/10027/Add.1, 8 October 1975.
11. Institute for Defense Analyses, *The Reduction of Tension in Korea*, Technical report (secret) prepared for the US Arms Control and Disarmament Agency, 1972, (declassified 1977).
12. Kim Il Sung, *Report to the Sixth Congress of the Worker's Party of Korea on the Work of the Central Committee*, Pyongyang, 10 October 1990.
13. For further information see P. Hayes and M. Hamel-Green, "The Path Not Taken, The Way Still Open: Denuclearizing the Korean Peninsula and Northeast Asia", *The Asia-Pacific Journal*, 50-1-09, 2009.
14. M. Gorbachev, *The Speech in Murmansk*, Novosti Press Agency, 1987.
15. The 1971 Zone of Peace, Freedom and Neutrality Declaration was signed on 27 November 1971.

16. The Declaration on the Denuclearization of Africa was adopted by the Summit of the OAU at its first ordinary session, Cairo, 17–21 July 1964.
17. General Assembly, *Implementation of the Declaration on the Denuclearization of Africa*, UN document A/RES/45/56, 4 December 1990, p. 2.
18. General Assembly, *Provisional verbatim record of the 13th Meeting*, UN document A/47/PV.13, 6 October 1992.
19. General Assembly, *Resolutions adopted by the General Assembly: Mongolia's international security and nuclear-weapon-free status*, UN document A/RES/53/77 D, 12 January 1999.
20. Known fully as the Treaty on a Nuclear-Weapon-Free Zone in Central Asia, the treaty was signed on 8 September 2006 and entered into force on 21 March 2009.
21. J. Dhanapala, *Statement before the First Committee of the General Assembly*, UN document A/C.1/57/PV.2, 30 September 2002.
22. 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final document*, document NPT/CONF.2010/50 (Vol. I), 2010, p. 15.
23. For further discussion of the security contributions of these zones see M. Hamel-Green, *Regional Initiatives on Nuclear- and WMD-Free Zones: Cooperative Approaches to Arms Control and Non-Proliferation*, UNIDIR, 2005, pp. 5–8.
24. 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final document*, document NPT/CONF.2000/28, 24 May 2000.
25. For further information see A. Vanaik, "Nuclear Disarmament: Building a Movement in South Asia", *Economic and Political Weekly*, vol. 40, no. 6, 2005, pp. 495–98.

The Treaty of Pelindaba: towards the full implementation of the African NWFZ Treaty

Noël Stott

The African Nuclear-Weapon-Free Zone Treaty, commonly known as the Treaty of Pelindaba, declares that the “African nuclear-weapon-free zone will constitute an important step towards strengthening the non-proliferation regime, promoting cooperation in the peaceful uses of nuclear energy, promoting general and complete disarmament and enhancing regional and international peace and security”.¹ This article provides a brief historical background to the treaty and an update of developments in its implementation since its entry into force, including the First Conference of State Parties, in November 2010.

Developing a nuclear-weapon-free zone (NWFZ) in Africa has been a long process. Back in July 1964 the then Organization of African Unity (OAU)² adopted the Declaration on the Denuclearization of Africa.³ The 1960s was a very different Africa from today. Apartheid was firmly entrenched in South Africa and was characterized by racial oppression, segregation and a sense—on the part of the ruling National Party—that it was facing a “total onslaught” from Soviet-inspired enemies, which required a “total strategy” response, including an eventual nuclear deterrent.

It was also an Africa where France was conducting atmospheric and underground nuclear tests in the Sahara desert. It was only in June 1995, after the end of apartheid and the dismantlement of South Africa’s nuclear weapons programme, when the final text of the African NWFZ Treaty was agreed to by African heads of state and governments. The treaty opened for signature on 11 April 1996, and thirteen years later the Treaty of Pelindaba entered into force when Burundi deposited its ratification instrument on 15 July 2009, becoming the twenty-eighth African state to do so.⁴ As of 1 March 2011 all 53 members of the African Union (AU) are signatories to the treaty (including the territory known as the Sahrawi Arab Democratic Republic), and 31 states have deposited their instruments of ratification with the AU Commission (the Treaty Depository)—the latest being Cameroon, on 28 September 2010.⁵ Although Morocco left the OAU in 1984—and is not a member of the AU—it signed the treaty on 11 April 1996.

Through the treaty, African states seek to ensure that nuclear weapons are not developed, produced, tested, or otherwise acquired or stationed in any of the countries on the continent or associated islands.⁶ As an important step towards strengthening the global non-proliferation regime, it provides for the promotion of cooperation in the peaceful uses of nuclear energy, requires complete nuclear disarmament by African states, and enhances both regional and

Noël Stott leads the “Africa’s Development and the Threat of Weapons of Mass Destruction” project of the South African based Institute for Security Studies (ISS). He has been at the ISS since 2002 and has extensive experience in all aspects of arms control, disarmament and non-proliferation, including small arms and light weapons, and conventional arms. The opinions expressed in this article are the author’s own and do not necessarily represent the views of the states parties to the Treaty of Pelindaba, the ISS or the United Nations.

global peace and security. According to the AU Commissioner for Peace and Security, Ramtane Lamamra, the treaty is part of a wider strategy to implement the Common African Defence and Security Policy.⁷ As such, it is a key component of the overall peace and security architecture of the AU.⁸

Provisions of the treaty

Under the terms of the treaty, African states pledge the following:

- renunciation of nuclear explosive devices
- prevention of the stationing of nuclear explosive devices
- prohibition of the testing of nuclear explosive devices
- declaration, dismantling, destruction or conversion of nuclear explosive devices and the facilities for their manufacture
- prohibition of the dumping of radioactive waste
- promotion of peaceful nuclear activities and verification of their peaceful uses
- physical protection of nuclear materials and facilities and the prohibition of armed attacks on nuclear installations
- establishment of the African Commission on Nuclear Energy as a mechanism for compliance
- reporting and exchange of information on nuclear activities

The treaty is of unlimited duration and withdrawal requires 12 months prior notification. It prohibits research on nuclear explosive devices by any means, and includes acquiring, manufacturing, testing or developing nuclear weapons. It also requires the destruction of any nuclear explosive device a state party might possess. However, the transport of nuclear weapons through ports, airfields and territorial waters within the zone is the independent decision of each state party.

However, the treaty supports the use of nuclear science and technology for peaceful purposes. Each state party is to conduct all activities regarding the peaceful use of nuclear energy under strict non-proliferation measures. These include providing assurance of exclusively peaceful use and comprehensive safeguards in agreement with the International Atomic Energy Agency (IAEA) for the purpose of verifying compliance.

The treaty strengthens the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), which is often regarded as the cornerstone of the global nuclear non-proliferation regime. In line with the provisions and three pillars in the NPT, the Treaty of Pelindaba not only commits African states not to manufacture, acquire, test or possess nuclear weapons but also facilitates the use of nuclear energy for peaceful purposes on the continent. Like other NWFZ treaties, the Treaty of Pelindaba includes a protocol for the five

nuclear-weapon states⁹ (NWSs) to sign and ratify—and therefore respect—the status of the zone by providing negative security assurances.

However, according to Hans Blix, the then IAEA Director General, speaking at the Conference for the Signing of the African Nuclear-Weapon-Free Zone Treaty:

The Pelindaba Treaty, however, goes further than the Non-Proliferation Treaty. Unlike the NPT, it prohibits the stationing and testing of any nuclear explosive device in the territories of its parties; it also commits its parties to apply the highest standards of security and physical protection of nuclear material, facilities and equipment to prevent theft and unauthorized use; it prohibits armed attack against nuclear installations in the zone; and it prohibits the dumping of any radioactive waste. These are important undertakings supplementary to those already assumed by the parties under the NPT. They will help to advance the cause of horizontal and vertical non-proliferation and to prevent illegal trafficking in or other unauthorized uses of nuclear material. They will help to shield nuclear facilities from possible armed attacks and consequent radiological releases during conflicts; and they will require management of radioactive waste to be in accordance with accepted international safety standards.¹⁰

Nuclear installations

Article 11, which prohibits armed attacks on nuclear installations, is distinct in that few of the other NWFZ treaties include such a provision and thus “reassures parties that other parties will neither launch such an attack nor assist others in doing so.”¹¹ This is important given that Algeria, Egypt, Ghana, Libyan Arab Jamahiriya, Morocco, Nigeria and South Africa have operational nuclear research reactors. While South Africa is the only state at present to have nuclear power reactors, a number of African states are in the process of investigating the feasibility of developing nuclear power plants for generating electricity.¹² In addition, the inclusion of substantial definitions of the terms “nuclear explosive device”, “nuclear installation” and “nuclear material” and the fact that the treaty prevents the dumping of waste anywhere in the zone is an improvement upon both the Treaty of Rarotonga and the Treaty of Tlatelolco.¹³

Securing nuclear material and technology

The need to better secure nuclear and other radioactive material and technology has taken on increased significance in recent times. An international nuclear smuggling ring—the A. Q. Khan network¹⁴—was uncovered in 2004, which implicated a number of citizens of various states in the dissemination of sensitive nuclear technology without authorization. There has also been evidence which suggests that Al-Qaida-linked groups may have an interest in acquiring or

developing weapons of mass destruction and in particular a nuclear or radiological explosive or dispersal device.¹⁵ Under Article 10 of the Treaty of Pelindaba, which lays out the necessary physical protection of nuclear materials and facilities, states parties undertake to:

maintain the highest standards of security and effective physical protection of nuclear materials, facilities and equipment to prevent theft or unauthorized use and handling. To that end each Party, *inter alia*, undertakes to apply measures of physical protection equivalent to those provided for in the Convention on Physical Protection of Nuclear Material and in recommendations and guidelines developed by IAEA for that purpose.¹⁶

National implementation

None of the early NWFZ treaties require states parties to take the measures necessary to implement the treaty obligations. It is, however, a general duty for states to bring their national law into conformity with their obligations under international law.¹⁷ Although it is not explicitly laid out in the Treaty of Pelindaba, each African state is required to take the appropriate legal and administrative measures to prevent and punish any prohibited activity by either individuals under its jurisdiction or control, or in any territory under its jurisdiction or control. Legal measures include the imposition of penal sanctions. Administrative measures, including changes in military doctrine and operating procedures and the notification of organizations involved in the development, production and transfer of arms, may also be required to ensure that violations do not occur.

Beyond the prevention and punishment of violations, states parties need to consider a range of positive measures to ensure implementation of the treaty. They are required to prohibit the testing of any nuclear explosive devices in their territory (Article 5), draw up and implement plans to destroy any stockpiled nuclear explosive devices (Article 6), and ensure high security standards (Article 10). States parties are also required to observe the measures outlined in the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, with regards to radioactive waste. In addition, reports to the African Commission on Nuclear Energy (AFCONe) are to be prepared and submitted.¹⁸

Protocols to the Treaty of Pelindaba

Additional to the treaty are protocols for the NWSs and Spain, which are *de jure* or *de facto* in control of territories within the zone. The states are required to sign and ratify the protocols and should take all necessary measures to ensure the speedy application of the treaty to the territories which lie within the limits of the established geographical zone.

Protocol I calls on NWSs not to use or threaten to use a nuclear weapon against any states parties to the treaty or against any territory within the NWFZ. It has been signed by all the NWSs and ratified by China, France, the Russian Federation and the United Kingdom.

Protocol II calls on the NWSs not to test, assist or encourage the testing of a nuclear explosive device anywhere within the African NWFZ. It has been signed by all the NWSs and ratified by China, France, the Russian Federation and the United Kingdom.

Protocol III calls upon states which are de jure or de facto in control of territories within the NWFZ—France and Spain—to apply the principles of the treaty to the territories under their control. France has signed and ratified it. However, Spain, which is a non-nuclear-weapon state (NNWS), has yet to do so.

State positions

Spain

According to Spain, three of its territories—the Canary Islands and two coastal cities in Morocco, Ceuta and Melilla—are an integral part of the European Union. Therefore, Spain has insisted that these three territories should not be included within the African NWFZ. Spain has also argued that the treaty does not contain any global non-proliferation or disarmament provisions that it has not already signed. Spain also cites its adherence to IAEA and European Atomic Energy Community safeguards—which in its view contain provisions that go considerably beyond those contained in the Treaty of Pelindaba. Spain has renounced production of nuclear weapons. It has militarily denuclearized its whole national territory and has been committed to an exclusively peaceful use of nuclear energy. The signature, and later ratification of Protocol III, would therefore create a redundant nuclear control regime over those parts of Spanish territory that, according to the treaty, would fall within the geographical area to which the treaty applied.¹⁹

The Russian Federation

The Russian Federation signed Protocols I and II in November 1996—shortly after the treaty opened for signature. On signing the Russian Federation made clear that:

It would not use nuclear weapons against a state party to the treaty, *except* [emphasis added] in the case of invasion or any other armed attack on Russia, its territory, its armed forces or other troops, its allies or a state towards which it had a security commitment, carried out or sustained by a non-nuclear weapon state party to the treaty, in association or alliance with a nuclear weapon state.²⁰

In August 2010 Russian President Dmitry Medvedev submitted Protocols I and II to the lower house of the Duma for ratification. The Duma ratified the protocols in March 2011. However, according to Russian Deputy Foreign Minister Sergei Ryabkov:

Russia signed the treaty with a number of reservations. They stipulate that we do not assume the obligation not to use nuclear weapons against states that are part of the zone free from nuclear weapons in Africa in situations where they have allied commitments to other nuclear states and may participate in military actions using nuclear weapons against Russia. [...] In signing this treaty the reservation was made it does not apply to the US base of Diego Garcia. [...] This is an important reservation, which allows us to fully maintain our own security in hypothetical situations of the emergence [of] crises or conflicts in which the potential use of nuclear weapons is possible.²¹

The United Kingdom and the United States

In the past both the United Kingdom and the United States have argued that the British Indian Ocean Territory cannot be included in the geographical area of the Treaty of Pelindaba, as it is a UK territory used by the United States as a major military base. On depositing the ratifications:

The UK stated that it did not accept the inclusion of the British Indian Ocean Territory within the African nuclear-weapon-free zone without its consent, and did not accept, by its adherence to Protocols I and II, any legal obligations in respect of that territory.²²

The AU, however, considers the islands to be part of Mauritius, and a map, in Annex 1 of the treaty, explicitly includes the Chagos Archipelago—although with the note “Appears without prejudice to the question of sovereignty” in reference to the long-standing diplomatic dispute between Mauritius and the United Kingdom. While the airstrip on Diego Garcia played a central role in the war against Iraq and Afghanistan from 1991 through 2006, it is not known whether the United States has ever stored nuclear weapons on the Indian Ocean island.

