



**Revitalizing Nuclear Disarmament
Report on the
Pugwash 50th Anniversary Workshop
Pugwash, Nova Scotia, 5-7 July 2007**

Co-Sponsored by

the Pugwash Conferences on Science and World Affairs and the Middle Powers Initiative

Report by Jeffrey Boutwell

Preface

On the 50th anniversary of the first meeting of the Pugwash Conferences on Science and World Affairs, held in at the Cyrus Eaton home, Thinker's Lodge, in Pugwash, Nova Scotia, a distinguished group of 25 international specialists on nuclear weapons issues convened to discuss the urgency of revitalizing nuclear disarmament in order to free the world from the ever-present threat posed by nuclear weapons. Under the auspices of the Pugwash Conferences and the Middle Powers Initiative, the participants discussed a variety of measures that need to be taken by both the nuclear weapons-states and the non-nuclear weapons states who are members of the 1968 Nuclear Non-Proliferation Treaty in order to provide needed momentum toward the goal of declaring nuclear weapons illegal and immoral and eliminating them entirely.

The Pugwash Conferences and the Middle Powers Initiative believe strongly that global cooperation on an entirely new scale will be needed to eliminate the many common threats to humanity, including nuclear weapons. While the Pugwash 50th anniversary workshop focused on the nuclear threat, new modes of international cooperation will also be needed to tackle the many other global challenges that threaten basic human security, such as climate change, the scourge of HIV-AIDS and other diseases, the lack of adequate food, water, health care and education for many of the world's peoples, and environmental degradation. It is imperative that we recall the words of the 1955 Russell-Einstein Manifesto, of "thinking in a new way" and "remembering our humanity", as we seek to solve the challenges of the 21st century.

In their Manifesto, Lord Russell and Albert Einstein gave equal emphasis to the renunciation of war as an instrument of policy, and it is to that end that the Pugwash Conferences have focused on “practical non-proliferation” by focusing its work in precisely those regions where, should armed conflict occur, nuclear weapons could well be used.

Introduction

Over the past several years, events around the world have conspired to seriously jeopardize the nuclear non-proliferation regime and increase the danger that nuclear weapons might be used in conflict for the first time since 1945.

Not since the dissolution of the Soviet Union and the end of the Cold War in the early 1990s have so many ominous threads converged to call into question the ability of the international community to both check the spread of nuclear weapons and reduce existing stockpiles that still number more than 25,000 such weapons.

Active negotiations between the United States and Russia, which between them control more than 95 percent of the world’s nuclear weapons, are non-existent. While the Moscow Treaty calls for each country to reduce its arsenal to 1,700 to 2,200 each by the end of 2012, there are no provisions for destroying excess warheads (which can be kept in operational reserve), and each country is expected to retain many thousands of nuclear warheads - absurd numbers in today’s international security environment.

Equally worrisome are rising tensions between Washington and Moscow over planned deployments of US missile defense systems in Poland and the Czech Republic, and the possible breakdown of two long-standing arms control agreements: the 1987 INF Treaty on intermediate-range nuclear forces, and the 1990 Conventional Forces in Europe Treaty.

The situation with the other existing nuclear weapons states – the UK, France, China, Israel, India, Pakistan, and North Korea – is hardly more reassuring. None of them are implementing the obligation, affirmed by the International Court of Justice in 1996, to pursue negotiations in good faith on nuclear disarmament in all its aspects under strict and effective international control. The UK and France have expanded their nuclear doctrine to include the threat or use of nuclear weapons in a wider range of circumstances. The UK has all but taken the political decision to modernize and extend its nuclear Trident submarine deterrent until the year 2050 or later.

As for the more recent nuclear weapons states – Israel, India, Pakistan, and North Korea – all of them live in dangerous and unstable neighborhoods. Advocates of nuclear weapons in these countries would argue that this is precisely why their countries need nuclear weapons, as a deterrent against existential threats to security. Should open conflict break out in any of these regions, however, the risk of nuclear weapons use will be dangerously high, with unimaginable consequences.

