

Pugwash

NEWSLETTER

*issued by the Council of the Pugwash
Conferences on Science and World Affairs
Nobel Peace Prize 1995*



The 58th Pugwash Conference, Netherlands, April 2009

Volume 46 • Summer 2009

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Pugwash

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Shukria Barakzai (Afghan Parliament), Paolo Cotta-Ramusino (Pugwash) and Amb. Robin Raphel (US) at the 58th Pugwash Conference, The Hague, Netherlands, 19 April 2009

To the Pugwash Community

BARACK OBAMA AND THE VISION OF A NUCLEAR WEAPON-FREE WORLD

In his first six months in office, President Barack Obama advanced an ambitious agenda on a number of key issues facing the international community. From climate change and energy resources to the global economy and the threat posed by nuclear weapons, the President promised invigorated US leadership to work with countries great and small in tackling these challenges.

The response of the international community to the new US administration was nothing short of electric. The prospect of a United States that would work constructively with international organizations and the world community on seeking solutions to pressing global problems raised hopes and expectations around the world.

Regarding the long-espoused Pugwash goal of a nuclear weapon-free world, the President was simple and direct: “I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons.” In his April 5, 2009 speech in Prague, Pres. Obama clearly articulated how the United States must lead this effort, noting that, “as a nuclear power – as the only nuclear power to have used a nuclear weapon – the United States has a moral responsibility to act.”

The President was a bit circumspect in noting that “this goal will not be reached quickly – perhaps not in my lifetime.” But he was determined, he said, that the “United States will take concrete steps toward a world without nuclear weapons.”

In the several months since his Prague speech, there was indeed momentum in a number of areas – most especially the US-Russian START negotiations – for translating the President’s words into action.

Yet as those in Pugwash, who for 50 years have been working towards this goal, know all too well, a combination of national biases, entrenched interests, and conventional thinking will be difficult to overcome. Nuclear weapons continue to represent a symbol of political prestige and military power in many parts of the world. The dividing line between civilian nuclear activities and the ability to manufacture nuclear weapons remains porously

thin. Nuclear materials need to be better accounted for and protected, especially from diversion to possible terrorist use.

Nonetheless, the combined talents and efforts of international organizations, national governments committed to a nuclear weapon-free world, and NGOs could initiate a new era in faithfully living up to the bargain enshrined in the 1970 Nuclear Non-Proliferation Treaty: countries with nuclear weapons will give them up, and all other countries will not acquire them.

Over the next year, benchmark events that will occur include the CTBT Preparatory Conference in September and the 2010 NPT Review Conference in New York in May 2010. As it has since 1957, the Pugwash Conferences will devote its efforts and energy to ensuring the most successful outcome possible in these conferences on the path to a world without nuclear weapons.

I. 58th Pugwash Conference on Science and World Affairs

The 58th Pugwash Conference on Science and World Affairs, *Justice, Peace and Nuclear Disarmament*, was held in The Hague, Netherlands, from April 17-21, 2009. Nearly 200 senior policy figures, scientists, and NGO representatives attended the conference, which was superbly organized by the Netherlands Pugwash Group. The first day of the conference was devoted to a special symposium, *Next Steps in Nuclear Disarmament*. This brought together an impressive group of international experts who discussed how recent initiatives by President Barack Obama of the United States and Pres. Dmitri Medvedev of Russia might inject new momentum into the nuclear disarmament and non-proliferation process. As noted by Pugwash President Jayantha Dhanapala, “This Pugwash conference will contribute positive next steps towards implementing the vision of a world free of nuclear weapons, a vision promoted by Pugwash throughout its 52-year history and recently recalled by many world leaders, including President Obama in his Prague speech of 5 April 2009.”

The remainder of the conference consisted of the usual format of plenary sessions and working group meetings on topics ranging from regional conflicts in the Middle East and South Asia to the importance of preventing the deterioration of human rights standards to the interplay between climate change, energy resources, and technology sharing.

As noted by Pugwash Secretary General Paolo Cotta-Ramusino, “this conference will frame today’s non-proliferation and disarmament challenges in the context of the real world, where regional issues in the Middle East and Central and South Asia are at center stage. A particular effort has been made to bring together representatives of different nations and political groups, including nations and groups that are antagonistic to each other, thus promoting dialogue across all lines.”

Highlights of the conference included the Dorothy Hodgkin Memorial Lecture, delivered by the Hon. Sherry Rehman, former Federal Information Minister from Pakistan, and a keynote address by Mr. Luis Moreno-Ocampo, Chief Prosecutor of the International Criminal Court.

In addition to the heavy conference schedule, participants made the most of special opportunities provided by our Dutch hosts, including receptions at the 400-year-old City Hall in Delft and the Gemeentemuseum in The Hague, as well as a special screening of the documentary film, *The Strangest Dream*, on the life of Joseph Rotblat and the work of the Pugwash Conferences, produced by the National Film Board of Canada.

II. Pugwash Activities 2008-2009

With the *Pugwash Newsletter* now published once a year, our format is moving in the direction of providing an annual report of Pugwash activities. The period since the June 2008 issue of the *Newsletter* was a very busy one, with numerous workshops and informal consultations convened on the main topics of Pugwash concern.

Of special note were visits paid by Jayantha Dhanapala, Paolo Cotta-Ramusino, and Jeffrey Boutwell to senior Obama administration officials in Washington, DC, in April, including Presidential Science Advisor and long-time Pugwash colleague John Holdren, Assistant Secretary of State Rose Gottemoeller, White House WMD Coordinator Gary Samore, and Jon Wolfsthal of Vice President Joseph Biden’s office. Meetings were also held with Joseph Cirincione, President of the Ploughshares Fund, and Robert Gallucci, President-designate of the John D. and Catherine T. MacArthur Foundation. Dhanapala and Cotta-Ramusino also gave a seminar on Pugwash at the Henry L. Stimson Center, presided over by Stimson President Ellen Laipson.

In early May, Dhanapala, Cotta-Ramusino and Boutwell were in New York participating in various Pugwash and other NGO activities during the first week of the NPT PrepCom held at the United Nations.