In May 2011 US President Barack Obama jointly submitted Protocols I and II to the Treaty of Pelindaba and Protocols I, II and III to the Treaty of Rarotonga to the US Senate for consent to ratification. In reference to the Treaty of Pelindaba, the president stated:

I am convinced that it is in the best interest of the United States to ratify Protocols I and II to the Treaty. This step will strengthen our relations with our African friends and allies, enhance US security by furthering our global nonproliferation and arms control objectives, demonstrate our commitment to the decisions taken at the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, and contribute

significantly to the realization of the African Nuclear-Weapon-Free Zone in all its aspects.²³

At the First Committee of the United Nations General Assembly in 2010, the representative of France, speaking on behalf of France, the United Kingdom and the United States, noted that France and the United Kingdom had committed themselves not to use or threaten to use nuclear weapons against any African states parties to the Treaty of Pelindaba. Furthermore, he added that the United States had announced “its intention to start the process of ratifying the protocols annexed to the treaty”.²⁴ India—neither a state party to the NPT nor a recognized NWS—also conveyed its assurance that it would respect the status of the African NWFZ.

The 2010 First Conference of States Parties

Article 14 lays out a “Conference of all Parties to the Treaty”, which should meet “as soon as possible after the entry into force of the Treaty to, *inter alia*, elect members of the Commission [AFCONE] and determine its headquarters”.²⁵ The article continues with the stipulation that conferences should be held as necessary and at least every two years.

The First Conference of States Parties was held in Addis Ababa on 4 November 2010 and was attended by states parties²⁶ to the treaty, states not party²⁷ and the NWSs.²⁸ At the First Conference 12 commissioners were elected, as stipulated in the treaty.²⁹ Participants also endorsed the decision to establish the headquarters of AFCONE in South Africa. On 4 May 2011 the First Ordinary Session (a meeting of the 12 Commissioners) of AFCONE was held to decide on the structure and budget of AFCONE and its rules of procedure, as well as to elect its chairman and vice-chairman and to establish a process to appoint an executive secretary.

At its 2011 Ordinary Session the AU Assembly welcomed the convening of the First Conference.³⁰ The Assembly called upon “the AU Member States that have not yet done so, to sign and ratify the Treaty of Pelindaba without further delay”, and appealed “to the concerned non-African States to speedily sign and ratify the relevant Protocols to the Pelindaba Treaty and to comply with all the commitments contained therein”.³¹

The African Commission on Nuclear Energy

Under Article 12 states parties are to establish AFCONE in order to ensure that there is compliance to the treaty. AFCONE has to perform certain administrative functions in support of compliance, such as collating reports and the exchange of information and establishing a complaints procedure. State party conferences can be convened, following a simple majority, on any matter arising from the implementation of the treaty. In addition, AFCONE is also responsible for reviewing the application of peaceful nuclear activities,

following IAEA safeguards. Article 12 concludes with a call for encouraging regional and international cooperation initiatives in the peaceful use of nuclear science and technology. Thus AFCONE will need to ensure state party compliance with the basic principles of the treaty and play an instrumental role in facilitating the promotion of peaceful nuclear activities (Article 8), the verification of peaceful uses (Article 9) and the physical protection of nuclear materials and facilities (Article 10).

Once AFCONE is operational, African states will have more control over the development of nuclear projects on the continent, which should also ensure increased security of radioactive material. AFCONE could also assist African states with the ratification and implementation of other international nuclear disarmament and non-proliferation instruments, including the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and the Convention on the Physical Protection of Nuclear Material.

In fulfilling its role in facilitating the promotion of peaceful nuclear activities AFCONE will have to work closely with the African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology (AFRA) and the recently created Forum of Nuclear Regulatory Bodies in Africa (FNRBA). AFRA is an important IAEA initiative given that it “seeks to maximize the use of the available infrastructure and expertise in Africa and assists countries to move toward regional self-sufficiency using peaceful applications of nuclear techniques”.³² The FNRBA was formed in response to the increasing use of radioactive material in peaceful nuclear applications such as health, agriculture and energy, and 33 African states are currently part of the Forum. According to IAEA Deputy Director General Tomihiro Taniguchi the launching of the FNRBA “is a very positive step in strengthening nuclear safety and security in Africa”.³³ As laid out in its charter, the FNRBA provides a mechanism for the exchange of regulatory experiences and practices among nuclear regulatory bodies in Africa, and importantly, aims “to provide for the enhancement, strengthening and harmonisation of the radiation protection, nuclear safety and security regulatory infrastructure and framework among the members of FNRBA”.³⁴ Working together (and with the IAEA), AFCONE, AFRA and the FNRBA will avoid duplication and close the gaps in strengthening Africa’s nuclear disarmament and non-proliferation obligations while simultaneously providing a balance between Africa’s security and development needs.

AFCONE and states parties will have to consider in the near future how best to approach Article 9, which deals with the verification of peaceful uses. The provision obliges states “not to provide source or special fissionable material, or equipment or material”³⁵ for the peaceful purposes of any NNWS unless it complies with IAEA safeguards. Agreements between India and the United States may now conflict with this. On 6 September 2008 the Nuclear Suppliers Group (NSG) agreed to exempt India from its guidelines, which require comprehensive international safeguards as a pre-condition for the trade in nuclear material. India is one of four states which have signed neither the NPT nor the CTBT and continues to produce fissile material as it expands its nuclear arsenal. As a state not party to the NPT

(along with the Democratic People's Republic of Korea, Israel and Pakistan), India has not made a legally binding commitment to pursue nuclear disarmament. In reference to the NSG decision, Daryl Kimball, Executive Director of the Arms Control Association, remarked that this "severely erodes the credibility of global efforts to ensure that access to nuclear trade and technology is available only to those states that meet global nuclear nonproliferation and disarmament standards".³⁶

Conclusion

In many ways nuclear weapons had fallen from the African agenda since the Treaty of Pelindaba was signed, and it took 13 years before the treaty entered into force. African participation in international legal regimes concerning nuclear weapons has often been perceived as marginal over the last 14 years—and this should come as no surprise. The continent faces many security challenges: the proliferation of small arms and light weapons; the alleviation of poverty; and the provision of basic goods and services such as food, housing, educational and health care. However, when the Treaty of Pelindaba entered into force in July 2009, African support for a world without nuclear weapons gained significant momentum—and since then three more African states have ratified: Cameroon, Tunisia and Zambia, with more expected in the near future as AFCONE becomes operational.

Many African states played a significant role at the 2010 NPT Review Conference—both individually and as groups, such as the Africa Group, the Arab Group and the Non-Aligned Movement. Attended by virtually all African states, 22 African states made opening statements. Ambassador Tommo Monthe of Cameroon set the tone of what the continent desired at the review conference—which was for all UN member states "to demonstrate sufficient political goodwill and requisite flexibility and deep understanding with a view to achieving concrete results".³⁷

A vital element in all NWFZ treaties that have been negotiated is they are not something that can be imposed from outside. They must be rooted in the politics and culture of the region, and although they share common elements, each is unique. The Treaty of Pelindaba is thus an important African initiative led by Africans and for Africans. However, it is also important to place NWFZs within a global context and recognize that the 1967 Treaty of Tlatelolco for Latin America and the Caribbean served as the model for the successive NWFZ treaties: the Treaty of Pelindaba, as well as the 1985 Treaty of Rarotonga for the South Pacific, the 1995 Treaty of Bangkok for South-East Asia and the 2006 Treaty of Semipalatinsk for Central Asia.

As an NWFZ, Africa has reinforced the commitments of both NNWSs and NWSs to their nuclear disarmament and non-proliferation objectives. The treaty and AFCONE could play a galvanizing role towards the rapid entry into force of the CTBT—a pressing international imperative towards a world free of nuclear weapons. The CTBT and the Treaty of Pelindaba are mutually reinforcing. The impact and effects of any test, use or accident involving nuclear

weapons cannot be contained within national boundaries or continents. As stated by Jean du Preez on behalf of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), states parties to the Treaty of Pelindaba “should have no conceivable political and security obstacles to ratifying the CTBT. Under the NPT, they already have a legal obligation not to develop nuclear weapons. The Pelindaba Treaty further binds them legally not to test nuclear weapons or to allow nuclear testing on their territories”.³⁸

Notes

1. General Assembly, *Final text of a treaty on an African nuclear-weapon-free zone*, UN document A/50/426, 13 September 1995, p. 7.
2. The Organization of African Unity (OAU) was established on 25 May 1963 in Addis Ababa. Its successor, the African Union (AU), was established on 9 July 2002.
3. OAU, *Resolutions adopted by the First Ordinary Session of the Assembly of Heads of State and Government held in Cairo, UAR, from 17 to 21 July 1964*, AHG/Res.11(I), no date.
4. For a comprehensive account of the background to, and negotiating history of, the African NWFZ Treaty, see O. Adeniji, *The Treaty of Pelindaba: On the African Nuclear-Weapon-Free Zone*, UNIDIR, 2002.
5. The 22 AU member states which have yet to ratify the treaty are: Angola, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Democratic Republic of the Congo, Egypt, Eritrea, Ghana, Guinea-Bissau, Liberia, Namibia, Niger, Republic of the Congo, Sao Tome and Principe, Seychelles, Sierra Leone, Somalia, Sudan and Uganda, as well as the Sahrawi Arab Democratic Republic. Morocco is not included here, as it is not an AU member because of its opposition to the Sahrawi Arab Democratic Republic's AU membership.
6. The NWFZ covers the entire African mainland as well as the following islands: Agalega Islands, Bassas da India, British Indian Ocean Territory (commonly referred to as the Chagos Archipelago, including Diego Garcia), Canary Islands, Cape Verde, Cardagos Carajos Shoals, Comoros, Europa Island, Juan de Nova, Madagascar, Mauritius, Mayotte, Prince Edward and Marion Islands, Réunion, Rodrigues Island, Sao Tome and Principe, Seychelles, Tromelin Island and the Zanzibar Archipelago.
7. AU, *Solemn Declaration on a Common African Defence and Security Policy*, Second Extraordinary Session of the Assembly of Head of States and Government, held in Sirte, 28 February 2004.
8. Ambassador Ramtane Lamamra, Commissioner for Peace and Security of the African Union, Opening address to the First Conference of States Parties to the African Nuclear Weapon-Free Zone Treaty (Treaty of Pelindaba), Addis Ababa, 4 November 2010.
9. The five states are China, France, the Russian Federation, the United Kingdom and the United States.
10. H. Blix, “Conference for the Signing of the African Nuclear-Weapon-Free Zone Treaty (the Pelindaba Treaty)”, Cairo, 11 April 1996.
11. P. Savita, “Treaty of Pelindaba: How Different?”, *Strategic Analysis*, vol. 22, no. 4, pp. 547–59.
12. These include: Algeria, Egypt, Ghana, Kenya, Libyan Arab Jamahiriya, Morocco, Namibia, Nigeria, Senegal and Tunisia.
13. The Treaty of Rarotonga is also known as the South Pacific Nuclear Free Zone Treaty, and the Treaty of Tlatelolco as the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean.
14. Abdul Qadeer Khan, referred to as the father of the Pakistan nuclear weapon programme, provided the government of Pakistan with centrifuge designs and sold nuclear technology to the Democratic People's Republic of Korea, Iran and Libyan Arab Jamahiriya.
15. For further information see R. Mowatt-Larssen, *Al Qaeda Weapons of Mass Destruction Threat: Hype or Reality?*, Belfer Center for Science and International Affairs, Harvard Kennedy School, 2010.

16. General Assembly, *Final text of a treaty on an African nuclear-weapon-free zone*, UN document A/50/426, 13 September 1995, p. 12.
17. For further information see L. Tabassi, "Strengthening the NWFZs: National Legislation Enabling Enforcement of the Norms", *NPT News in Review*, no. 9, 2009, pp. 2–3.
18. It should be noted that recent AU documents, for example those emanating from the First Conference of Parties, use the abbreviation ACNE and not AFCONE—whereas the treaty itself refers to the African Commission on Nuclear Energy.
19. General Assembly, *Action on all draft resolutions under all disarmament and international security agenda items*, UN document A/C.1/60/PV.20, 26 October 2005.
20. B. Gill et al., *SIPRI Yearbook 2010: Armaments, Disarmament and International Security*, Stockholm International Peace Research Institute, 2010, p. 501.
21. Global Security Newswire, "Russia Ratifies African Nuke-Free Zone Pact", 14 March 2011.
22. B. Gill et al., *SIPRI Yearbook 2010: Armaments, Disarmament and International Security*, Stockholm International Peace Research Institute, 2010, pp. 500–1.
23. The White House, *Press release from the Office of the Press Secretary*, 2 May 2011.
24. General Assembly, *Action on all draft resolutions and decisions submitted under disarmament and international security agenda items*, UN document A/C.1/65/PV.20, 27 October 2010, p. 16.
25. General Assembly, *Final text of a treaty on an African nuclear-weapon-free zone*, UN document A/50/426, 13 September 1995, p. 13.
26. Algeria, Botswana, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, Equatorial Guinea, Ethiopia, Gabon, Gambia, Kenya, Lesotho, Libyan Arab Jamahiriya, Malawi, Mali, Mauritania, Mauritius, Mozambique, Nigeria, Rwanda, Senegal, South Africa, Swaziland, Tanzania, Togo, Tunisia, Zambia and Zimbabwe.
27. Djibouti, Egypt, Ghana, Namibia, the Republic of the Congo, the Sahrawi Arab Democratic Republic, Sudan and Uganda.
28. For further information see First Conference of State Parties to the African-Nuclear-Weapons-Free Zone Treaty (Treaty of Pelindaba), *Conclusions*, 4 November 2010.
29. The commissioners elected are from: Algeria, Burkina Faso, Cameroon, Ethiopia, Kenya, Libyan Arab Jamahiriya, Mali, Mauritius, Senegal, South Africa, Togo and Tunisia.
30. Assembly of the Union, "Sixteenth Ordinary Session", Addis Ababa, 30–31 January 2011.
31. Assembly of the Union, *Decision on the report of the Peace and Security Council on its activities and the state of peace and security in Africa*, AU document Assembly/AU/Dec.338(XVI), no date, p. 6.
32. M. Edwerd, "Development of a Continent", *IAEA Bulletin*, vol. 51, no. 1, 2009, pp. 53–56.
33. IAEA, "Africa Takes Nuclear Safety Stage", IAEA Staff Report, 17 December 2009.
34. FNRBA, *Charter of the Forum of Nuclear Regulatory Bodies in Africa*, Article 2, 2 October 2008.
35. General Assembly, *Final text of a treaty on an African nuclear-weapon-free zone*, UN document A/50/426, 13 September 1995, p. 12.
36. D. Kimball, "Unfinished Business for the NSG", MIT Workshop on Internationalizing Uranium Enrichment Facilities, Cambridge, 6 October 2008.
37. Statement by H.E. Tommo Monthe, Ambassador and Permanent Representative of the Republic of Cameroon to the Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, New York, 5 May 2010.
38. Statement by Jean du Preez, Preparatory Commission for the CTBTO, to the First Conference of State Parties of the African Nuclear Weapons Free Zone Treaty, Addis Ababa, 4 November 2010.