Moreover, the risks remain high of nuclear weapons spreading to more countries, and possibly to non-state terrorist groups. International concern over Iran's nuclear program is but symptomatic of the fact that some 40 countries around the world have sufficient know-how when it comes to uranium enrichment and plutonium reprocessing technologies to possibly have the capability of developing nuclear weapons. As we have seen recently with the interest shown by several states in the volatile Middle East – including Egypt, Saudi Arabia, the Gulf states, and Turkey – the nuclear program of a neighboring country (in this case, Iran) can initiate a chain-reaction of interest in mastering the nuclear fuel cycle.

The Pugwash 50th Anniversary workshop – *Revitalizing Nuclear Disarmament* – was co-sponsored by the Pugwash Conferences on Science and World Affairs and the Middle Powers Initiative from 5-7 July 2007 in Pugwash, Nova Scotia, site of the very first Pugwash meeting of scientists from around the world in July 1957. The findings of the Middle Powers Initiative through four meetings of the Article VI Forum, published in “Towards 2010: Priorities for NPT Consensus,” provided important inputs for the workshop discussion.

Although nuclear weapons have not been used since Hiroshima and Nagasaki in 1945, we are now entering an entirely new phase of the nuclear dilemma, where the proliferation threats posed by non-state terrorist groups and new nuclear-weapons states demand entirely new ways of thinking about nuclear weapons and security. As the Pugwash Council noted following its meeting in Hiroshima, Japan in 2005 – with the evidence of the horrors of nuclear warfare still fresh for all to see – “as long as nuclear weapons exist, they will one day be used.”

The goal of eliminating all nuclear weapons is indeed becoming feasible, 50 years after the Pugwash Conferences committed itself to that objective. Mainstream political figures are coming to endorse the urgent need to move toward that end, as stated by George Shultz, William Perry, Henry Kissinger, and Sam Nunn, in their now famous opinion piece in the Wall Street

Journal on 4 January 2007: *We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal.*

In May of 2007, in Vienna, the first PrepCom was held in advance of the 2010 NPT Review Conference. In comparison to the woefully weak conclusion of the 2005 NPT Review Conference, the 2007 PrepCom agreed on a modestly encouraging document that affirmed the Non-Proliferation Treaty as “the cornerstone of the non-proliferation regime”. The document further noted that “multilateralism and mutually agreed solutions... provide the *only* (emphasis added) sustainable method” for working toward nuclear disarmament and nuclear non-proliferation.

From many quarters of the international community, momentum is building to re-energize the campaign to control, reduce and eliminate nuclear weapons. The time for decisive leadership and action is now, before it is too late.

Recommendations

Devaluing Nuclear Weapons - Now

In order to make feasible and practical the goal of eliminating nuclear weapons, it is important to point out, as many military officials have done, that nuclear weapons have very little role to play in operational military planning, beyond that of providing existential deterrence. And, if nuclear weapons are only meant to deter the use of nuclear weapons by others, there is no justification for them in a world free of nuclear weapons.

Toward this end, the US and Russia must take lead in reducing the salience of nuclear weapons in their military doctrines. In 2001, Presidents Bush and Putin jointly declared that the US and Russia no longer “regard the other as an enemy or threat.” Yet thousands upon thousands of nuclear weapons remain in the American and Russian arsenals.

Important actions that can convince the international community that the two major nuclear weapons powers are serious about devaluing the role of nuclear weapons in their security and foreign policies should include:

1. The US and Russia should take immediate steps to de-alert the more than 1,200 warheads that each country has on high operational alert status, ready to be launched within minutes of an order to do so. Such warheads can be stored separately from their launch vehicles (missiles and aircraft), and strategic nuclear submarines can be kept in port, to

increase assurances that neither country will launch their weapons through accident or miscalculation.

2. The other nuclear weapons states (UK, France, China, India, Pakistan and Israel) should take all necessary steps to minimize the risk of nuclear use through accident or miscalculation.
3. All nuclear weapons states should declare a No First Use policy, with explicit declarations that nuclear weapons, until such time as they are eliminated, will only ever be used in retaliation for a nuclear weapons attack against them. These so-called Negative Security Assurances (that nuclear weapons will never be used against those countries who have legally bound themselves not to acquire nuclear weapons) should be codified in a legally-binding instrument.

Those countries not possessing nuclear weapons can take steps as well to advance the goal of a nuclear weapons-free world. As is the case with the chemical and biological weapons conventions, national legislation can be enacted making it a crime for their citizens to engage in nuclear weapons activities.