Throughout the year, President Dhanapala traveled widely on behalf of Pugwash, visiting China, the DPRK, Switzerland, and Russia, among others. Secretary General Cotta-Ramusino maintained his usual heavy travel schedule, with trips nearly every month to South Asia and the Middle East especially. As is the Pugwash custom for working quietly behind the scenes, much of this work goes unreported, but is essential to the success of Pugwash in bringing together parties in conflict to discuss ways of reducing the nuclear threat and strengthening the international nuclear non-proliferation regime.

Acknowledgments

For continued support of the *Pugwash Newsletter* and the Pugwash Conferences, we are grateful to the German Research Society, the Russian Academy of Sciences, the John D. and Catherine T. MacArthur Foundation, the Carnegie Corporation of New York, the Ploughshares Fund, and the Cyrus Eaton Foundation.

JEFFREY BOUTWELL, *Editor*

58th Pugwash Conference on Science and World Affairs *Peace, Justice and Nuclear Disarmament*

April 17–20, 2009
The Hague, The Netherlands

COMMUNIQUÉ OF THE PUGWASH COUNCIL

The Council of the Pugwash Conferences on Science and World Affairs, recipient of the 1995 Nobel Peace Prize, welcomes the new international climate that is being generated which makes it possible for multilateral cooperative solutions to be negotiated for the critical issues affecting the global community. On nuclear disarmament and non-proliferation, weapons of mass destruction, terrorism, the international economic crisis, the urgent problem of climate change, the achievement of the Millennium Development Goals (MDGs), the strengthening of the rule of law, human rights, and other issues, the moment has arrived and we must seize the opportunity. As always, Pugwash stands ready to play its part.

Nuclear Disarmament and Non-Proliferation

From its inception in 1957 the Pugwash Conferences has focused on the threat posed by nuclear weapons to humanity. Nuclear weapons are the ultimate indiscriminate genocidal weapon of warfare, and as such must be eliminated and declared illegal and immoral. Recent statements by many senior political leaders and others around the world calling for a nuclear weapon-free world are surely welcomed, and give credence to a goal that Pugwash has espoused for more than 50 years.

The Pugwash Council applauds the April 1 joint statement of President Obama of the US and President Medvedev of Russia, where the two leaders pledged to work for the goal of a nuclear weapon-free world. The two Presidents enumerated a wide range of steps that would facilitate the elimination of nuclear weapons. These include US-Russian negotiation of a new verifiable strategic arms treaty, support for efforts to conclude a verifiable fissile material cut-off treaty, US ratification of the Comprehensive Test Ban Treaty (CTBT), consultation and possible cooperation on missile defense, and many

others. In doing so, Russia and the United States appeared poised to put behind them several years of deteriorating relations over NATO expansion, the Russia-Georgia conflict, missile defense, the suspension of the CFE (Conventional Forces in Europe) Treaty, and other divisive issues.

Several days later, on April 5 in Prague, President Obama delivered a historic speech that firmly committed his administration to fulfilling its obligations under Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) to reduce nuclear stockpiles through significant progress in reducing nuclear weapons toward the goal of complete elimination. If followed up by concrete action, this renewed US commitment will set a positive example for the other original nuclear weapons states, as well as those countries with nuclear weapons that remain outside the NPT Treaty, to take seriously the prospect of joining the nuclear disarmament process leading to zero.

Prospects for a successful NPT Review Conference in 2010 will be dim, however, if the nuclear weapons states have not made significant early progress in reducing their nuclear arsenals. Over the near term, the Council urges all necessary steps be taken to devalue the importance of nuclear weapons and concepts of nuclear deterrence, including:

- All nuclear weapons states should move immediately to remove their nuclear weapons from quick reaction alert status;
- All nuclear weapons states should adopt no-first-use policies and unqualified non-use policies against non-nuclear weapons states;
- The US and Russia should conclude a new START that goes even further in reducing their numbers of nuclear weapons;

- The UK should help lead the way towards the total abolition of nuclear weapons by deciding not to renew, renovate or replace its Trident nuclear weapons;
- The US and NATO should complete the withdrawal of all US tactical nuclear weapons based in Europe;
- Russia should include all its tactical nuclear weapons in negotiations with the US on deep cuts;
- NATO should ratify the adapted Conventional Forces in Europe Treaty;
- The international community must give high priority to preserving space as a weapons-free sanctuary;
- And most urgently, there remains the need for rapid action to control and/or eliminate the still substantial stockpiles and sources of highly enriched uranium (HEU) around the world that could provide the means for a catastrophic terrorist nuclear attack.

Prospects for a “nuclear power renaissance” are driven by concerns over global climate change and the need for low-carbon diversified energy sources. There are serious obstacles facing any such increase in the building of civilian nuclear power plants, including environmental concerns, cost, lead times, plant safety and security, and waste disposal issues. There are also serious concerns over the proliferation ramifications of an expansion of enrichment and reprocessing capabilities and facilities. Options for the multilateral control of nuclear fuel cycles could also help strengthen the barrier between civil and military nuclear programs.

Regional Conflicts and Nuclear Weapons

On-going and escalating regional tensions and conflicts, especially those in the Middle East and Persian Gulf, South Asia, and the Korean peninsula, pose a very real danger that the outbreak of armed conflict in any of these areas could escalate to both major conventional war and the possible catastrophic use of nuclear weapons. When combined with possible acquisition of nuclear materials and expertise for terrorist purposes, there is the real possibility that an attack with a nuclear device or weapon could occur for the first time since 1945, with horrific consequences.

Given that a possible use of nuclear weapons could come from regional conflicts around the world where nuclear weapons are present, the Pugwash Conferences focuses its efforts on working to resolve such conflicts and calling for a global elimination of such weapons.

The Middle East

In the Middle East, the recent armed conflict in Gaza has created an unprecedented crisis. The excessive use of Israeli military force against densely populated civilian areas and the current living conditions of the survivors are unacceptable. Rocket attacks on Israel must stop and a comprehensive ceasefire implemented. Access of goods and persons to and from Gaza should be restored and assured. The goal of an end to the occupation and a peace agreement should be pursued through an inclusive process, perhaps following the framework of the Arab peace initiative, that involves all representatives chosen by Palestinians and Israelis.