The Arctic: top of the world to be nuclear-weapon-free

Jan Prawitz

Nuclear-weapon-free zones (NWFZs) have emerged as an important but largely unnoticed approach towards a nuclear-weapon-free world, overshadowed by the more visible Treaty on the Non-Proliferation of Nuclear Weapons (NPT). Zones established so far cover some 50% of the world's land areas, including 99% of all land south of the equator and 74% of all land outside nuclear-weapon states¹ (NWSs). Altogether, NWFZs include 119 states and 18 other territories, with some 1.9 billion inhabitants. Several more NWFZs are currently under discussion—one of which is a proposed zone to cover the circumpolar Arctic. Such a zone has been discussed since the mid-1960s, but it has recently become politically feasible following global warming and the gradual melting of the polar ice-cap.²

In the past the Arctic and the High North were generally inaccessible for anyone other than a few explorers. Since the 1950s airlines have flown over the ice, nuclear-powered submarines have passed under it and icebreakers have occasionally passed through it.

However, with rising temperatures and shrinking ice caps, the world is alarmed, and various restrictive measures are under discussion. According to experts, the Arctic Ocean, now mostly covered by ice all year around, may in the not-too-distant future become first passable in summer, then eventually throughout the year.

Some consider such a possibility a “worst case scenario”, whilst others believe it to be a more “promising scenario”. Should the Arctic Ocean become passable the year through, new opportunities of great economic value would become available. Shipping between the Atlantic Ocean and the Pacific Ocean which would pass close to the North Pole and through the Bering Strait could increase in volume to amounts comparable to the current traffic passing through the Panama Canal and Suez Canal. Offshore oil and natural gas reserves, whose volume could match those of the Middle East but are currently unreachable because of the harsh climate, could become accessible for exploitation. In addition, new areas would be opened up for large-scale fishing.

No one knows, however, if such a scenario will ever become a reality after 20, 50 or 100 years—or even at all. But the mere possibility has prompted many states to prepare themselves by laying down territorial claims, sending out research expeditions and establishing a military presence just in case. The Arctic Ocean littoral states,³ the European Union and the North Atlantic Treaty Organization (NATO), among others, have all made claims. Policies are being developed as if the ice had already gone. Politically speaking, the race has begun.

Jan Prawitz is a research associate (em.) of the Swedish Institute of International Affairs (Utrikespolitiska Institutet, UI). The opinions expressed in this article are the author's own and do not necessarily represent the views of the UI or the United Nations.

Future exploitation of a more accessible Arctic would require international cooperation on a wide range of political, economic and navigational matters. Disputes and competing or overlapping claims need to be resolved peacefully. A militarization of presence or engagements should be avoided. Therefore, arms control measures for the area should be initiated at an early stage, beginning with limiting weapons of mass destruction and the establishment of an NWFZ in the region.

The early negotiation and establishment of an NWFZ in the Arctic is timely, urgent and most important. Historically, the negotiation and establishment of NWFZs have proven to be time-consuming—requiring years or even decades—thus motivating an urgent initiation of the process of establishing an Arctic NWFZ.

At an historical meeting in Ilulissat, Greenland, in 2008, the five littoral states agreed on the principles for future cooperation in the Arctic, based on negotiation, transparency, protection of the environment, and a respect for the interests of local communities and indigenous populations.⁴ The basic legal framework for future cooperation, territorial delimitation, and resolution of disputes and competing claims would be the United Nations Convention on the Law of the Sea (UNCLOS).⁵ Among the five littoral states, however, only four are states parties to the convention—the exception being the United States.

The political geography

The geography of the Arctic has been defined in various ways for various purposes. The Arctic Council⁶ produces different maps of the Arctic, which detail administrative areas and where indigenous populations live. With regards to negotiating Arctic arms control and establishing an Arctic NWFZ—a matter for sovereign states—the core group of states would, like the Council, include states which have territory north of the Arctic Circle. The eight which can be considered the core Arctic states would include the five littoral states plus Finland, Iceland and Sweden.

The political geography of the Arctic is dominated by a large, central area of high seas and exclusive economic zones of coastal states. A large part of the periphery of the area is mainland, islands and continental territories belonging to the littoral states. Some boundaries at sea were agreed in the past—however, some are disputed and many still need to be defined.⁷

Among the littoral states, all but the Russian Federation are members of NATO. Only Denmark is a member of the European Union,⁸ but all are participants in the Organization for Security and Co-operation in Europe (OSCE). The political OSCE territory comprises of all its 56 participating states, which includes European states, states which were part of the former Soviet Union, Canada and the United States—from “Vancouver to Vladivostok”—and encompassing the whole Arctic basin, sometimes referred to as the Arctic Mediterranean.

The zone experience up to now

There is a wealth of experience upon which to build when designing NWFZs or considering new zone projects. There are five such zones, and they cover, in chronological order, Latin America and the Caribbean, the South Pacific, South-East Asia, Africa and Central Asia.⁹ There are additional treaties and agreements which cover other areas and single states, such as the Antarctic, Mongolia and the former German Democratic Republic (GDR). Discussions within the United Nations Disarmament Commission resulted in a set of recommendations for zone-making adopted on 30 April 1999 and later unanimously endorsed by the General Assembly.¹⁰

The Arctic area features elements for which there are no historical precedents. Of the eight core states that should negotiate and establish an Arctic NWFZ, two are NWSs, five are members of NATO—a nuclear-armed alliance—and much of the zonal area is ocean.

Many treaties on arms control or demilitarized zones were concluded long ago—often before the atomic bomb was invented. Among such areas is the demilitarization regime of the Norwegian northern archipelago of Spitsbergen (now called Svalbard). By implication, such areas should today be considered NWFZs as well. The Spitsbergen Treaty of 1920¹¹ recognized Spitsbergen, at the time not subject to any national jurisdiction, to be under Norwegian sovereignty. However, states parties to the treaty would have equal rights, subject to Norwegian regulations, to presence, fishing, hunting, mining, trading and other economic activities.

The current legal situation

Some international treaties and agreements are relevant for establishing an NWFZ in the Arctic. To begin with is the NPT, which entered into force in 1970 and defines the Russian Federation and the United States as NWSs and the six other core Arctic states as non-nuclear-weapon states (NNWSs). Also important are the security guarantees provided to states parties to the NPT by Security Council resolution 984,¹² as well as the unilateral negative guarantees extended by the five NWSs.

The fact that nearly all states are in the NPT regime is the most important basis for discussing the future establishment of further NWFZs. Indeed, Article VII encourages this with the words: “Nothing in this Treaty affects 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”. This was reiterated at the Extension and Review Conference of the states parties to the NPT in 1995 as a matter of priority and again at the review conferences in 2000 and 2010.

The NPT does not prohibit the stationing and deployment of nuclear weapons controlled by the five NWSs in the territories of NPT states parties and at sea. However, it has been internally agreed within the NATO alliance that no nuclear weapons are to be stationed in Denmark, Greenland, Iceland and Norway during “peacetime”.

Also relevant is the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (also known as the Partial Test Ban Treaty), to which all the core Arctic states are parties. Among the NWSs, China and France are not. More important is the Comprehensive Nuclear-Test-Ban Treaty (CTBT), prohibiting all nuclear test explosions, including all nuclear explosions for peaceful purposes for all time.¹³ However, this treaty has not yet entered into force. All of the Arctic core states—except the United States—have ratified the treaty. Among the NWSs, France, the Russian Federation and the United Kingdom are states parties; China and the United States are signatories. The Russian Arctic nuclear test site at Novaya Zemlya is thus closed for ever.

Very relevant to the Arctic is the 1971 Sea-bed Treaty,¹⁴ prohibiting states parties placing nuclear weapons on the seabed or ocean floor beyond 12 nautical miles from the coast, regardless of any future delimitation of the Arctic shelves. At the Third Review Conference of the Parties to the Treaty, in 1989, a declaration was adopted stipulating that the application of the treaty's provisions would be extended to all waters (the shore to shore formula). All core states and all NWSs, excluding France, are states parties.

An important convention opened for signature as recently as 2005—the International Convention for the Suppression of Acts of Nuclear Terrorism.¹⁵ The provisions of the convention cover both nuclear explosive devices and “dirty bombs”.

NWFZ general objectives and measures

The general objective for establishing an NWFZ would be to remove the threat of the area being involved in a mass destruction war. Achievement of this would usually require cooperation among the zonal states, NWSs and other extra-zonal states. Negotiating such a regime is clearly complex. A variety of further objectives may be pursued in specific cases. There are four measures of central importance for the achievement of the objectives of an NWFZ:

- non-possession of nuclear weapons by zonal states
- non-stationing of nuclear weapons within the zone by any state
- no use or threat of use of nuclear weapons in the zone
- verification of treaty compliance

Non-possession

The non-possession measure would apply to all zonal states. Its codification could be simplified if based on Article II of the NPT with regards to NNWSs.¹⁶ If a zone includes NWSs, a special regime must be defined. The same is true when only a part of an NWS is included in the zone—which could well be the case when establishing an Arctic NWFZ. This inclusion of only part of a state has previously occurred, as detailed in the following five cases.

The first category is when a considerable part of the state is denuclearized while other parts are not. An example is the territory of the former GDR, which is now nuclear-weapon-free and part of a unified Germany—a member of NATO, with nuclear airbases in the west.

The second category includes state dependencies part of an NWFZ, whilst the actual state is not part of a zone. Protocols of the Latin American, South Pacific and African treaties apply to such cases.

The third category is a case in which the state belongs to an NWFZ but a far away dependency does not. For example, in a Nordic-European NWFZ, Norway would be considered part of the zone, while its dependency in the South Atlantic Ocean, Bouvet Island, would not.

The fourth category is when a separate part of a state is a denuclearized or a demilitarized entity but the mainland is not. Examples are the demilitarized Spitsbergen and Aaland Islands archipelagos—dependencies of Norway and Finland respectively—which are currently not parties to a zone.

The fifth category is a combined zonal and non-zonal case where an extra-zonal state has a military base in a zone, but the host country has no responsibility for the base. An example is US Naval Station Guantanamo Bay, in Cuba. Cuba is a state party to the Latin American and Caribbean NWFZ.

Non-stationing

The non-stationing measure would primarily apply to zonal state territories—with the exception that zonal states could not restrict or prohibit the innocent passage (or transit passage) by vessels of NWSs or other extra-zonal states with prohibited weapons onboard in their territorial and archipelagic waters. Non-stationing measures applying to international land and sea areas would require special legal arrangements. An example is the Antarctic.

Non-use

The non-use measure would be a commitment by states controlling nuclear weapons, and has taken the form of a separate protocol attached to existing zone treaties. Consideration of this measure should be made with Security Council resolution 984 in mind, in which NWSs undertake to “provide or support immediate assistance, in accordance with the Charter, to any non-nuclear-weapon State Party to the Treaty on the Non-Proliferation of Nuclear Weapons that is a victim of an act of, or an object of a threat of, aggression in which nuclear weapons are used¹⁷”.

Verification

Verification that NWFZ treaty commitments are properly observed has usually been organized in two parts. The first verifies that nuclear activities for peaceful purposes are not diverted to nuclear weapons. This task is very similar to the full scope safeguards prescribed by Article III of the NPT, applying to NNWSs and undertaken by the International Atomic Energy Agency. As no NWFZ established has so far included substantial territory of an NWS, there is no historical precedent of how to verify such cases in an Arctic NWFZ. A new procedure must therefore be developed.

The second part refers to suspected violations and is usually operated by an administrative body established for the general management of the zone treaty. Inspections could be launched following complaints by a zonal state that non-compliance has occurred. Such inspections could also be supported by extra-zonal assistance.

The special case of the Antarctic Treaty includes an interesting verification provision. Any state party to the treaty “with a consultative status” has a right to appoint special inspectors with unlimited access to all areas, facilities and activities throughout the zonal area.

Special provisions for the sea

It would be a requirement of zonal states not to possess, deploy or operate nuclear weapons anywhere—including at sea. In principle, effective denuclearization of a sea area would require agreement among all states—or at least among the NWSs. Therefore, commitments applying to sea areas should be laid out in a separate legal instrument or protocol linked to the main NWFZ treaty and expressed in terms referring to the general law of the sea. The precise objectives need not coincide with those applicable to areas of land. Maritime zonal commitments could be assumed by the zonal states, as well as by the NWSs and other extra-zonal states, subject to signing special maritime protocols.

UNCLOS is of particular interest for an Arctic NWFZ, since the convention provides for special responsibilities and rights of control of coastal states in exclusive economic zone areas with particularly severe climatic conditions or covered by ice most of the year.¹⁸

Among existing NWFZs, the Antarctic Treaty (Article VI) and the Treaty of Rarotonga (Article 2) include specific provisions that treaty obligations will not infringe upon freedoms of the sea within the zone perimeter. The Treaty of Tlatelolco—agreed before the NPT and the UNCLOS were adopted—defines the zonal area as including substantial parts of the Atlantic Ocean and the Pacific Ocean, but NWSs parties to the guarantee protocol (Protocol II) have made statements of interpretation to the effect that they will not be restricted regarding freedoms of the sea in those areas. The freedoms of the sea and the immunity of naval ships at sea are a substantial obstacle to verifying maritime NWFZ commitments, unless legally removed by a separate international agreement.