US-Russian Nuclear Weapons Negotiations

Having made a firm commitment to the future elimination of nuclear weapons, Washington and Moscow must take the lead in greatly reducing their nuclear arsenals, destroying excess warheads, controlling and eliminating excess nuclear fissile material, and implementing effective transparency and verification measures. In particular, the US and Russia should:

1. Negotiate a new treaty that will extend the 2002 Strategic Offensive Reductions Treaty (SORT) and provide effective verification and transparency measures for a total limit (operational and reserve) of no more than 2,200 strategic warheads for each country by the year 2012.
2. The US and Russia should confirm their commitment to existing nuclear agreements, especially the 1987 Intermediate Nuclear Forces agreement negotiated by Presidents Reagan and Gorbachev that eliminated an entire class of nuclear weapons (all intermediate-range, ground-based nuclear missiles between 500 and 5,500 kilometers).
3. Agreement should be reached on eliminating short-range nuclear weapons that are intended for forward-deployment, NATO should unilaterally withdraw all US nuclear

weapons stationed on NATO territory, and the US and Russia should agree not to deploy their nuclear weapons on the territory of other states.

4. The US and Russia should work together, with the international community, to ensure that the 1967 Outer Space Treaty is strengthened and that space remains free of weaponization.

Multilateral Nuclear Weapons Treaties

Prompt action is needed on the following:

1. The Comprehensive Test Ban Treaty (CTBT): While 138 countries have signed and ratified the 1996 CTBT, which prohibits all testing of nuclear weapons and devices, whether for military or civilian purposes, ten of the 44 states whose ratification is required for entry into force have failed to do so. The US, China and Israel have signed but not ratified the treaty, while India, Pakistan and North Korea have neither signed nor ratified. The International Monitoring System for detecting nuclear explosions of as little as one or two kilotons will soon be completed (perhaps in 2007), giving high confidence of detecting any and all clandestine nuclear testing. First, though, those states such as the US who are behind in their financial contributions to the CTBO must make good their contributions so that the IMS can be fully effective. The entry into force of the first treaty to ban all nuclear explosions would signal the seriousness of the nuclear weapons states in living up to their NPT Article VI obligations to take significant steps towards nuclear disarmament, while greatly enhancing the non-proliferation norms of Article IV of the NPT.
2. The Fissile Material Cut-off Treaty (FMCT): Under discussion since the 1990s, a FMCT would extend current IAEA prohibitions on the production of weapons-grade fissile materials in the non-nuclear weapons states to the declared enrichment and reprocessing facilities in the weapons-possessing states. In addition to prohibiting any further production of weapons-grade material, the FMCT should be expanded to include prohibitions on converting existing large stocks of civilian fissile material to weapons use, of banning the use of excess military fissile material for the production of weapons, and of controlling the highly enriched uranium (HEU) currently used in naval and civilian research reactors. The entry into force of a FMCT would, similar to the CTBT,

be a significant signal to the international community on the feasibility of reaching a nuclear weapons-free world.

3. NPT Governance: There is a demonstrable need for strengthening the oversight, implementation and enforcement mechanisms that can ensure compliance with the non-proliferation and disarmament obligations of the NPT regime. A combination of increased resources (staff and funds) and new provisions would greatly enhance the ability of the IAEA and the UN Office for Disarmament Affairs to undertake compliance assessment and enforcement, while greater political will and advance planning would allow the UN Security Council to decide on measures to be taken in the event of treaty violations and withdrawal.
4. Strengthening and extending Nuclear Weapons-Free Zones: NWFZs prevent proliferation in regimes, provide security from the threat of nuclear weapons use, and advance the norm of non-nuclear security paving the way for a nuclear weapons free world. The NWS should acknowledge and respect all existing NWFZs by ratifying the appropriate protocols to the zones. States Parties to NWFZs are encouraged to enhance their cooperation in order to jointly promote nuclear disarmament initiatives. All efforts should be made for the establishment of additional NWFZs particularly in North East Asia, Central Europe, the Middle East and the Nordic/Arctic regions.
5. Towards a Nuclear Weapons Convention: All States should affirm the goal of the complete abolition and elimination of nuclear weapons through a multilaterally verified instrument or package of instruments, i.e. a Nuclear Weapons Convention. Practical work should be undertaken to explore and advance the legal, technical and political requirements to make such a convention a reality.