Pugwash has been especially active in promoting international dialogue on Iran. The Council welcomes the US invitation for talks with Iran without conditions and we look forward to positive results leading to a comprehensive dialogue. Constructive developments could help with a broad range of regional issues, from Iraq and Afghanistan to Syria and Lebanon. Most especially, the Council urges the cooperation of the entire international community, including Iran, to strengthen the nuclear non-proliferation regime.

In Iraq, progress in dampening sectarian violence offers hope for the future. But efforts will be needed to ensure that all parties in Iraq are adequately represented in the political and economic reconstruction of the country.

Finally, in parallel with regional conflict resolution efforts, the Pugwash Council reiterates its support for efforts to delineate the steps needed to implement a zone free of weapons of mass destruction in the Middle East.

South Asia

The deteriorating situation in Afghanistan has made it clear that it is time that all stakeholders take steps to make the process of governance and dialogue more inclusive. Regional efforts to stabilize must include positive cooperation with Iran, Pakistan, India and Central Asian countries, as well as the broader international community.

The internal situation in Pakistan, including the recent developments in Swat, are a cause of serious concern. Terrorist acts have destabilized the region and dealt a serious blow to the dialogue between New Delhi and Islamabad. Progress on issues, including Kashmir, and the overall security situation between the two nuclear-armed countries has been put in jeopardy, and the Council urges both Pakistan and India to resume their comprehensive dialogue in all good faith.



Participants at the 58th Pugwash Conference.

Northeast Asia

North Korea's launch of a multi-staged rocket on April 5, 2009, purportedly to put a satellite into space, was condemned by the UN Security Council presidential statement. In response, North Korea decided to halt the process of disabling its nuclear facilities and to stop participating in the Six-Party Talks. It is regrettable that North Korea has expelled the IAEA inspectors and decided to reactivate the reactors as well as its reprocessing plant. These are serious setbacks to ongoing efforts in achieving a denuclearized Korean peninsula.

It is urgent and necessary to refrain from further escalation of tensions; what is needed instead is to re-establish confidence among all the countries concerned. To this end, it is vital to start the US-North Korean dialogue first and then resume the Six-Party Talks in order to implement already reached agreements by providing security assurances, normalization of relations, and by creating a peace mechanism that would replace the current truce regime. This would pave the way for the DPRK to return to the NPT before the 2010 NPT Review Conference. A nuclear weapon-free Korean peninsula will help to sustain peace and stability in the region as well as strengthen the NPT regime. More broadly, efforts are needed to prevent arms competition, whether conventional or nuclear, throughout the region.

Global Climate Change

We recognize that the climate change is an urgent global security threat and urge leaders of both developed and developing countries to work together to meet these chal-

lenges and at the same time meet special needs of developing countries. We welcome the positive attitude of the new US administration that indicates it understands the urgency to act immediately on this threat. The upcoming Conference of the Parties (COP) meeting at Copenhagen must secure the commitment of all nations to undertake major changes that will result in a global society that satisfies its energy needs from low-carbon sources. We must undertake large scale effective technology transfer and diffusion of "low-carbon technologies." This will require measures such as increased funding, better financing, management of intellectual properties, and trust building that satisfy needs of both developing and developed countries..

Conflict Resolution, Justice and Human Rights

Meeting in The Hague, with its centuries-old reputation for concepts and practices of international law and justice, the Pugwash Council is acutely aware of the importance of fairness and equity in laying a lasting foundation for peace. From Hugo Grotius (1583-1645) and the birth of international law to the 1899 and 1907 Hague Conventions to the modern International Court of Justice and the International Criminal Court, The Hague represents for many of the world's war-torn societies and dispossessed peoples a beacon of hope that the rule of law will prevail over the use of military force and violations of fundamental human rights.

In carrying out its work, Pugwash recognizes that conflict resolution requires a great deal of compromise in talks and negotiations between opposing parties to a conflict. This applies to conflicts between states and those



Dr. Jennifer Simons at the panel on Nuclear Disarmament Beyond the NPT, with panelists Jeremy Issacharoff, Rebecca Johnson, Talat Masood, Amitabh Mattoo, Sverre Lodgaard.

between states and non-state groups. Pugwash believes firmly that dialogue and communication, and the movement of people involved in such dialogue, should be allowed to the maximum extent possible. Restrictions by states on dialogue and the movement of people, and the injunction of “not talking with terrorists,” ultimately is self-defeating in seeking the resolution of enduring conflicts.

Genuine human security is achieved not just through the absence of conflict, but through equitable access to natural resources such as food, water, healthcare, education, and economic opportunity. For too many of the world’s peoples, these basic necessities have been sorely lacking for far too long. An active role for civil society and the rule of law are essential to the promotion of human dignity and the expansion of fundamental civil and human rights.

As discussed at the 58th Pugwash Conference, the application of new technologies for human welfare, the sustainable use of resources, and greater scientific and international cooperation do offer hope for a more just and equitable world.

The Pugwash Council reaffirms its commitment to a nuclear weapon-free world and particularly recognizes the importance of engaging the younger generations on these issues. Such weapons have no role in a just and humane world and Pugwash calls for their total elimination.

The 58th Pugwash Conference, Justice, Peace and Nuclear Disarmament, was attended by more than 180 participants from 30 countries, including 31 International Student/Young Pugwash participants, and was held at the Golden Tulip Bel Air Hotel in The Hague, The Netherlands. As is now the custom, an International Student/Young Pugwash Conference preceded the meeting. International Pugwash and the Netherlands Pugwash Group greatly appreciate support from the following funders: the Foreign Ministry and Ministry of Defense of The Netherlands, the Foreign Ministry of Norway, PBL, Novib/Oxfam, Cordaid, the Municipalities of Delft and The Hague, The Simons Foundation, and the Carnegie Corporation of New York.



THE SECRETARY-GENERAL

MESSAGE TO THE 58th PUGWASH CONFERENCE

The Hague, 17 April 2009

I am pleased to send greetings to the Pugwash Conference on Science and World Affairs. In our troubled world, where some scientific advances have improved our quality of life but others have produced horrifically destructive weapons, Pugwash's ongoing efforts to promote scientific contributions to humanity are invaluable.