Treaty design and negotiation

Framework

Establishing an NWFZ in the Arctic would most probably require a long and elaborate diplomatic process. However, the region is unique and has few parallels to other NWFZs. Climate change and the possible transformation of the Arctic from a mostly barren region to an attractive area have made international regulation of a number of issues urgently required. These issues include regional security, economic cooperation, exploitation of mineral resources, fishing, shipping, protection of the environment, and the rights and participation of indigenous populations. International treaties covering these issues will have to be negotiated. Any new agreements—including an Arctic NWFZ—should be coordinated and harmonized to avoid contradiction and overlap. Under an Arctic NWFZ treaty, core NNWS, NWSs, other nuclear-weapon states and extra-zonal states will all have to assume various obligations.

The OSCE would be best suited for diplomacy in the Arctic region, with its large international participation—yet regional focus. The organization was initially set up to coordinate agreements on security, economic cooperation, environmental protection and human rights. To adopt new responsibilities on Arctic issues, the OSCE will have to expand its current mandate to include the entire Arctic area, maritime issues and weapons of mass destruction.

The question which immediately comes to mind is whether it would be possible to draft an Arctic NWFZ treaty by just copying the Antarctic Treaty. However, the political and geographic differences between the two regions are too great to make such a simple procedure possible. The Antarctic is a mostly uninhabited continent not subject to any national jurisdiction. The Arctic region is primarily an ocean surrounded by inhabited land areas subject to national sovereignties.

States parties

To begin negotiations on an Arctic NWFZ, the geographical scope of the prospective zone and the states to participate first need to be determined. Preferably, one of the states should assume a leadership role, as was done in previous NWFZ treaties.¹⁹

A possible Arctic zone could be the area north of the Arctic Circle. Although this solution is simple, it has no distinct political meaning. The zone would divide states with territory north of the Arctic Circle into two parts—one part north of the Circle and within the zone, and a southern part outside the zone. Managing such a zone would be rather complicated. However, of the eight Arctic Council member states, six are NNWSs, which could include their entire territory in the NWFZ to facilitate implementation. Were the whole of Canada to be included in the zone, it would also seem reasonable to include the two islands of Saint Pierre and Miquelon, territorial collectivities of France and close to Canada's Atlantic provinces. Denmark itself could be left outside the zone because of its distance from Greenland.

With regards to the NWSs on the Arctic Circle, their participation in the zone would be politically very desirable. However, as their territories lie mostly south of the Circle, including their entire territories in an Arctic NWFZ would be beside the point.

The core NNWSs are all states parties to the NPT, and thus their non-possession commitments could be based on Article II of that treaty, with the requirement that they stay as NPT states parties for the duration of the zone treaty. In addition, they would be obliged not to permit the presence of any nuclear weapons in their territories. The NWSs are also states parties to the treaty and are committed under Article I not to transfer any nuclear weapons or control over such weapons.²⁰

However, the four core NNWS which belong to NATO—Canada, Denmark, Iceland and Norway—would have to ensure that their zonal obligations do not conflict with their commitments under NATO. They would have to demonstrate that they would not under any circumstances receive control over any nuclear weapons or accept the presence of any such weapons in their territories. They would also have to offer sufficient transparency of the NATO nuclear command structure to allow verification of these commitments. These four states would need to negotiate with NATO for exemptions from possible alliance obligations regarding nuclear weapons or preferably a general alliance accommodation of the zone in its strategic concept.

Membership to an NWFZ has always been considered incompatible with membership of NATO. However, at the NATO summit meeting in 2010, new guidelines for the alliance were adopted.²¹ The strategic concept adopted at the summit “commits NATO to the goal of creating the conditions for a world without nuclear weapons—but reconfirms that, as long as there are nuclear weapons in the world, NATO will remain a nuclear Alliance”.²² NATO will continue to promote arms control, disarmament and non-proliferation. In addition, the summit declaration called for “a true strategic partnership between NATO and Russia”.²³ This could allow a reconsideration of past attitudes to NWFZs. In particular, were NATO to cooperate rather than compromise with the Russian Federation, an Arctic NWFZ could be a solid element in a security regime for the Arctic and an element of strategic balance of power in the northern hemisphere.

The obligations of the Russian Federation and the United States would be more difficult to define. A general non-possession commitment is nonsense. A substantial non-presence obligation applicable in the region would be very desirable, however. The details of such a measure would be closely related to the outcome of the bilateral negotiations on nuclear arms control currently in progress. One difficulty is that the Russian Federation has a significant number of its strategic nuclear weapons stationed on board submarines north of the Arctic Circle, at the Kola Peninsula. Assuming the two states generally support an Arctic NWFZ, one possibility could be to refer the issue of defining their zone commitments to a bilateral agreement—including, for instance, a complete absence of sub-strategic nuclear

weapons north of the Arctic Circle, whilst permitting the presence and transit of strategic nuclear weapons in their zonal area and at sea. Their medium-range weapons have already been eliminated according to the Intermediate Range Nuclear Forces Treaty²⁴ and their strategic weapons must not be launched from anywhere in the zonal area. Most of their sub-strategic weapons have already been withdrawn to “centrally located storages” following the Presidential Nuclear Initiatives (PNI) in 1991.²⁵ Such a bilateral agreement should preferably include also a provision for mutual verification, subject to sufficient transparency to inform the other zonal states.

An Arctic Ocean NWFZ

An issue which differs from other NWFZ treaties is how to manage an Arctic Ocean NWFZ—the major part of the prospective zone area. The prime obligation here would be a non-presence formula, which would eventually include—without exception—the transit of nuclear weapons in the entire ocean space, from the seabed to the airspace above.

Under UNCLOS all states have the right to enter and use those sea areas. Therefore, all states should be invited to subscribe to a special Arctic maritime regime committing them to observe a nuclear non-presence obligation. Of course, the signatures of the NWSs to such a measure would be most essential for making the Arctic Ocean an NWFZ.

The negotiation of such an ocean regime would be difficult. There would be a conflict between arms control restrictions and the principle of the freedom of the seas, a tradition which has lasted several centuries. Furthermore, it would also involve the participation of many states parties. Formally, this could be conducted at a special world conference of all states with access to the sea areas concerned. Practically, however, it could be done in the same way as guarantee protocols from NWSs. The ocean zone regime should also include a legal basis for verification at sea, suspending UNCLOS immunity rules applying to the region.

Conclusion

A possible legal structure under which Arctic NWFZ provisions could be organized is an umbrella treaty with several additional protocols. The treaty should specify the objectives and general purposes of the zone regime, its geographical scope and core parties, and references to related Arctic international law. It should also outline general provisions for adherence to the zone regime, which would include, among others, verification and complaints procedures, provisions for entry into force, duration and withdrawal.

The first protocol to be signed by the six core NNWSs would specify their obligations, referring also to an endorsement by NATO for its four member states. The second protocol, to be signed by the Russian Federation and the United States, would specify their obligations as agreed between them and endorsed by the six core NNWSs. The third protocol would be signed

by all five NWSs and would require them to respect the integrity of the zone and to commit themselves not to use or threaten to use nuclear weapons against the entire zone area nor launch such weapons from anywhere in the zone at extra-zonal targets. This protocol should also refer to the Security Council resolution on security assurances.²⁶ The fourth protocol, to be signed by France, would submit the islands of Saint Pierre and Miquelon into the zonal area. Finally, the fifth protocol (on maritime issues) would be signed by the core states, the other NWSs and other extra-zonal states applicable and would prescribe the absence of nuclear weapons from the Arctic Ocean areas beyond national jurisdiction. This protocol should also refer to relevant OSCE confidence-building measures.

Notes

1. The five states are China, France, the Russian Federation, the United Kingdom and the United States.
2. This article is based on a paper "A Nuclear-Weapon-Free Arctic: Arms Control 'on the Rocks'", which J. Prawitz presented at the Conference on an Arctic Nuclear-Weapon-Free Zone, Copenhagen, 10–11 August 2009.
3. The five Arctic Ocean littoral states are Canada, Denmark (Greenland), Norway, the Russian Federation and the United States (Alaska).
4. For further information see Danish Ministry of Foreign Affairs, *The Ilulissat Declaration: Arctic Ocean Conference, Ilulissat, Greenland 27–29 May 2008*, 2008.
5. The convention opened for signature on 10 December 1982 and entered into force on 16 November 1994. Currently, 160 states and the European Union are states parties to the convention.
6. The Arctic Council was established on 19 September 1996. The eight member states of the Council are Canada, Denmark (Greenland), Finland, Iceland, Norway, the Russian Federation, Sweden and the United States (Alaska).
7. For further information see International Boundaries Research Unit, *Maritime Jurisdiction and Boundaries in the Arctic Region*, University of Durham, 2011.
8. Greenland, along with Denmark, joined the European Economic Community in 1973, but Greenland left in 1985. In July 2009 Iceland applied for membership to the European Union.
9. Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco) in 1967; South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga) in 1985; Treaty on the South-East Asia Nuclear Weapon Free Zone (Treaty of Bangkok) in 1995; African Nuclear-Weapon-Free Zone Treaty (Treaty of Pelindaba) in 1996; Treaty on a Nuclear-Weapon-Free Zone in Central Asia (Treaty of Semipalatinsk) in 2006.
10. See Annex I, *Establishment of nuclear-weapon-free zones on the basis of arrangements freely arrived at among the States of the region concerned*, in General Assembly, *Report of the Disarmament Commission*, UN document A/54/42, 6 May 1999.
11. The Treaty Concerning the Archipelago of Spitsbergen opened for signature on 9 February 1920 and entered into force on 14 August 1925. For a legal analysis of the Treaty of Spitsbergen see G. Ulfstein, *The Svalbard Treaty: From Terra Nullis to Norwegian Sovereignty*, 1995.
12. Security Council, *Resolution 984 (1985)*, UN document S/RES/984 (1995), 11 April 1995.
13. The CTBT opened for signature on 24 September 1996 but has not yet entered into force. Currently, 153 states parties have ratified the treaty and 181 have signed. See also General Assembly, *Comprehensive Nuclear-Test-Ban Treaty*, UN document A/RES/50/245, 17 September 1996.
14. Known fully as the Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof, the treaty—General Assembly resolution 2660 (XXV)—opened for signature on 11 February 1971 and entered into force on

- 18 May 1972. The treaty has 96 states parties, including four NWSs—France is not a state party—and an additional 20 signatories.
15. The text of the convention is in General Assembly, *International Convention for the Suppression of Acts of Nuclear Terrorism*, UN document A/RES/59/290, 15 April 2005.
 16. Article II states: "Each non-nuclear-weapon State Party to the Treaty undertakes not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices".
 17. Security Council, *Resolution 984*, UN document S/RES/984 (1995), 11 April 1995, p. 2.
 18. For further information see UNCLOS, Article 234, *Ice-covered areas*.
 19. Mexico assumed a leading role in negotiating the Treaty of Tlatelolco, Australia with the Treaty of Rarotonga and South Africa with the Treaty of Pelindaba.
 20. Article I states: "Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices".
 21. NATO, "Summit Meeting of NATO: Heads of State and Government", Lisbon, 19–20 November 2010.
 22. NATO, *Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organisation: Active Engagement, Modern Defence*, 2010, p. 1.
 23. NATO, *Lisbon Summit Declaration*, Press release PR/CP(2010)0155, 20 November 2010, p. 6.
 24. The treaty, known fully as the Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-range and Shorter-range Missiles, was signed on 8 December 1987 and entered into force on 1 June 1988.
 25. The PNI was declared by US President George Bush and Soviet President Mikhail Gorbachev in 1991, and confirmed by Russian President Boris Yeltsin in 1992.
 26. Security Council, *Resolution 984*, UN document S/RES/984 (1995), 11 April 1995.

Possible elements of an NWFZ treaty in the Middle East

Nabil Fahmy
Patricia Lewis

The idea of a nuclear-weapon-free zone (NWFZ) in the Middle East had its genesis in 1962, when a committee of highly respected Israeli intellectuals—the Committee for the Denuclearization of the Middle East—first put forward the concept publicly in April of that year, stating that they viewed the development of nuclear weapons “to constitute a danger to Israel and to peace in the Middle East” urging the United Nations to intervene “to prevent military nuclear production”.¹ The concept was then formally set in political motion in 1974 through a joint Egyptian-Iranian General Assembly resolution calling for the establishment of such a zone.² In 1990 Egypt expanded on the proposal calling for a zone free of all weapons of mass destruction (WMD), judging that a more comprehensive approach to disarmament may prove attractive to the full range of states in the region. In 1995 the Arms Control and Regional Security (ACRS) talks collapsed—in part due to disagreements between Israel and Egypt on the sequencing of discussions on the zone.³ Earlier in 1995, as an integral part of the decision to extend the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) indefinitely, the NPT Review and Extension Conference adopted the 1995 resolution on the Middle East,⁴ which was co-sponsored by the three depositary states—the Russian Federation, the United Kingdom and the United States—and:

Calls upon all States in the Middle East to take practical steps in appropriate forums aimed at making progress towards, inter alia, the establishment of an effectively verifiable Middle East zone free of weapons of mass destruction, nuclear, chemical and biological, and their delivery systems, and to refrain from taking any measures that preclude the achievement of this objective;

Calls upon all States party to the Treaty on the Non-Proliferation of Nuclear Weapons, and in particular the nuclear-weapon States, to extend their cooperation and to exert their utmost efforts with a view to ensuring the early establishment by regional parties of a Middle East zone free of nuclear and all other weapons of mass destruction and their delivery systems.