Civilian Nuclear Energy and Nuclear Weapons

A renewed global interest in developing nuclear power is bringing increased demand for uranium enrichment and plutonium reprocessing capabilities. About a dozen countries currently possess full-scale facilities, including four non-weapons states (Brazil, Germany, Japan, and The Netherlands), while Iran is seeking to master the nuclear fuel cycle. Others, notably in the Middle East and Persian Gulf, have announced plans to develop such capabilities in the future. Given current weaknesses in the NPT regime to ensure that countries which possess

nuclear-fuel capabilities do not divert resources and materials into producing nuclear weapons, the only short-term solution is a moratorium on the construction of additional enrichment and reprocessing facilities coupled with an international mechanism for the production and delivery of fuel for civilian nuclear energy generation. In the long-term sustainable and environmentally sound alternatives must be further developed to eliminate demand for nuclear energy.

1. In conjunction with a moratorium on the construction of additional enrichment and reprocessing facilities, the IAEA should establish an international fuel bank that can provide guaranteed supplies of nuclear fuel to NPT-compliant states.
2. The international community must invest more in sustainable energy resources and devote substantial new funding to research and technology that can lead to new sources of energy generation that are not reliant on either nuclear power or fossil fuels.

Disarmament as the Compass Point

As noted in the Middle Powers Initiative document, “Towards 2010,” the above measures are valuable in and of themselves. They decrease risks of use, diminish the access of terrorists to catastrophic weapons and materials to build them, raise barriers to acquisition by additional states, and generate support for strengthening the regime and resolving regional crises. Moreover, the measures pass key tests: they do not diminish the security of any state; they reinforce the NPT and enhance the rule of law; they make the world safer now; and they move the world towards the elimination of nuclear weapons.

Achievement of the measures is difficult, however, in the context of an unstable, two-tier world in which nuclear weapons seem to have a permanent place. Some weapons states will hesitate to reduce flexibility by agreeing to the CTBT, the FMCT, intrusive verification of reductions and de-alerting, and strengthened security assurances. Some non-weapons states will be reluctant to agree to further steps to ensure peaceful use of nuclear energy such as the Additional Protocol and multilateral regulation of nuclear fuel production and supply. Accordingly, implementation of the measures should take place in the context of a visible intent to achieve a nuclear weapons-free world, such as was manifested at the 2000 NPT Review Conference by the unequivocal undertaking of the weapons states to accomplish the total elimination of nuclear weapons.

In the wake of stalled progress over the past several years, meaningful disarmament measures are needed on the part of the nuclear weapons states, both in and of themselves, and to enhance non-proliferation efforts.

A Global Campaign to Eliminate Nuclear Weapons

In 1986 at the Reykjavik summit, Ronald Reagan and Mikhail Gorbachev laid out a vision of a world free of nuclear weapons. Their efforts led to an entire class of nuclear weapons – intermediate nuclear forces – being eliminated for the first time in the nuclear age.

In the more than 20 years since Reykjavik, despite the end of the Cold War, we have seen numerous missed opportunities for taking bold steps to implement this vision of a nuclear weapons-free world.

Momentum is building, however, for revitalizing global efforts to eliminate nuclear weapons. From the Blix Commission on Weapons of Mass Destruction, to the political efforts of Mayors for Peace, to the sober assessments of policy figures such as George Shultz, William Perry, Henry Kissinger, and Sam Nunn, a broader political coalition than ever before is uniting behind the need to eliminate nuclear weapons before we witness the catastrophic consequences of their use.

To help sustain and increase that momentum, national and international organizations should undertake broad public education efforts to inform political leaders and the global community of the need to act before it is too late. To an extent not seen since the nuclear atmospheric testing days of the 1950s and early 1960s, the international community at all levels must become engaged with the need to eliminate the threat posed by nuclear weapons. The world may have been lulled into a false sense of security given the fact that nuclear weapons have not been used since the Hiroshima and Nagasaki bombings in 1945, but time is not on our side. The sober reality is that, as long as nuclear weapons exist, they will one day be used. It is precisely to prevent such a catastrophe that the Pugwash Conferences and Middle Powers Initiative issue this call, on the 50th anniversary of the first meeting of Pugwash scientists in the small fishing village of Pugwash, Nova Scotia, that the international community galvanize its efforts to declare illegal and eliminate nuclear weapons forever.

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