I especially appreciate your longstanding efforts to warn the world against the catastrophic threat posed to humanity by nuclear and other weapons of mass destruction. Pugwash's work for progress in nuclear disarmament has even greater resonance today, as more and more people recognize the hazards of nuclear weapons and their irrelevance in addressing contemporary security challenges, such as terrorism and intra-state warfare. Enlightened leaders, former high officials and statesmen, and civil society groups around the world have been offering initiatives to achieve progress in this realm.

Against this backdrop, I congratulate Pugwash President Jayantha Dhanapala and the organizers for the Nuclear Weapons Symposium that is part of this year's Conference. Your members have a uniquely authoritative and passionate stance, and their contributions will no doubt help advance our work in this area.

For my part, I have discussed disarmament and non-proliferation with top leaders in key countries, including the Russian Federation and the United States. Earlier this month, I welcomed the commitment by President Medvedev and President Obama to fulfill their disarmament obligations under Article



**UN Secretary
General Ban
Ki-moon**

VI of the Treaty on the Non-Proliferation of Nuclear Weapons, and to rapidly pursue new and verifiable reductions in their strategic offensive arsenals by replacing the Strategic Arms Reduction Treaty with a new, legally-binding treaty.

I am also encouraged by their efforts to overcome differences related to the deployment of missile defenses. And I welcome their commitment to further strengthen the

NPT and the international regime for the non-proliferation of weapons of mass destruction. As depositary of the Comprehensive Nuclear-Test-Ban-Treaty, I am particularly pleased at President Obama's commitment to work for U.S. ratification of the Treaty.

But the nuclear powers must go further, and make the most of next year's NPT Review Conference. I have called for negotiations on a fissile material treaty to begin in a year or two. And we must undertake new efforts to limit conventional weapons and strengthen our protections against the proliferation of WMD.

There are many significant challenges on the road to achieving a nuclear-weapon-free world, including several that have scientific dimensions, such as verification, the disposition of fissile material from dismantled weapons, measures to prevent the further development of weapons, and improvements in physical security. The Pugwash Conference has a critical role to play in meeting these challenges, I offer my best wishes for the success of your gathering, and look forward to learning about its results.

*Delivered by Mr. Sergio Duarte,
UN High Representative for Disarmament Affairs*

58th Pugwash Conference on Science and World Affairs *Peace, Justice and Nuclear Disarmament*

April 17–20, 2009 • The Hague, The Netherlands

Program

Thursday 16 April

Afternoon/
evening

Arrival of participants. Registration

Evening

Walk-in buffet dinner

16:30-19:00 *Working Groups meet in parallel sessions*

19:15-20:15 *Keynote Speech*

Chair: Dr. Berma Klein Goldewijk
(The Netherlands)

Mr. Luis Moreno-Ocampo, Prosecutor of the
International Criminal Court (Argentina)

Followed by Q&A

Friday 17 April

08:30

Registration

9.30–10.00

Conference Opening: Welcome Addresses

Amb. Jayantha Dhanapala, Pugwash President
(Sri Lanka)

Prof. Paolo Cotta-Ramusino, Pugwash Secretary
General (Italy)

Prof. Georg Frerks, Pugwash Netherlands Chair
(The Netherlands)

10:00–19:30

*Symposium on
Next Steps in Nuclear Disarmament*
Multiple speakers

19:45-22:45

Welcome Reception in the Gemeentemuseum

Welcome by Mayor Van Aartsen

Visit to the galleries and light buffet dinner

20:30-21:30

Dinner

21:30

Film: The Strangest Dream (optional)
90 minute film by National Film Board of
Canada on Joseph Rotblat and Pugwash

Sunday 19 April

09:00-11:30

Plenary Session: Prospects for Afghanistan

Chair: Paolo Cotta-Ramusino (Italy)

Hon. Mirwaiz Yasini, Deputy Speaker of the
Wolesi Jirga (Parliament) (Islamic Republic of
Afghanistan)

Hon. Shukria Barakzai, Member of Wolesi Jirga
(Parliament) (Islamic Republic of Afghanistan)

Amb. Robin Raphel, Former US Assistant
Secretary of State for South Asia (USA)

Comments by:

Amb. Humayun Khan (Pakistan)

Amb. G. Parthasarathy (India)

Amb. Aziz Ahmed Khan (Pakistan)

Amb. Mahmood Moosavi (Iran)

Dr. Peter Jones (Canada)

Dr. Alexander Nikitin (Russia)

11:30-12:00

Coffee break

12:00-13:00

Working Groups meet in parallel sessions

13:00-14:30

Lunch

11:00-11:30

Coffee break—conference photo

11:30-12:30

Plenary Session: Report of the Secretary General
Prof. Paolo Cotta-Ramusino (Italy)

14:30-16:30

Working Groups meet in parallel sessions

16:30-17:00

Coffee break

12:30-14:00

Lunch

17:00-19:00

Working Groups meet in parallel sessions

14:00-16:00

Working Groups meet in parallel sessions

19:30

Dinner

16:00-16:30

Coffee break



Hon. Sherry Rehman and Amitabh Mattoo.



Luis Moreno-Ocampo, Chief Prosecutor of the International Criminal Court.