In principle, all states in the Middle East have expressed support for a multilateral, regional non-proliferation framework. The Egyptian-Iranian resolution from 1974 has been passed each year, and there has been consensus at the General Assembly since 1980 that a Middle East NWFZ “would greatly enhance international peace and security”.⁵ The resolution invites all states in the region to adhere to the NPT, place all their nuclear activities under International

Ambassador Fahmy is Chair of the James Martin Center for Nonproliferation Studies (CNS) Middle East Project. He is also the founding Dean of the School of Public Affairs at the American University, Cairo. Patricia Lewis is Deputy Director and Scientist-in-Residence at CNS. She was Director of UNIDIR from 1997 through 2008. The authors thank Hassan Elbahtimy at the Verification Research, Training and Information Centre (VERTIC) for his research in preparation for this article. Opinions expressed in this article are those of the authors and do not necessarily represent the views of CNS, VERTIC or the United Nations.

Atomic Energy Agency (IAEA) safeguards, and—pending the establishment of an NWFZ—not to produce, test, acquire or station nuclear weapons on their territories.

It is important to note that the 1995 Review and Extension Conference of the NPT adopted a resolution on a Middle East NWFZ as a fundamental component of the political compromise that led to the extension decision without a vote. In practice however, no real progress had been made towards the realization of this goal until the NPT Review Conference in 2010, in New York. The final document of the conference emphasized the importance of a process leading to full implementation of the 1995 resolution on the Middle East and endorsed a set of practical steps to that end. The NPT states parties charged the Secretary-General and the co-sponsors of the 1995 resolution, in consultation with the states of the region, with the convening of a conference in 2012, to be attended by all states of the Middle East, on the establishment of a Middle East zone free of nuclear weapons and all other WMD.⁶

The 2012 conference in itself represents a significant step forward towards enhancing regional and international peace and security. However, as of May 2011 little progress has been made on the practicalities for the conference. A year following the 2010 NPT Review Conference, we are still awaiting the appointment of a facilitator and host government for the process, both of which have to be appointed by the Secretary-General and the depositary states, in consultation with the states in the Middle East. With a mandate to support implementation of the 1995 resolution by conducting consultations with Middle East states and undertaking preparations for the 2012 conference, the role of the facilitator is vital to progress. The facilitator is also charged with assisting in implementing the steps agreed at the 2012 conference and reporting to the 2015 NPT Review Conference and its Preparatory Committee meetings.

So much work remains to be done in advance of discussions about a future zone, including overcoming the differences in opinion among the regional parties on the scope of such a zone, its application, in addition to its basic obligations on member states. A year's delay in progress to decide on a facilitator and venue, together with significant political change in the region is prompting some experts to suggest delaying the conference. Others are concerned that a significant delay would signal a lack of commitment to the agreements made in 2010. They fear that further delay could seriously hamper progress towards a weapons of mass destruction free zone (WMDFZ) in the Middle East and have strong negative repercussions for the NPT.

As a contribution to the forthcoming discussions on the establishment of an NWFZ and a prohibition of all WMD in the Middle East, we have been considering what may form the basis of a treaty. Our purpose is to focus on the substance and content of a zone agreement in the lead up to the 2012 conference in the belief that discourse will stimulate the imaginations of all those involved. Substantive work to prepare the conference is every bit as vital as appointing the facilitator and determining the host country. Indeed, in focusing on substance we hope to illustrate the achievability of a WMDFZ in the Middle East, before all parties become ensnared

in the multitude of traps and pitfalls made from political pre-conditions and other seemingly intractable impossibilities that are so well known and treasured in the region.

We have limited this initial endeavour to an NWFZ, since there is a general understanding that this is the most difficult aspect of a WMDFZ. It is a widely shared contention that if and when nuclear weapons are addressed to the satisfaction of the regional states, a commitment to disarm and refrain from acquiring chemical and biological weapons (and their means of delivery) by regional states would either swiftly follow or at least be addressed for an NWFZ to be finalized. Such commitments have been publicly declared by a number of regional parties, and the existing conventions eliminating biological and chemical weapons could form the basis of the regional approach.

In drafting a set of possible NWFZ treaty elements, we have built on the experiences of other NWFZs: the Antarctic Treaty; the Treaty of the Tlatelolco for Latin America and the Caribbean; the Sea-bed Treaty; the Treaty of Rarotonga for the South Pacific; the Treaty of Bangkok for South-East Asia; the Treaty of Pelindaba for Africa; and the Central Asian Nuclear-Weapon-Free Zone Treaty (CANWFZ Treaty, sometimes called the Treaty of Semipalatinsk). The negotiators are likely to adopt the conventional terms of various NWFZ treaties, adapting them as applicable to the Middle East. We have also drawn on other related treaties when appropriate. We have thus introduced provisions that may be regarded as customary and established in nuclear disarmament and non-proliferation law, with the aim of minimizing the expected points of difference among the regional parties once negotiations are underway.

Definition of terms and scope of the treaty

Area of application and territory

Determining the geographic area of application for the Middle East zone presents a challenge for a number of reasons—including the absence of a fixed and widely recognized perimeter for the region. The Middle East does not form a distinct geographical unit bounded by oceans and clear land demarcations, such as the African continent or Latin America. There are states that are in the League of Arab States but not considered by all to be strictly-speaking in the Middle East geographical area—but they do engage politically in the region. There are states bordering the region which may be considered to be Middle Eastern geographically, but they have not been politically oriented to the region in recent times. The Middle East zone of application should also encompass all areas, including those under occupation, administration or jurisdiction, of states in the region. But expressing those situations under current status arrangements could be difficult without generous flexibility.

We have considered two different approaches to deal with the treaty's geographical application. The first approach, modelled for example on the CANWFZ Treaty, would explicitly name each of the entities that would be party to the treaty. The second approach includes a more general reference, stipulating the application of the treaty to the territories of states

parties within the zone, such as in the Treaty of Pelindaba (of which a number of Middle East states are signatories). The Treaty on Conventional Armed Forces in Europe (CFE) will be forever renowned for the phrase in Article II “and thence to the sea”, in reference to Turkey, which was formulated for the purposes of creative ambiguity to avoid classifying the port of Mersin as included (as insisted by Greece) or excluded (on the insistence of Turkey).⁷ Similar creative drafting could be used in the Middle East zone negotiations if a constructive atmosphere in the negotiations can be fostered to reach a compromise.

Whether countries are explicitly named or whether a geographical area is delineated by, for example, latitude and longitude coordinates as in the Treaty of Rarotonga, we propose that the Middle East NWFZ is defined to include: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Mauritania, Morocco, Oman, the Palestinian Authority, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates and Yemen.

The definition of territory adopted in, for example, the Treaty of Pelindaba and the Treaty of Rarotonga might be applied, thus encompassing land territory, internal waters, territorial seas and the airspace above them all, as well as the seabed and subsoil beneath.

Nuclear weapons

We propose that the treaty defines a nuclear weapon as: any weapon or other nuclear explosive device capable of releasing nuclear energy, including in unassembled or partly assembled forms. In order to minimize any confusion, the treaty should not make a distinction between nuclear weapons and nuclear explosive devices in terms of rights and obligations. The only NWFZ treaty that distinguishes between them is the Treaty of Tlatelolco, which prohibits nuclear weapons but allows the use of nuclear explosive devices for “peaceful purposes” under certain conditions.⁸ Subsequent NWFZ treaties have not made that distinction. The distinction has decreased in significance since the 1995 NPT Review and Extension Conference, in which states parties reached an understanding that under Article V of the NPT

the potential benefits of the peaceful applications of nuclear explosions have not been demonstrated and that serious concerns have been expressed as to the environmental consequences that could result from the release of radioactivity from such applications and on the risk of possible proliferation of nuclear weapons.⁹

In addition, peaceful nuclear explosions are explicitly banned under Article 1 of the Comprehensive Nuclear-Test-Ban Treaty (CTBT), which prohibits any nuclear explosions.

For the purposes of this article we exclude delivery vehicles (such as missiles and aircraft) from the treaty’s scope and definitions on the grounds that they may well be the focus of a

separate negotiation in the region, addressing a wider set of concerns with regards to missile proliferation. This does not suggest that the issue is either unimportant or unconnected.

Nuclear material

The term nuclear material applies to any source material or special fissionable material as defined in Article XX of the Statute of the IAEA. Special fissionable material means “plutonium–239; uranium–233; uranium enriched in the isotopes 235 or 233; any material containing one or more of the foregoing”, but does not include source material, which is defined as: “uranium containing the mixture of isotopes occurring in nature; uranium depleted in the isotope 235; thorium; any of the foregoing in the form of metal, alloy, chemical compound, or concentrate”. The IAEA Board of Governors may from time to time determine that other materials be included in the definitions. The contentious issue of whether or not to include other special fissionable materials, such as americium and neptunium, was considered by the IAEA Board of Governors in 1998¹⁰ and reported to the 2000 NPT Review Conference that

the proliferation risk with regard to neptunium is considerably lower than that with regard to uranium or plutonium and that at present there is practically no proliferation risk with regard to americium. The Conference expresses satisfaction at the recent decisions of the IAEA Board of Governors, which enabled IAEA to enter into exchanges of letters with States, on a voluntary basis, to ensure the regular and timely receipt of information as well as the application of measures required for efficient implementation of certain monitoring tasks regarding the production and transfer of separated neptunium, and which requested the Director General of IAEA to report to the Board when appropriate with respect to the availability of separated americium, using relevant information available through the conduct of regular IAEA activities and any additional information provided by States on a voluntary basis.¹¹

It is unlikely that the states in the Middle East would wish to go beyond the international understanding of such proliferation risks, but such matters could be considered once in the process of negotiations.

Radioactive waste and nuclear facilities

Defining radioactive waste is important for the treaty provisions on preventing radioactive waste dumping. We propose a broad definition for radioactive waste, such as the definition used in Article 1 of the CANWFZ Treaty: “any substance containing radionuclides that will be or has already been removed and is no longer utilized, at activities and activity concentrations of radionuclides greater than the exemption levels established in international standards issued by the IAEA”.¹²

The term nuclear facility, in the spirit of Article 1 of the CANWFZ Treaty, includes a nuclear reactor, critical facility, conversion plant, fabrication plant, reprocessing plant, enrichment facility, isotope separation plant or separate storage installation, or any location where nuclear material of a mass greater than one kilogram is customarily used. The application of such a broad definition is particularly important for inspections for verification and confidence-building and for any provisions prohibiting armed attacks on nuclear facilities. The mass of one kilogram is stipulated in Article 1, reducing the scope for misunderstanding and confusion. Quantitative precision is preferable to the definition which appears in Article 1 of the Treaty of Pelindaba,¹³ which lists similar installations but concludes with “and any other installation or location in or at which fresh or irradiated nuclear material or significant quantities of radioactive materials are present”.

Stationing and transport

When it comes to the stationing of nuclear weapons, we advocate separating out stationing from transport. Stationing means stockpiling, storage, installation and deployment. We take transport to mean transport on land or inland waters, which is a temporary transport or transit and is not equivalent to stationing. No real value is derived from twisting the definition of stationing to include transport.

Basic obligations

An NWFZ treaty in the Middle East will need to contain basic provisions, comprised of prohibitions and commitments, many of which are common to other NWFZ treaties and disarmament and non-proliferation treaties. The following is an outline of the main elements of what would constitute a Middle East NWFZ treaty. The list of elements is not exhaustive and will undoubtedly be incomplete. We put it forward at this stage, however, to elicit reaction and comments from scholars and practitioners engaged in the discussions on how to move forward.

1. Renouncing nuclear weapons through refraining from conducting indigenous development and activities related to nuclear weapons, or receiving second party assistance in such activities, or providing support to second parties in this regard. This language is present in all NWFZ treaties.
2. Prohibiting the stationing of any nuclear explosive device on their territories.
3. Using nuclear materials and facilities under the control of states parties to the NWFZ treaty for peaceful purposes only, in accordance with their inalienable right under Article IV of the NPT.
4. Prohibiting nuclear explosive testing in the territories of the states parties, and refraining from participating in or assisting of such tests by any state anywhere. If all states parties to

an NWFZ were party to the CTBT, as would undoubtedly be required as part of the zone, this element would be modified to reflect that.

5. Declaring any existing nuclear weapons capabilities prior to the entry into force of the treaty. This is one of the most difficult aspects of any discussions or negotiations on an NWFZ in the Middle East. It is widely believed that Israel has a fully-fledged nuclear weapons programme and capability. Israel has not yet signed the NPT nor has it ratified the CTBT, and there has never been a formal admission of its nuclear status.¹⁴ How states in the region can discuss a NWFZ without a minimum of transparency from Israel is hard to imagine. There could indeed be creative ways to deal with the problem, such as a declaration that before the entry into force of the treaty, all states parties will have declared past programmes and demonstrated complete dismantlement under the supervision of the IAEA. South Africa is clearly the model here. South Africa dismantled its nuclear weapons programme in 1989. In 1993 the IAEA confirmed that the nuclear weapons had been dismantled and that it was satisfied that South Africa's nuclear programme was at that point solely for "commercial non-nuclear applications or peaceful nuclear usage".¹⁵ Should the negotiations for a Middle East NWFZ bear fruit, this is a workable option for Israel to consider. This would also apply to any other capabilities in the region—whether they are embryonic (such as a clandestine research programme) or more advanced (such as a military component of uranium enrichment capability).

6. Dismantling and destroying existing or remaining nuclear weapons capabilities, facilities and devices, under international verification mechanisms, may have to be treated in the text. Given the severe political ramifications and the degree of technical difficulties in dismantling weapons capabilities, in addition to the potential for the spread of classified information, we propose that all of the dismantlement is carried out in advance of the entry into force of the treaty, with verification being conducted by an international team of IAEA inspectors.

7. Declaring all nuclear facilities and placing them under IAEA safeguards. The treaty would contain annexes for lists of declared facilities, which would be updated regularly by the states parties in conjunction with the IAEA.

8. Prohibiting the dumping of radioactive waste and related material in the Middle East NWFZ (territorial sea, land, rivers or inland waters) by all states and regional and international organizations. This could be based on Article 1 of the Treaty of Bangkok,¹⁶ which details "dumping" as:

- (i) any deliberate disposal at sea, including seabed and subsoil insertion, of radioactive wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea, and
- (ii) any deliberate disposal at sea, including seabed and subsoil insertion, of vessels, aircraft, platforms or other man-made structures at sea, containing radioactive material,

but does not include the disposal of wastes or other matter incidental to, or derived from the normal operations of vessels, aircraft, platforms or other man-made structures at sea and their equipment, other than wastes or other matter transported by or to vessels, aircraft, platforms or other man-made structures at sea, operating for the purpose of disposal of such matter or derived from the treatment of such wastes or other matter on such vessels, aircraft, platforms or structures.