Monday 20 April

- 09:00-11:00 *Working Groups meet in parallel sessions*
- 11:00-11:30 Coffee Break
- 11:30-12:30 ***Plenary Session: Dorothy Hodgkin Lecture***
 Hon. Sherry Rehman, Former Federal Information Minister (Pakistan)
 Introduced by Prof. Amitabh Mattoo (India)
- 12:30-14:30 ***Luncheon Speech***
 Amb. Rogelio Pfirter, Director General of the OPCW (Argentina)
 Introduced by Amb. Sergey Batsanov (Russia)
- 14:30-15:30 ***Plenary Session: Presidential Address***
 Amb. Jayantha Dhanapala, Pugwash President (Sri Lanka)
 Introduced by Dr. Jeffrey Boutwell, Pugwash Executive Director (USA)
- 15:30-16:00 Coffee Break
- 16:00-18:00 ***Plenary Session: Conflict resolution, Peace building and Justice*** (organized in cooperation with Oxfam Novib & Cordaid)

Chair: Mr. Sverre Lodgaard, Pugwash Executive Committee (Norway)

Justice Richard Goldstone, Judge, Previous Chief Prosecutor of the United Nations International Criminal Tribunals for the former Yugoslavia and for Rwanda (South Africa)

Hon. Ruud Lubbers, Minister of State, Former Prime Minister (The Netherlands)

Prof. Paolo Cotta-Ramusino, Pugwash Secretary General (Italy)

Hon. Joris Voorhoeve, former Dutch Minister of Defense, Council of State, Chair Oxfam-Novib Netherlands (The Netherlands)

18:00-18:30 ***Closing of Conference***

58th Pugwash Conference on Science and World Affairs *Peace, Justice and Nuclear Disarmament*

SYMPOSIUM ON “NEXT STEPS IN NUCLEAR DISARMAMENT”

Friday, 17 April 2009

Program

9.30–10.00	<i>Conference Opening: Welcome Addresses</i> Jayantha Dhanapala, President, Pugwash Conferences Paolo Cotta-Ramusino, Secretary General, Pugwash Conferences Georg Frerks, Pugwash Netherlands	15.15–16.30	<i>The Non-Nuclear Weapons States and Nuclear Disarmament</i> Speakers: Dr. Wa’el Al Assad (League of Arab States), State Secretary Espen Barth-Eide (Norway), Amb. Reza Ziaran (Iran) Q&A, Comments
	<i>Symposium</i> <i>Chair: Amb. J. Dhanapala (President, Pugwash)</i>	16.30- 16.45	Coffee break
10.00–11.15	<i>Nuclear Disarmament and the Survival of the NPT</i> Speakers: Amb. Sergio Duarte (UN High Representative on Disarmament) Amb. Hans Blix (former D.G. IAEA; President WMD Commission) Q&A, Comments	16.45–18.30	<i>Nuclear Disarmament Beyond the NPT</i> Speakers: Jennifer Allen Simons (Canada), Amitabh Mattoo (India), Lt. Gen (R)Talat Masood (Pakistan), Amb. Jeremy Issacharoff (Israel), Sverre Lodgaard (Norway), Rebecca Johnson (UK), Amb. Nabil Fahmy (Egypt) General Q&A, Comments
11.15–12.15	<i>Restarting US-Russian Nuclear Disarmament</i> Speakers: Amb. Grigory Berdennikov (Ambassador at Large Ministry Of Foreign Affairs of the Russian Federation), Dr. Lynn Eden (Stanford University) and Dr. Sergei Batsanov (Pugwash Geneva) Q&A, Comments	18.30–19.30	<i>A New Prospect for Nuclear Disarmament</i> Speaker: William Perry (former US Secretary of Defense), Concluding remarks by Maxime Verhagen (Minister of Foreign Affairs, The Netherlands) presented by H.E. Pieter de Gooijer
12.15 –14.00	Lunch		
14.00–15.15	<i>Nuclear Disarmament for all Nuclear Weapons States</i> Speakers: Amb. Hu Xiaodi (China) , Sir Malcolm Rifkind (UK), Comments by Gen (R) Hugh Beach (UK), George Le Guelte (Fr) Q&A, Comments		

58th Pugwash Conference on Science and World Affairs *Peace, Justice and Nuclear Disarmament*

April 17–20, 2009 • The Hague, The Netherlands

PRESIDENTIAL ADDRESS — JAYANTHA DHANAPALA

It is an honour and privilege to deliver what is described as a “Presidential Address”. In fact, that is a rather pompous title and rather grandiose for an organization that is a consensual, democratic, and transparent body. The distinction between the office bearers and foot soldiers is certainly not anything as great as elsewhere. So this is not a “State of the Union” speech, but it allows me to talk about the strong linkages between the campaign for nuclear disarmament and the Pugwash movement.

Now all of you have seen the film “*The Strangest Dream*” and know how it all began with Joseph Rotblat’s dramatic leaving of the Manhattan Project, the Russell-Einstein Manifesto, the establishment of Pugwash in 1957 with the first Pugwash conference, and the growth of Pugwash into a significant movement. I would like to quote the citation of the Nobel Committee of Norway which said that, “The Pugwash Conferences are founded in the desire to see all nuclear arms destroyed and, ultimately, in a vision of other solutions to international disputes than war. The Pugwash Conference in Hiroshima in July this year declared that we have the opportunity today of approaching those goals. It is the Committee’s hope that the award of the Nobel Peace Prize for 1995 to Rotblat and to Pugwash will encourage world leaders to intensify their efforts to rid the world of nuclear weapons.” Let me repeat that last sentence: “It is the Committee’s hope that the award of the Nobel Peace Prize for 1995 to Rotblat and to Pugwash will encourage world leaders to intensify their efforts to rid the world of nuclear weapons.”

So it was the aspiration of the Nobel Peace Prize Committee that our example can inspire world leaders into doing something that we have advocated throughout our history. Now they were probably thinking about the missed opportunity that had taken place approximately ten years earlier in 1986 in Reykjavik with Gorbachev and Reagan and the historic summit; when the world missed that opportunity of being nuclear weapon free by the barest minimum. But we did, as you know, come out with an historic statement, that: “a nuclear war cannot be won and should never be fought.” This has been a classic state-

ment that has helped set a certain benchmark for US-Russian relations and indeed we have been fortunate not to see a nuclear war being fought, certainly by those two countries, which together own, as we have been told many times in this Conference, 95% of the 25,000 nuclear warheads around the world, 10,000 or so of them operationally deployed.

Well, despite this great compliment to us, we must be honest. The Pugwash Conferences are not the only body that has advocated nuclear disarmament and that has worked tirelessly for the elimination of nuclear weapons. We have a number of NGOs, movements, and individuals, who have also been honoured for the same reason. I go from here to Helsinki, where the IIPNW, our fellow organization, which also won a Nobel Peace Prize, will be holding a meeting. I think this is important as we are at a stage where we must have synergy amongst all our organizations, so that together we can achieve the great lofty vision of a nuclear weapon free world.

Although we have had missed opportunities in the past, we now have a unique opportunity that has arisen from the radical change in the leadership of several countries, including most significantly the USA. During the presidential campaign, then-Senator Obama had the occasion at a Washington media “roast” to deny the rumour that he was born in a manger! I can here deny that President Obama is a secret member of the Pugwash movement! But we do have a Pugwashite in the White House in our good friend John Holdren, and we know that John’s convictions throughout his whole Pugwash career, (and he made the speech in Oslo in receiving the Nobel Peace Prize on behalf of Pugwash) will, I’m sure, be with him in the advice he offers the Obama administration. I will have the pleasure of meeting John in Washington at the end of this month and I will convey to him the way in which this conference once again reinforced our own commitment to the cause of a Nuclear Weapon Free World (NWFW).

We have had, of course, over the years a number of commissions that have helped to analyze the situation, and set the agenda, including a verification agenda, for a NWFW. Early in my diplomatic career, there was the



William Perry and Jayantha Dhanapala.

Palme commission and the Canberra Commission, on which I had the privilege of serving together with Sir Joseph Rotblat and Robert MacNamara, and more recently the WMD commission chaired by Dr. Hans Blix, which will meet again at the end of this month in Washington DC. We know that there is another Australian/Japanese commission with another group of people to come out with yet another report. And then we have heard that the Global Zero are also putting together a commission that will address the agenda of global zero.

With all respect to all these organizations that are planning to come out with commission reports, I think we have had a great deal of analysis and a great deal of agenda setting. What we need now, before this opportunity is lost, is action. A seizing of this opportunity before, once again, we let things off. Now Pugwash has been ahead of the curve for most of the period, but what do we do when we are behind the curve? Well, we can push the curve a little bit, to see that it moves faster, but we must also reflect, amongst ourselves, what strategies we can adopt best of all in order to revitalize the nuclear disarmament campaign, thinking outside the box, and looking for other routes, other than the conventional routes that we have pursued.

As former US Secretary of Defence Perry told us, there are forces of reaction even in the US and we cannot be

sure that, for example, the CTBT will be ratified in the US Senate. Now the campaign that began in 2007 with the Wall Street Journal op-eds by the “Four Knights,” repeated in 2008, and now taking organizational form with the University of Stanford and the Hoover Institute behind it, has gathered momentum. There is also the Global Zero, and we are very privileged to hear a detailed description of its activities from Dr. Jennifer Simons, who was with me at the launch held in Paris. Amongst these parallel movements that are gathering momentum, “the global public good of the highest order” that UN Secretary-General Ban Ki-moon spoke of in October last year, is in fact this NWFW. Therefore, the more who join the movement, the better it is for us.

But we must also be careful about the different directions in which we might go as we approach the goal. We have all been inspired and encouraged by the Obama statement of April 1st, and by the Prague speech a few days later. In sum, President Obama’s agenda includes the ratification of the CTBT by the US hopefully during the course of this year. That really involves getting 6 to 7 senators from amongst all those ‘Doubting Thomases’ who were there the last time to change their positions. Vice-president Joe Biden himself, a creature of the Senate, is going to be in charge of the campaign. I think they will need a lot of help. And so it is up to us as NGOs and other

groups to try to meet, and particularly those of you who are US-based, some of the senators in order to persuade them that it is important that they should support this campaign so that we can have the ratification by the US, which began the process of the CTBT, accomplished by the end of this year; or certainly by the May 2010 NPT Review Conference.

But I hear disturbing stories about the approval of the Reliable Replacement Warhead (RRW) as a kind of barter-deal for the ratification. I heard a disturbing statement from the former Foreign Secretary of India Shyam Saran who said that it could not be assumed that India would follow the US by signing and ratifying the CTBT because they would want it linked to a nuclear disarmament programme. So we have not only got to work with the US Senate, but we have to work with the other 8 countries that have still not signed or ratified. You know who those countries are. So now let us get to the task, in our own way, try to use our time and energy to ensure that the CTBT is in fact entered into force. We are sorry not to have had Tibor Toth (Executive Secretary of the Preparatory Commission of the Comprehensive Nuclear-Test-Ban Treaty Organization) here to tell us the level to which he has brought his organization and his verification machinery so that the entry into force would be a very significant process.

The other issue that President Obama set out in both his statement on April 1st as well as in his speech in Prague, are US-Russian relations. And we know that these relations have been left in abeyance for far too long. There was, I think two years ago, the agonized speech of President Putin in Munich which complained about the neglect of Russia, a great power, a great nuclear weapons state, a permanent member of the UNSC, which has not been paid due respect. Instead, NATO was being expanded right to its doorstep and a missile defence programme was being erected in countries very close to it, with some provocation, although various excuses were given. I'm glad now that there is a sea of change in the relationship between the US and Russia. And I hope the statement that emerged on the 1st of April is only the beginning of a process. Yet again we are happy that people whom we know – Rose Gottemoeller and others in the US administration - and those in the Russian foreign ministry – are going to engage in this negotiating process as soon as possible. So we return to the old negotiating process of bilateral disarmament agreements, trying to bring down numbers. But in this bean-counting exercise, we hope we don't lose sight of the spirit of disarmament and the goal of a NWFW.

Because we may go down to 1000, we may go down to 500, but what beyond that? This is not a permanent resting place. And so we must ensure that the negotiators are also aware of that.

The 3rd item on the Obama agenda is the FMCT. And he talked about the importance of moving matters in the Conference on Disarmament - and God knows matters need to be moved in the Conference on Disarmament. But it is not enough to talk about fissile material cut-offs because there are also existing stocks, which concerns some people, and which concern us. There will also be the Nuclear Posture Review that will set out the doctrine. All this will have to be achieved before the NPT Review Conference next year if that conference is to succeed. I had the privilege of presiding over the 1995 NPT Review and Extension Conference, and then from the UN I was happy to see the 2000 Review Conference succeed with the adoption of the "13 Steps." Fortunately I was gone when the tragedy of 2005 took place.