9. Concluding a comprehensive safeguards agreement with the IAEA. Most NWFZ treaties stipulate adherence to the comprehensive safeguards agreement¹⁷ and others call for adherence to the Additional Protocol. Given the nuclear opacity within the region, greater transparency is required for building confidence than perhaps for other regions. The Additional Protocol¹⁸ may serve as the basis for a safeguards arrangement that is negotiated separately between the IAEA and the states of the region for the purposes of the treaty.

10. Refraining from all forms of civil nuclear trade with any non-nuclear weapon state, unless subject to the comprehensive safeguards agreement or Additional Protocol.

11. Maintaining the highest standards of physical protection of nuclear materials and facilities. Such standards should be as effective as those called for by the 1987 Convention on the Physical Protection of Nuclear Material¹⁹ and by the recommendations and guidelines developed by the IAEA for physical protection and the outcomes of the Nuclear Security Summit held in Washington, DC, in 2010.²⁰ At the summit 47 states agreed to strengthen nuclear security and reduce the threat of nuclear terrorism by:

- securing all vulnerable nuclear material in four years
- focusing national efforts to improve security and accounting of nuclear materials and strengthen regulations—with a special focus on plutonium and highly enriched uranium
- consolidating stocks of highly enriched uranium and plutonium and reducing the use of highly enriched uranium
- promoting the universality of key international treaties on nuclear security and nuclear terrorism
- building capacity among law enforcement, industry and technical personnel
- calling for the IAEA to receive the resources it needs to develop nuclear security guidelines and provide advice to its members on how to implement them
- ensuring that bilateral and multilateral security assistance would be applied where it can do the most good
- encouraging the nuclear industry to share best practices for nuclear security, at the same time making sure that security measures do not prevent states from enjoying the benefits of peaceful nuclear energy²¹

A work plan to enact these commitments was also agreed at the summit and governments made their individual commitments of support by either taking national action to increase nuclear security domestically or by working through bilateral and multilateral mechanisms to improve security globally.

12. Prohibiting the undertaking, assisting or encouraging of any armed attack on civil nuclear facilities in the Middle East. This clause—based on Article 11 of the Treaty of Pelindaba, but not included in other NWFZ treaties—is important given the history of such operations in the Middle East and the need for an NWFZ treaty to stabilize nuclear relations. A non-attack agreement has existed for India and Pakistan with respect to their nuclear facilities since 1988.²² Attacks are prohibited against “nuclear power and research reactors, fuel fabrication, uranium enrichment, isotopes separation and reprocessing facilities as well as any other installations with fresh or irradiated nuclear fuel and materials in any form and establishments storing significant quantities of radioactive materials”. It is an agreement that has survived, with annual data exchanges, even through very tense situations on the sub-continent.

13. With regards to transit and transport, we propose using language similar to that in the CANWFZ Treaty and the Treaty of Pelindaba, which leave the matter of transportation of nuclear explosive devices through the zone (via air, land or water) to each state party to resolve. Under Article 4 of the Treaty of Pelindaba each state party:

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.

Means of verification and monitoring compliance

Any NWFZ treaty must include verification and compliance measures, which usually take one of two forms. They are either with extensive verification and compliance functions carried out by new institutions—as is the case in the Treaty of Tlatelolco—or they instead rely on existing international verification instruments supplemented with added reporting requirements—as in the Treaty of Rarotonga.

We suggest adopting a third way, building on the experience from the Treaty of Pelindaba, which recently came into force and of which a number of states in the Middle East are already signatories or states parties.²³

Article 12 of Treaty of Pelindaba lays out the mechanism for compliance and establishes the African Commission on Nuclear Energy (AFCONE) for the purpose of ensuring compliance with the treaty.²⁴ Similarly a “Commission on Nuclear Energy on the Middle East” (CONEME) could be established as a substantive body, gathering its own information, interacting with and

transmitting reports to the IAEA, and able to call—independently of the IAEA—for clarification, technical visits and inspections when the need arises. For routine inspection a Middle East NWFZ could depend primarily on IAEA safeguards. As in the Treaty of Pelindaba, we propose that CONEME reserves the right to establish its own inspection mechanisms should the need arise. In addition, if mutually acceptable, states could consider the possibility of joint inspections with the IAEA, (involving, for example, three stages: pre-inspection, inspection in situ and post-inspection) as in the case of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials. CONEME could also be granted the right of a special inspection by a team of suitably qualified inspectors appointed by CONEME (as in the Treaty of Rarotonga). Another mechanism to consider for the purposes of mutual confidence-building is for states parties to be able to ask another state party for clarification, or for a fact-finding mission to resolve an ambiguous situation or one which may give rise to doubts about compliance (as in the Treaty of Bangkok). Obviously, many of these measures could prove a step too far for the region, but the more that can be done to increase transparency, reduce threat and build confidence, the better are the chances for an NWFZ in the Middle East.

Additional measures

An NWFZ in the Middle East would also include the standard clauses in all treaties establishing NWFZs on the settlement of disputes arising from the interpretation of the treaty, on the prohibition of reservations by state parties to any clause in the treaty, and on the provisions regarding the signature, ratification, entry into force and (unlimited) duration of the treaty.

The right of every state party to withdraw from the treaty in the case of extraordinary events jeopardizing its supreme interests, and upon the submission of a written notification addressed to the depositary state outlining these events could be included—withdrawal taking effect 12 months after the date of receipt of the notification by the depositary, as is the case in the CANWFZ Treaty. However, such a clause could be modified in order to make withdrawal more difficult and to visibly increase the level of long-term commitment for the zone.

With regard to amendments to the treaty, we propose that states adopt the consensus approach in light of the large discrepancy in voting blocks among states parties—Arab states outnumbering Israel and Iran.

The depositary of the treaty would carry out the procedural tasks of any treaty depositary, including receiving ratification instruments, treaty amendments, registering the treaty and its protocols in accordance with the Charter of the United Nations, transmitting copies of the treaty to state parties, and dealing with withdrawal-related procedures. Generally for such a treaty, the Secretary-General would be requested to take the role. There is another alternative for the Middle East. The depositaries of the NPT—the Russian Federation, the United Kingdom and the United States—having co-sponsored the 1995 resolution, are active players in this

process. They could be asked to perform the same role for a Middle East NWFZ as they do for the NPT.

Protocols

Similar to the other treaties, a Middle East NWFZ treaty will likely have protocols to be signed by the five nuclear-weapons states (NWSs)²⁵ as defined by the NPT. The protocols should commit the NWSs to upholding the Treaty and undertake not to use or threaten to use a nuclear explosive device against any states parties to the treaty or any territory within the NWFZ and not to contribute to any act that constitutes a violation of the treaty or of the protocols.

Conclusion

The content of a treaty needs to be thought through now—well in advance of any negotiations. Disagreements over process, end games and entry-into-force conditions are inevitable in any such negotiation. In the Middle East these arguments have a history of blocking initial progress towards peace and security because as soon as they are considered and discussed, they overwhelm and paralyse substantive debate. With this in mind, we have attempted to address the content of the treaty, leaving aside contentious issues such as entry-into-force conditions and similar time-dependent hurdles. It is our intent to initiate a constructive intellectual discussion on the substantive detail of the future zone and put to one side—for the purposes of this discussion—whether such a zone is possible, likely or unlikely, needed, desirable or pure folly. Instead, let us address the details of such a treaty with the seriousness it deserves, so that should the conditions ever be ripe (and this is something nobody can predict with any degree of certainty), the academic community has at least demonstrated due diligence in thinking through the possible elements that might constitute a Middle East WMDFFZ. Should the political conditions change, we do not want to have been asleep at the wheel.

Notes

1. S. Hersh, *The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy*, 1991, p. 109.
2. General Assembly, *Establishment of a nuclear-weapon-free zone in the region of the Middle East*, resolution 3263 (XXIX), 9 December 1974.
3. For more on the ACRS talks see E. Landau, "ACRS: What Worked, What Didn't, and What Could Be Relevant for the Region Today", *Disarmament Forum*, no. 2, 2008, pp. 13–20.
4. 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final document*, document NPT/CONF.1995/32 (Part I), June 1995, p. 14.
5. General Assembly, *Establishment of a nuclear-weapon-free zone in the region of the Middle East*, UN document A/RES/65/42, 11 January 2011.
6. 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, "The Middle East, particularly implementation of the 1995 resolution on the Middle East", in *Final document*, document NPT/CONF.2010/50 (Vol. I), 18 June 2010, pp. 29–31.

7. In the CFE Treaty, which was signed on 19 November 1990 and entered into force on 9 November 1992, Article II stipulates that the term “area of application” means the entire land territory of the states parties in Europe, from the Atlantic Ocean to the Ural Mountains, including all the European island territories of the Faroes (Denmark), Svalbard and Bear Island (Norway), the Azores and Madeira (Portugal), the Canary Islands (Spain), and Franz Josef Land and Novaya Zemlya (the Russian Federation). In the case of the Russian Federation the area of application includes all territory to the west of the Ural River and the Caspian Sea. In the case of Turkey the area of application includes Turkish territory north and west of a line extending from the point of intersection of the Turkish border with the 39th parallel to Muradiye, Patnos, Karayazi, Tekman, Kemaliye, Feke, Ceyhan, Dogankent, Gözne and thence to the sea.
8. Article 18 of the Treaty of Tlatelolco, “Explosions for Peaceful Purposes”, states that parties to the treaty “may carry out explosions of nuclear devices for peaceful purposes—including explosions which involve devices similar to those used in nuclear weapons”.
9. 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Report of the Main Committee III*, document NPT/CONF.1995/MC.III/1, 5 May 1995.
10. IAEA, *The proliferation potential of neptunium and americium*, document GOV/1998/61, 30 October 1998.
11. 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final document*, document NPT/CONF.2000/28 (Parts I and II), 2000, p. 7.
12. The treaty, known fully as the Treaty on a Nuclear-Weapon-Free Zone in Central Asia, was signed on 8 September 2006 and entered into force on 21 March 2009.
13. The treaty, known fully as the African Nuclear-Weapon-Free Zone Treaty, was signed on 11 April 1996 and entered into force on 15 July 2009.
14. For an excellent account of Israel’s nuclear policy of opacity see A. Cohen, *The Worst Kept Secret: Israel’s Bargain with the Bomb*, 2010.
15. IAEA General Conference, *The denuclearization of Africa: report to the Director General*, document GC(XXXVII)/1075, 9 September 1993, p. 11.
16. The treaty, known fully as the Treaty on the South-East Asia Nuclear Weapon Free Zone, was signed on 15 December 1995 and entered into force on 27 March 1997.
17. IAEA, *The structure and content of agreements between the Agency and states required in connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, document INFCIRC/153 (Corrected), June 1972.
18. IAEA, *Model protocol additional to the agreement(s) between states(s) and the International Atomic Energy Agency for the application of safeguards*, document INFCIRC/540 (Corrected), September 1997.
19. IAEA, *The Convention on the Physical Protection of Nuclear Material*, document INFCIRC/274/Rev.1, May 1980. The convention opened for signature on 3 March 1980 and entered into force on 8 February 1987.
20. “Nuclear Security Summit”, Washington, DC, 12–13 April 2010. The next summit is to be held in Seoul in 2012.
21. US Department of State, *Key Facts about the Nuclear Security Summit*, 2010.
22. The Agreement Between India and Pakistan on the Prohibition of Attack Against Nuclear Installations and Facilities (India-Pakistan Non-Attack Agreement) was signed on 31 December 1988 and entered into force on 1 January 1991.
23. They include Algeria, Egypt, Libyan Arab Jamahiriya and Morocco.
24. For further information on AFCONE see the article by N. Stott in this issue of *Disarmament Forum*.
25. The five states are China, France, the Russian Federation, the United Kingdom and the United States.

The role of civil society in promoting a WMDFZ in the Middle East

Chen Kane

As one Middle East arms control expert put it, “The Middle East has all it takes to frustrate international arms control regimes”.¹ Ongoing territorial, religious, ethnic and other disputes underpin the continuing presence of weapons of mass destruction (WMD) in the region. States in the Middle East have used chemical weapons against external and internal adversaries. At least one state—Israel—is presumed to have advanced nuclear weapons capabilities, while four others—Iran, Iraq, Libyan Arab Jamahiriya and Syria—have violated their safeguards agreements with the International Atomic Energy Agency (IAEA), and Egypt has been found conducting some undeclared activities. Several of these states possess, pursued or are pursuing WMD capabilities. In addition, some key regional actors do not even recognize Israel, let alone share diplomatic relations. As a result of these intense and complex regional relationships, there is virtually no security framework or organization in the Middle East, much less a regional arms control culture. Many states in the region still perceive their own security as a zero sum game, leading them to adopt offensive military postures.

It is easy to see why, based on this background, the last place most will look for a strong civil society is the Middle East. Scepticism is even greater with issues such as WMD policies, of which governments tend to be highly secretive. Particularly in the Middle East, governments surround their WMD capabilities and doctrines with secrecy and opacity, presenting additional challenges to civil society initiatives to influence policymaking.

Nevertheless, because of the unique political and geo-strategic circumstances of the region, civil society in the Middle East has had extensive first-hand experience in dealing with arms control and non-proliferation issues. Indeed, it may be surprising to learn that civil society meetings have been the only forum for regular regional dialogue on arms control and non-proliferation issues since 1995, when the Arms Control and Regional Security Working Group (ACRS)—the only formal regional arms control negotiation mechanism—was halted.

The objective of this article is to analyse the past, present and future role of civil society in promoting the establishment of a weapons of mass destruction free zone (WMDFZ) in the Middle East. The article begins by describing the reasons for the failure of the ACRS and the void it has created—leaving civil society initiatives to provide the only forum for discussing the issue of a WMDFZ in the region. The findings of a unique project conducted by the James Martin Center for Nonproliferation Studies (CNS) are also reported. The project collected the opinions of civil society experts from the Middle East on issues concerning the establishment of the zone. The article concludes with suggestions on the next steps that can be taken

Chen Kane is Senior Research Associate at the James Martin Center for Nonproliferation Studies (CNS). Her focus is on projects related to reducing the proliferation of weapons of mass destruction and terrorism, with a particular focus on the Middle East. The opinions expressed in this article are the author's own and do not necessarily represent the views of the CNS or the United Nations.

to promote the establishment of such a zone and the role civil society has to play in this important, challenging task.

The ACRS experience

The ACRS has so far served as the only official multilateral security dialogue and framework in the Middle East concerning WMD arms control and non-proliferation. The ACRS was established as part of the Arab-Israeli multilateral peace process initiated with the Madrid Peace Conference, in October 1991. The ACRS group held six plenary sessions and many other conceptual and thematic meetings between 1992 and 1995.² While the group formally still exists—it has never been suspended or annulled—in practice it is treated as a non-functioning body.

The group's record has been mixed at best.³ However, the initial establishment of multilateral direct talks and processes was in itself significant. The ACRS achieved important understandings, especially in the area of conceptual and operational confidence-building measures (CBMs). Some of these accomplishments include:

- drafting the Declaration of Principles and Statements of Intent on Arms Control and Regional Security⁴
- encouraging discussion on the geographical delineation of the Middle East region for an arms control regime
- examining actions or measures needed to begin negotiations on arms control
- drafting a charter for a regional security centre in Jordan and two affiliated institutions in Qatar and Tunisia
- building a communications network
- establishing procedures for pre-notification of certain military activities and exchange of military information
- developing a number of maritime CBMs, such as draft agreements on search and rescue and the prevention of incidents at sea

However, by 1995 complications in the peace process, the 1995 Review and Extension Conference on the Treaty on the Non-Proliferation of Nuclear Weapons (NPT),⁵ and the ongoing disagreement between Israel and Egypt over when, where and how to discuss the nuclear issue all placed the ACRS talks on hold indefinitely. No formal meeting has been held since September 1995, and most of the initiatives agreed upon have never been formally adopted. The failure of the ACRS also revealed the deep disagreements between Egypt (which took upon itself to represent the Arab position) and Israel on priorities, the sequencing of the peace process versus WMDNFZ negotiations, threat perceptions and the nuclear issue. The process also deepened mistrust and rivalries among different Arab states.⁶

Nevertheless, the ACRS experience indicated that CBMs are possible in a variety of areas. Moreover, it illustrated that regional security dialogue can be fruitful, albeit provided that further progress is made towards resolving the ongoing regional disputes.

Civil society initiatives

Civil society initiatives and dialogues concerning arms control and non-proliferation among experts from the region started in the early 1990s, prior to the ACRS talks. The most notable early projects were those led by Geoffrey Kemp, Director of the Middle East Arms Control Project at the Carnegie Endowment for International Peace, the Geneva office of the Quaker United Nations Office, and the Pugwash Conferences on Science and World Affairs.⁷

With the demise of the ACRS and later the Israeli-Arab peace process, the prospects for renewed, formal regional arms control dialogue were slim. The vacuum created by the absence of formal dialogue was partially filled by a variety of alternative Track 1.5 and 2 initiatives and meetings.⁸ These were created as a way to discuss regional security affairs while exploring methods for renewing the official process in a non-binding, unofficial way.⁹ Additional objectives of the various processes were to serve as a mechanism for the development of policy advice to governments and to provide conceptual “laboratories” for the development and testing of ideas within a non-committal environment. They also played a socialization role for members by acquainting them with each other’s threat perception and concerns, and over time it helped members develop a better appreciation and understanding of them.

It is estimated that over 30 civil society projects have been initiated since 1995, bringing together around 750 regional and extra-regional officials, military officers, security experts and other specialists for off-the-record discussions and cooperation on issues related to regional arms control and security.¹⁰ Most of these meetings have been organized under strict confidentiality and the Chatham House Rule¹¹ to protect open dialogue and the identity of the participants, as some take considerable risks by attending the meetings.

Ongoing initiatives

When examining the potential contribution of civil society in the Middle East to the establishment of a WMDfZ in the region, it is important to fully understand which activities are currently taking place. Such an inventory is useful not only to prevent duplication but also to identify existing opportunities, gaps and areas of mutual interest.

The Center for Middle East Development

The Center for Middle East Development (CMED), at the University of California, Los Angeles (UCLA), hosts probably the most well-attended and long-standing series of dialogues on various themes relating to regional cooperation. It conducts a broad-based regional dialogue

involving as many as 800 members, many of whom meet two to three times annually. The CMED also organizes smaller, biannual military-to-military dialogues. Whilst the CMED initiative started in the 1980s, it only began discussing arms control matters in the early 1990s, parallel to the official ACRS process. Issues related to arms control and non-proliferation are currently discussed within the Science and Technology Working Group of the UCLA meetings. Participants from the region include the 22 member states of the League of Arab States (LAS), Iran, Israel and Turkey.

The Science and Technology Working Group, one of the CMED's nine working groups, has also established a task force exploring some of the issues relating to the technical dimensions of implementing a WMDFZ in the Middle East. The task force meets three to four times a year and includes participants from throughout the Middle East and North Africa (MENA) region, as well as representatives from the United States and Europe. The group's initial focus was on biological weapons issues. Within the task force, participants have presented their perspectives on biological arms control and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, biosafety, biosecurity, and ways in which the regional states can cooperate in preventing, mitigating and protecting against the use of biological weapons by states and non-state actors. The group has identified a set of potential CBMs and is currently examining options and priorities for implementation.

Possible future projects could include convening a group of scientists to further explore regional cooperation on the biological weapons dimensions of the zone, issues associated with WMD delivery systems, radiological weapons and the implications of regional nuclear energy development on a future WMDFZ.

The Near East and South Asia Center for Strategic Studies

The Regional Network of Strategic Studies Centers, a network focused on the MENA and South Asia, is sponsored by the Near East and South Asia Center for Strategic Studies (NESA) at the National Defense University and includes more than 30 government-affiliated institutes from the MENA and South Asia. The network promotes strategic thinking and dissemination of collaboratively developed research. A working group was formed in 2007, focusing on arms control, non-proliferation, border security and the establishment of a WMDFZ in the Middle East. Participating organizations include centres in Bahrain, Egypt, Israel, Lebanon, Morocco, Oman, Qatar, Tunisia, Turkey, the United Arab Emirates and Yemen. Meeting two to three times a year, the working group has discussed various matters related to regional WMD arms control and non-proliferation. The group has also developed a collaborative research agenda, under which two to three members produce a policy memorandum on a relevant issue. Topics have included strengthening the regional implementation of Security Council resolution 1540,¹² regarding the non-proliferation of WMD, and methods to promote the idea of a WMDFZ in the region. In 2010 the group started to examine issues related to nuclear energy within a

broader analysis of energy security in the Middle East. In addition, NESAC holds regular seminars attracting military and diplomatic officers from Israel, the Palestinian Authority, Turkey and most Arab states to Washington, DC, for dialogue and briefings.¹³ Over 2,600 officials have graduated from NESAC Centre executive seminars. The Centre also hosts bilateral and sub-regional workshops in the Middle East.

The Middle East Scientific Institute for Security

The Middle East Scientific Institute for Security (MESIS), based in Amman, Jordan, and associated with the Royal Scientific Society, was established in 2002 in cooperation with the US Department of Energy and Sandia National Laboratories. The institute's activities include conducting studies with regional experts on technical aspects of arms control—especially on verification issues—with the objective of reducing the motivation for regional states to acquire WMD. It also develops effective regional partnerships for countering proliferation and terrorism. MESIS, previously known as the Cooperative Monitoring Center, has directed a number of training programmes and workshops to promote the role of science and technology in addressing non-proliferation, arms control and other security challenges. It has hosted workshops on border security, regional biosecurity and biosafety, as well as approaches to national implementation of WMD agreements. For example, MESIS recently held a technical workshop to strengthen Comprehensive Nuclear-Test-Ban Treaty implementation capabilities in the Middle East and a training workshop on seismological analysis.¹⁴

The Peace Research Institute Frankfurt

The Peace Research Institute Frankfurt set up the Multilateral Study Group on the Establishment of a Ballistic Missile Free Zone in the Middle East in 2007. The group comprises of experts from the Middle East, who cooperated to work on joint articles, as well as citizens from China, Europe, the Russian Federation and the United States. The objective of the group was to explore regional efforts to control delivery systems and investigate the possibility of banning their testing as part of an overall effort to establish a WMD-free zone in the Middle East.¹⁵ The project is entering a new phase, in which the focus will be broadened to include issues other than missiles. This follow-on project is called the Academic Peace Orchestra Middle East and will primarily focus on developing ideas for the 2012 Middle East Conference, which was agreed on at the NPT Review Conference in 2010.¹⁶

Search for Common Ground

Search for Common Ground (SFCG), a conflict resolution non-governmental organization founded in 1982, hosts three local offices in the Middle East (Israel, Lebanon and Morocco) and has sponsored several working groups that mirrored the ACRS talks. A result of which

was a collection of papers in Arabic and English about threat perceptions as understood by representatives from Egypt, Iran, Israel, Jordan, the Palestinian Authority, Syria and Turkey.¹⁷

Two ongoing projects supported by SFCG are the Middle East Chemical Risks Consortium (CRC) and the Middle East Consortium on Infectious Disease Surveillance (MECIDS). Founded in 2002 the CRC is composed of Egyptian, Israeli, Jordanian and Palestinian research centres that address the problem of chemical risks. The CRC has so far published a compilation of analyses of chemical incidents in the region, including Egyptian, Israeli, Jordanian and Palestinian case studies.¹⁸ SFCG and the Nuclear Threat Initiative's Global Health and Security Initiative founded the MECIDS in 2003 to facilitate regional cooperation against the threat posed by biological attacks and natural disease outbreaks. Health ministries from Israel, Jordan and the Palestinian Authority share data about disease outbreaks, such as avian and swine influenza, through the MECIDS. The consortium's first project was to develop an enhanced, food-borne disease surveillance system. Participants routinely use a website to share data about incidence of particular diseases. The group has also discussed communication protocols in the case of an outbreak, and organized a simulation exercise to prepare for such an event.¹⁹

Additional initiatives

The Cooperative Monitoring Center, at Sandia National Laboratories, hosts a visiting fellows programme and conducts a number of regional projects. These include technical demonstrations of verification exercises and monitoring systems through the centre's technology laboratories as well as selective technical capacity building in the MENA region.

The Pugwash Conferences on Science and World Affairs has organized conferences on issues related to WMD proliferation in the Middle East since the early 1990s. Within the region Pugwash also organizes bilateral dialogues and workshops in conjunction with its Egyptian, Iranian and Israeli Pugwash national groups.²⁰ Further conferences are held by the Centre of International Studies and Diplomacy, at the School of Oriental and African Studies, University of London, which leads a project on a Middle East WMDFZ. The project's objective is to promote public awareness and international dialogue on the issue of a proposed WMDFZ. The project is known for its annual conferences (its fifth conference was in October 2010), but it aims to expand its operations to include research, educational programmes and public policy development.

Furthermore, the governments of Canada and Denmark have sponsored the Consortium of Research Institutes from four states in the Middle East region.²¹ In addition, a project by the University of Ottawa hosts conferences to consider the creation of a "Regional Co-operation and Security Process" in the Middle East and North Africa. Participating states have so far been limited to the four consortium states.²²

There are many edited publications on the various initiatives,²³ and a Palestinian-Israeli journal²⁴ has dedicated an issue on the establishment of WMDFZ in the Middle East,

with contributions from Arab, Iranian and Israeli authors. The Georgetown University Center for International and Regional Studies, based in Qatar, began a research project in 2010 entitled “The Nuclear Question in the Middle East”. The study explores the implications of WMD proliferation, nuclear energy programmes and related issues on the future WMDFZ in the region, which will later be published in an edited book.

Regional experts voice their opinions

The James Martin Center for Nonproliferation Studies (CNS) has collected the opinions of over 60 arms control and non-proliferation experts from the Middle East on five fundamental issues related to a future WMDFZ.²⁵ The fundamental differences among states in the region about how, when and why to pursue such a zone has already been extensively expressed.²⁶ The objective of this project was to identify new common positions and suggest recommendations in areas where progress can be made, or where diplomatic efforts could bridge differences.

The CNS team comprised of experts from Egypt and Israel, who designed and circulated a questionnaire with five questions on the most fundamental issues related to the zone: geographical delineation; what the zone should prohibit or limit; the role of outside powers; the preferred verification organization; and the appropriate negotiating forum. The questionnaire was then circulated to non-proliferation experts and former government officials from the 22 member states of the LAS, Iran, Israel and Turkey. In addition, the questionnaire was made available online and in print during regional Track 1.5 and 2 meetings to non-governmental non-proliferation experts from the Middle East. Responses were received from 13 states in the region.²⁷ The responses were then aggregated and analysed.

Three areas of agreement were identified:

- geographical delineation of the zone—over 60% of the experts surveyed said the zone should include the LAS, Iran and Israel, and that there should be protocol arrangements with neighbouring states—such as Turkey—the five nuclear-weapon states (NWSs)²⁸ and other relevant states.
- what should be prohibited or limited—over 60% of the experts held that the following three categories should be regulated or limited: WMD and missiles capable of carrying WMD warheads (24%); weapons-grade fissile material production, including limitations on enrichment and reprocessing (20%); and stocks of separated plutonium or highly enriched uranium (20%).
- role of outside powers—over 85% of the experts believed that outside powers should definitely play a role, with differing views as to the degree of involvement: central (46%) or limited (36%).

However, areas of clear divergence were also identified:

- verification organization—around 40% believed that it should be a tailored regional verification regime, implemented exclusively by a new regional verification organization established and funded by the states parties to the WMDFZ treaty for the specific purpose of monitoring the zone; 28% felt that it should be the existing verification regimes (for example, IAEA safeguards for the nuclear aspects, Chemical Weapons Convention verification under the auspices of the Organisation for the Prohibition of Chemical Weapons for chemical aspects); 24% reported that it should be a tailored mandate, with cooperation with existing verification regimes (for example, as applied by the European Atomic Energy Community or Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials). The remaining experts preferred “other” with regards to the verification organization.
- appropriate negotiating forum—37% chose a regional forum, sponsored by the NWSs; 34% selected a regional forum tied to a comprehensive regional peace process; 16% preferred a regional forum devoted solely to negotiating a WMDFZ treaty, organized by the regional states parties. Once again the remaining experts chose “other” as an option.