But now in 2010 I will be there, I hope, in my capacity as President of Pugwash to see the treaty safeguarded, strengthened, and carried forward. Yet I think it was Rebecca Johnson who told us here that perhaps this is now an outdated game. Because we hear a myriad of promises before a Review Conference, if the Conference succeeds in papering over the cracks and coming out with a final document, everybody feels very pleased with themselves, and goes back to their country saying they have had a successful conference. And of course if it fails, once again, they go back but nothing changes, it will be business as usual. And this is why I say that we need to have something very much more than the ritualistic exercises that we have seen. We have to see whether there can be a change in the game. And for that we need out-of-the-box thinking.

We need to attack on the role of security doctrines and what place nuclear weapons occupy there. It was a fundamental shift during the Bush-Cheney administration that caused alarm among all of us, for the use of nuclear weapons that was predicated. Likewise, in NATO, and there are many countries in NATO today, more and more whose citizens are members who are represented in Pugwash. We need to ensure that there is a revision of these doctrines so that the salience of nuclear weapons in security is reduced considerably. Because it is only after that it will be possible for these weapons to be eliminated. We must also support those countries within NATO who want to get rid of nuclear weapons on their side. Now we have heard very important statements from countries like Germany recently, which need to be supported by us

because it's extremely important.

Some years ago there was a book that estimated a cost of the manufacture of nuclear weapons, "Atomic Audit" it was called, and I forget the figures, but phenomenal figures were quoted for the actual cost of nuclear weapons. Today the nuclear weapons budget is estimated at US\$52 billion. That is a significant chunk of the US budget at a time of the international financial meltdown. So nuclear disarmament makes eminent financial sense as well as making eminent security sense. And this is something that we must continue to urge with both the US as well as with other nuclear weapon states.

Let me go on to the NPT of 2010, which we must all prepare for. And I propose being present at the PrepCom at the first week of May with Paolo (Secretary-General Cotta Ramusino) and Jeffrey (Executive Director Boutwell) in order to see what we ourselves can offer as Pugwash to assist the process. There will, of course, be a number of issues that will agitate the minds of the NNWS as well as NWS. The previous PrepComs have largely been devoted to procedural issues and there is no one more competent to talk about it than Rebecca Johnson.

But I think that there are a number of issues that we have to think about which concern the work that Pugwash has been doing already, and which you heard Paolo talk about when he presented his report. I refer to Articles I and II, and particularly to Article III, but also the fundamental question of Article IV on the peaceful uses of nuclear energy, which from its inception has been assured as an inalienable right. And now, efforts are being made to circumscribe the exercise of that right for reasons of realpolitik. For a number of countries that legally renounced nuclear weapons possession, one of the attractions was the opportunity of using nuclear energy for peaceful purposes, not only for power, but also for agriculture and medicine. All of them are connected to the agenda for a developing country, so that the 'bottom billion' in the world were looking forward to the use of nuclear energy and to assistance under projects from the IAEA. And now they are being told, "Hold on chums, there are some problems, we need to be sure that somewhere in the hidden recesses of your mind, you are not going to go for nuclear weapons and we need to be assured of that." And so countries even in good standing in the NPT, like South Africa and Brazil, are being told to join a multilateral fuel cycle arrangement where you can have nuclear fuel whenever you want to, and reactors whenever you want to. The governments of these countries ask 'Well, what criteria do we need to satisfy, apart

from financial payment to get this?' And then you begin to see the subtext, and the fine print of the arrangements, which make it very clear once again that you will have certain countries dominating the decision-making, and making it extremely difficult for the countries of the South to have access to nuclear energy.

So no wonder that there is a great deal of suspicion, animosity, and concern relating to this new arrangement regarding Article IV. And on Article VI, of course, I don't think we can expect to have nuclear disarmament within the context of the NPT as Rebecca said. I will talk about this later on when I discuss other routes that we may pursue. There is of course a new issue being brought up in regard to Article X, and that is as a consequence of a decision by the DPRK to withdraw from the NPT and the fact that some countries would like to maintain the fiction that the DPRK is still a member of the NPT that occasionally goes off on a weekend and tests a weapon. We have to be very realistic about it. Article X cannot be converted into a jail to keep NNWS unwillingly within the NPT permanently. It is true that we have to find ways and means diplomatically, as the UK very successfully did in the case of Libya, to contain a potential break out.

It is true that this takes time, takes effort, but that is precisely what all of us are trying to do here in Pugwash – the efforts that Pugwash are making in the DPRK, the diplomacy that we are engaged in with regard to Iran, which the US National Intelligence Estimate has told us is very far away from developing a nuclear weapon. And so there is a lot that needs to be done through diplomacy, not by using a sledgehammer. We saw where a sledgehammer got Mr. Bush. Therefore, we should look into what we can do and here the scientific expertise of Pugwash must be utilized. What should we do with the existing stock, running into 1370 tonnes of HEU if you do not count what is being set aside for downblending? What do you do about the separated Pu of 244.9? You have to find solutions. Whether it is by encouraging countries not to enrich to the high levels that are being contemplated or whether it is to encourage manufacture of nuclear proliferation resistant technology, new kinds of reactors for example – it is an area in which the scientists in Pugwash can perform a huge service. I suggest that we try to harness the energies of all these countries together. We can have a task-force to propose this. We can produce scientific papers that will help to change the thinking of a number of developing countries, which will find our proposals more acceptable, more credible, and more trustworthy. So let us move in that direction.

This current conference is another step in a long-standing connection between Pugwash and the campaign to eliminate nuclear weapons. But the question we must honestly ask ourselves is how much closer are we to the goal? Is it a mirage? There have been in the past so many broken promises, so many unfulfilled bargains, so many false dawns. Alva Myrdal wrote many decades ago about *"The Game of Disarmament."* So are we going back to the old order, the pre Bush-Cheney order, with the bean-counting in US-Russian negotiations with regard to nuclear disarmament? All this might sound cynical, but I think our predecessors in Pugwash were always cautiously optimistic. They always advised other options than the conventional one, there were always other plans that they proposed.