Although still in progress, the project is important in bringing to the fore shared positions previously unexplored or unidentified. It also highlights areas that can be explored further by civil society initiatives.

The limitations of civil society initiatives

It is important to acknowledge that while civil society initiatives are very important, they are no panacea and they suffer from important limitations. Informal activities, by their very nature, cannot replace formal negotiations and produce binding arms control agreements or CBMs. Most initiatives have so far concentrated on limited areas of CBMs—primarily those where agreements can perhaps be more easily attained because they do not threaten the core security interests of the parties involved.

Track 1.5 and 2 meetings organizers have found it challenging to convene sessions in the Middle East, since Israelis cannot be admitted to other countries in the region besides Egypt and Jordan. As a result, most meetings take place in Europe, which has resulted in increased costs and limitations on the number of participants. Without a formal process (or near-term prospects for restarting formal negotiations) it has been difficult to maintain enthusiasm for these initiatives as well as maintaining funding in terms of justifying their relevancy. Furthermore, some states (Iran, Iraq, Saudi Arabia and Syria) are still not represented at most meetings. Organizers also have difficulty sustaining sufficient funding, which mostly comes from European and US governments. Due to unreliable funding streams, many groups have

met irregularly, decreasing their cohesiveness and ability to develop relationships or long-term projects.

Another limitation is lack of coordination among—and sometimes even awareness of—the various initiatives. The initiatives usually fail to develop independence, integration and self-sufficiency. They are heavily dependent on funding and venues supplied by extra-regional players. In fact, most initiatives become completely dependent on the organizers. Indeed, this dependence often means that the initiative would cease to exist if the organizers did not provide full funding, prepare an agenda and initiate the meeting.

Finally, many of the participants are in their 50s and 60s and represent the “old guard”. They have participated in the ACRS talks and generally hold traditional perceptions on security and cooperation.

Conclusions and recommendations

As long as the ongoing conflicts in the Middle East remain unresolved, or at the very least serious attempts towards resolution are not made, it will be nearly impossible to push forward with a formal regional agenda of WMD disarmament and arms control. As a result, Track 1.5 and 2 activities are likely to remain the central locus for region-wide discussions, unless dramatic breakthroughs in other areas occur—such as progress in the Israel-Arab peace process, increased fear of a large scale war, or Iranian acquisition of nuclear weapons.

Areas of cooperation and collaboration which Track 1.5 and 2 initiatives could explore, but were scarcely considered in the past, include nuclear safety, security and safeguards in light of recent nuclear energy programmes in the region and the nuclear disaster in Japan. With a focus on the establishment of a regional WMDFZ, participants could examine areas of agreement identified in the recent CNS survey and reduce current differences between state positions. Further discussions could consider the following: Turkey’s role in a WMDFZ; requirements for a WMDFZ compared to a nuclear-weapon-free zone; desired outcomes of the proposed 2012 WMDFZ conference; CBMs for advancing the prospects of a WMDFZ; and specific forms of involvement of outside powers in establishing such a zone.

It will also be crucial to educate the next generation of experts. Many Middle East experts involved in Track 1.5 and 2 initiatives also participated in the ACRS negotiations but are now retired. Naturally, many of these individuals hold mainstream views on security issues and international cooperation and tend to favour the use of interest-based bargaining and zero-sum negotiations. The social unrest and revolutions across much of the Arab world in 2011 were started by young people pushing for reform of their current regimes. The potential benefits of the next generation of experts involved in existing and new initiatives goes well beyond the initiatives themselves. By sharing their experience and knowledge acquired through Track 1.5 and 2 dialogues, the individuals can influence their peers, their national

decision-makers, along with other young people not necessarily involved in arms control and non-proliferation issues but who are interested in creating positive change in the region.

The latest events in the Middle East have brought the role of civil society even further—and faster—to the front. The civil revolutions in several of the countries in the region may create a temporary vacuum or stalemate among decision makers until things settle. Such a vacuum could be filled and fed quickly by civil society input. Some of the experts currently outside the government may even take over official positions in newly formed governments. As opposed to the old-guard, authoritarian regimes, it may well be that the newly formed governments resulting from the civil revolutions will be more open and attentive to input from outside the government and more likely to adopt a new approach to regional security in the Middle East.

There are certainly important security and WMD-related issues in which all states in the region share common interests. Civil society can play a valuable role in identifying mechanisms to advance the interests of all parties involved. If the process can be repeated for multiple issues, a pattern of cooperation can contribute to a reduction of overall tensions and improve the atmosphere for tackling the central issues in dispute. Track 1.5 and 2 initiatives have promoted a better understanding of threat perceptions, built relationships among security experts, officials and academics, and served as a laboratory for new ideas. Such initiatives maintain contact when there is void, create dialogue where there is silence, and allow for the airing of ideas in a safe, non-committal environment.

Notes

1. D. Kaye, "Time for Arms Talks? Iran, Israel, and Middle East Arms Control", *Arms Control Today*, November 2004.
2. For a chronology of ACRS meetings see B. Jentleson, "The Middle East Multilateral Arms Control and Regional Security (ACRS) Talks: Progress, Problems, and Prospects", IGCC Policy Paper 26, Institute on Global Conflict and Cooperation, 1996.
3. Many experts have evaluated the shortcomings of ACRS in order to gain some lessons from this important experience. For a comprehensive review see the references in, and the article by, E. Landau, "ACRS: What Worked, What Didn't, and What Could Be Relevant for the Region Today", *Disarmament Forum*, no. 2, UNIDIR, 2008, pp. 13–20.
4. S. Feldman and A. Toukan, "Statement on Arms Control and Regional Security", *Bridging the Gap: A Future Security Architecture for the Middle East*, Carnegie Commission on Preventing Deadly Conflict, 1997, pp. 103–7.
5. "The 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons", New York, 17 April–12 May 1995.
6. B. Jentleson, "The Middle East Multilateral Arms Control and Regional Security (ACRS) Talks: Progress, Problems, and Prospects", IGCC Policy Paper 26, Institute on Global Conflict and Cooperation, 1996, pp. 9–10.
7. H. Agha, S. Feldman, A. Khalidi and Z. Schiff, *Track-II Diplomacy: Lessons from the Middle East*, BCSIA Studies in International Security, 2003, p. 115.
8. Track 1 diplomacy involves negotiations between government officials, whilst Track 2 diplomacy involves dialogue with influential, retired government and military officials, academics, activists, civil society members and individuals tackling specific issues that cannot be adequately addressed at the

- government-to-government level. Track 1.5 diplomacy brings together government officials from Track 1 with Track 2 participants, while it is understood that the government officials are participating in their personal capacity and not on behalf of their government.
9. Previous civil society projects include: an initiative in 2003 to develop a Regional Security Charter for the Middle East, sponsored by the University of California, Los Angeles (UCLA) and the Canadian and Danish governments; dialogues focusing on regional security, organized by the University of California Institute on Global Conflict and Cooperation (IGCC) and Steven Spiegel of UCLA; numerous UNIDIR Track 2 projects and publications; a digital discussion group concerning regional security issues operated by the Munk Centre for International Studies at the University of Toronto; the convening by DePaul University of the Mid-East Group of Experts on the Establishment of a Regional Security Regime in the Middle East Including the Elimination of Weapons of Mass Destruction; and the formation of a Stockholm International Peace Research Institute (SIPRI) Middle East Expert Group, led by Peter Jones.
 10. M. Yaffe, "Promoting Arms Control and Regional Security in the Middle East", *Disarmament Forum*, no. 2, UNIDIR, 2001, pp. 9–25. For additional analysis on arms control dialogues and Track 2 diplomacy in the Middle East see the references in, and the article by, P. Jones, "Filling a Critical Gap, or Just Wasting Time? Track Two Diplomacy and Regional Security in the Middle East", *Disarmament Forum*, no. 2, UNIDIR, 2008, pp. 3–12.
 11. "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed", Chatham House, London.
 12. Security Council, *Resolution 1540 (2004)*, UN document S/RES/1540 (2004), 28 April 2004.
 13. NESA, "Washington Day Seminar Series", National Defense University, Washington, DC.
 14. National Nuclear Security Administration, "Containing the Threat", *2010 Annual Report*, US Department of Energy, 2010, p. 9.
 15. For further information on the group's progress see B. Kubbig and S.-E. Fikenscher (eds), *Arms Control and Missile Proliferation in the Middle East*, Routledge Global Security Studies, 2011.
 16. 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Final document: volume 1*, document NPT/CONF.2010/50 (Vol. I)*, 18 June 2010.
 17. See H. Agha and A. Levran, *Common Ground on Lebanon: A Lebanese-Israeli Dialogue*, 1992; A. Levran and M. Shiyab, "A Joint Paper on Jordanian-Israeli Issues of Security and Political Settlement", 1994; and R. Eisendorf (ed.), *Arms Control and Security in the Middle East: The Search for Common Ground*, 1995.
 18. SFCG, *Common Ground on Chemical Risk: Case Studies from the Middle East*, 2004.
 19. For more information on MECIDS activities see MECIDS, *Regional Technical Report 2005–2008*, 2009.
 20. Pugwash conferences include: "Pugwash Workshop on Middle Eastern Security and WMD in the Middle East", Beit Oren, 2–3 July 2010; "Pugwash Consultation on Middle East Security", London, 26 July 2009; and "Iran's Nuclear Energy Program: Policies and Prospects", Tehran, 25 April 2006.
 21. The consortium consists of the Al-Ahram Center for Political and Strategic Studies in Cairo, the Gulf Research Center in Dubai, the Institut Diplomatique et des Relations Internationales in Algiers, the Centre Tarik Ibn Zyad in Rabat, and the Regional Centre on Conflict Prevention at the Jordanian Institute of Diplomacy in Amman.
 22. Consortium of Research Institutes, "A Middle East and North Africa Regional Co-operation and Security Process: Report of the Consortium of Research Institutes", executive summary, 2005.
 23. S. Spiegel and D. Pervin (eds), *Practical Peacemaking in the Middle East, Volume I: Arms Control and Regional Security*, 1995. Other noteworthy publications include: Gulf Research Center, "Gulf WMD Free Zone", *Security and Terrorism Research Bulletin*, no. 1, 2005; B. Kubbig and S.-E. Fikenscher (eds), *Arms Control and Missile Proliferation in the Middle East*, Routledge Global Security Studies, 2011.
 24. "A Nuclear Free Zone in the Middle East: Realistic or Idealistic?", *Palestine-Israel Journal*, vol. 16, no. 34 (special issue), 2010.

25. C. Kane, *Perspectives from the Region: Views in Civil Society*, "A WMD Free Zone in the Middle East: Promise and Prospects", conference, Vienna, 24–25 February 2011.
26. 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Implementation of the resolution on the Middle East adopted by the 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*, document NPT/CONF.2010/14, 5 April 2010, pp. 5–6.
27. Algeria, Egypt, Iran, Iraq, Israel, Jordan, Morocco, the Palestinian Authority, Saudi Arabia, Tunisia, Turkey, the United Arab Emirates and Yemen.
28. The five states are China, France, the Russian Federation, the United Kingdom and the United States.

New publication

Multilateralization of the Nuclear Fuel Cycle: The First Practical Steps

Edited by Yury Yudin (August 2011)

From the outset of the nuclear age the international community has faced the following challenge: how to manage global nuclear fuel cycles to make the benefits of peaceful applications of nuclear technology available to all states, on an equitable and non-discriminatory basis while simultaneously reducing the risks of nuclear proliferation.

Whilst the dual-use nature of nuclear technology cannot be altered, something can be done to change how this technology is managed. More than once the world has considered multilateral management of the nuclear fuel cycle and multilateral mechanisms that would provide assurances of supply of the fuel for nuclear power reactors.

In recent years governments, the nuclear industry and non-governmental organizations have put forward many proposals regarding multilateral approaches to the nuclear fuel cycle and assurances of supply of low-enriched uranium and nuclear fuel. Of these, only a few projects have achieved significant momentum. The Russian Federation International Uranium Enrichment Center and the guaranteed low-enriched uranium reserve have been established and are in operation, and the International Atomic Energy Agency (IAEA) low-enriched uranium bank is in the early stages of implementation.

In-depth analysis of existing multilateral fuel-cycle mechanisms is essential for future implementation of multilateral fuel cycle projects. This book investigates the two operational Russian mechanisms and the IAEA low-enriched uranium bank.

The first study, by Anton Khlopkov, outlines the key stages in the implementation of the Russian initiatives and details the steps undertaken to make them operational. The second study, by Zoryana Vovchok, discusses various legal issues pertaining to the choice of a state or states to host the IAEA low-enriched uranium bank, which will be influenced by various political, economic and technical considerations.

For more information on this and other publications, please visit our website <www.unidir.org>.

New project

Promoting implementation of the NPT Action Plan

The 2010 Review Conference of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) adopted a final document in which it agreed on 64 specific actions (including a section on the 1995 Middle East resolution) necessary to fulfil the three pillars in the NPT—nuclear disarmament, nuclear non-proliferation and peaceful uses of nuclear energy. Considering the past and potential role of Geneva as the home of bilateral and multilateral nuclear disarmament negotiations and meetings, the Geneva Centre for Security Policy, Reaching Critical Will and UNIDIR are to contribute to stocktaking and analysis and to offer recommendations on implementation of the action proposals. This project is financially supported by the Swiss Federal Department of Foreign Affairs and enjoys the support of the Geneva Branch of the United Nations Office for Disarmament Affairs.

As a run-up to the 2012 NPT Preparatory Committee of the 2015 Review Conference, three one-day seminars will be organized in Geneva on each of the three NPT pillars and will include the participation of international experts on the following dates:

- Peaceful Uses of Nuclear Energy (30 June 2011)
- Non-Proliferation (29 September 2011)
- Disarmament (20 January 2012)

This project is intended to provide all interested stakeholders the opportunity to express their views, share information and find common solutions.

For further information please contact:

Tae Takahashi

Tel.: +41 (0)22 917 15 83

Fax: +41 (0)22 917 01 76

E-mail: ttakahashi@unog.ch