We have heard warnings, as I said, about the forces of reaction within the US and other NWS. They are not going to fold their tents and go away. The laboratories of Los Alamos, Sandia, and Livermore are not going to give up. They were once fed the bait of the stockpiles stewardship programme. What will they demand now? So we have to be alert to all aspects of nuclear weapons programme. Some of you may have read an article that I wrote in some concern about what might come out of the Medvedev-Obama meeting of 1st of April. And there I quoted two young writers in the US – Darwin Bond-Graham and Will Parish – who published an op-ed piece in *Foreign Policy In Focus* at the beginning of this year. And they talked about the concept of anti-nuclear nuclearism. Let me quote just the first paragraph: "Anti-nuclear nuclearism is a foreign and military policy that relies upon overwhelming US power, including the nuclear arsenal, but makes rhetorical and even more substantive commitments to disarmament, however vaguely defined. Anti-nuclear nuclearism thrives as a school of thought in several think tanks that have long influenced foreign policy choices related to global nuclear forces. Even the national nuclear development labs in New Mexico and California have been avid supporters and crafters of it." So beware of this anti-nuclear nuclearism and the nice phrases about a NFWF that are in fact not mirrored by the actions that are taken. Watch closely for budget allocations. There had been an attempt, at the end of last year and subsequently after the Obama administration came in, to have the fiscal impetus package include some money for the nuclear weapons programme. Fortunately that was discovered by some alert people and it was removed. I think all of us have a duty to ensure that anti-nuclear nuclearism does not win the day.



Peace Palace, The Hague.

And so we must therefore look for other routes. One route that has been proposed is an NPT amendment conference even though we know that that route is unlikely to succeed. Those who advocate it point to the fact that the 1963 Partial Test Ban Treaty amendment conference, which was well in motion and led by the great Alfonso Garcia Robles of Mexico, was one of the elements that provoked the NWS in to rethinking their opposition to the CTBT.

There are many other routes. There is the possibility of reconvening the nuclear weapons issue and its legality with the ICC here in The Hague. We know that the decision that came out in 1996 was not as clear-cut and unambiguous as we would have liked, or as some of the judges would have liked. But we have to approach this carefully. I know that some countries have been thinking about it. It all depends on the composition of the Court and on the framing of the question. But this is another route we can adopt.

Then there is the UN's Secretary-General's route. I had the privilege of being present in New York on the 24th of October last year, when Ban Ki-moon, who many people accused of not being very sympathetic to us, made the

most extraordinary speech of any UN Secretary-General that I have known. He began of course by talking about a world free of nuclear weapons, which would be a global public good of the highest order, and then went on to talk about a 5-point proposal. Firstly, he urged all NPT parties to fulfill their obligations under the Treaty and to undertake negotiations on effective measures leading to nuclear disarmament. It is in that context that he asked them to consider negotiating a Nuclear Weapons Convention, referring to a draft that was on the table of the UNGA, co-sponsored by Costa Rica and Malaysia. He went on, of course, to make several other points in his 5-point proposal, which I am sure that many of you are familiar with. But one that is relevant to our Conference here in The Hague is his initiative relating to the rule of law. He talked about the need to bring so many of the disarmament treaties into force, including the CTBT, but also mentioning the many nuclear weapon free zones, treaties that have not entered into force because some of those have not been signed by the NWS. I am happy in this context to note that the treaty with which I was personally associated, the Central Asian Nuclear Weapon Free Zone, did come into effect because of the various countries signing and ratifying the treaty not so long ago. He also talked about accountability and transparency and complementary measures that are needed. Now this is the furthest that any UN Secretary-General has gone in calling for a NWWF. I hope he survives.

There is also the proposed Arms Trade Treaty even though it is not directly linked to the agenda of nuclear weapons. We have to encourage treaties like this, or movements towards signing a treaty like this, because according to the SIPRI Yearbook 2007, global military expenditure was US\$1,339 billion, which works out roughly as \$202 per person. At a time of the international financial crisis, we would do well to look at how much of this expenditure is really necessary to maintain security, and how much of it is profits made. Just as Wall Street made a profit from Main Street, so are the arms manufacturers making profits at the expense of those people in developing countries who fight their wars and have no other means than to buy these arms.

So we have to not only engage in our task of nuclear disarmament and disarmament in general by rebooting the

system, but also by looking at how we reconcile unequal power and asymmetrical arms control. Because the framework in which we have to work in the world today is not just a framework of nation-states, 192 of them in the UN. It is also a framework in which the nation-states have to work with non-state actors. There was a proposal, during this conference by a Pakistani professor, who suggested that we should look into how we can have a dialogue with non-state actors, the dialogue that Paolo has successfully conducted in many regions of the world where there are conflicts. Obviously we cannot have a dialogue with every

one of them and not all of them will be interested, but with those who are, is there some way in which Pugwash can engage in a dialogue?

There is also the North-South problem, which is going to be aggravated. The Doha Round was one of its battlefields. There are new emerging economies in the South – China, India, South Africa, and Brazil – the G20 is one arena in which they can work together with the North. But are we going to lose this opportunity once again? And finally,

of course, there is always the divide between the NWS and the NNWS. That divide will always be an impetus for countries that want to be NWS, as long as nuclear weapons are invested with the political power and significance.

And so we must – all of us – reflect once more on the statement in the WMD Commission Report that said, “So long as any state has such weapons, especially nuclear arms, others will want them. So long as any such weapons remain in any state’s arsenal, there is a high risk they will one day be used, by design or accident. Any such use would be catastrophic.” This echoes words that have been in other statements of Pugwash. It repeats, in different language, what the Pugwash movement has said from its inception. But it is not only by words that we can counter the machinations of the nuclear lobbies of the world, it is by actions. And I conclude by appealing to all of you to do what you can, to exert your influence, to use your scientific expertise in order to build a bulwark against nuclear weapons. So that in our lifetime, if not in our lifetime then in President Obama’s lifetime, we can achieve our vision of a NWWF.

Thank you.

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58th Pugwash Conference on Science and World Affairs

Peace, Justice and Nuclear Disarmament

April 17–20, 2009 • The Hague, The Netherlands

ADDRESS BY SECRETARY GENERAL PAOLO COTTA-RAMUSINO: *Disarmament and Non-Proliferation*

I. The control of nuclear weapons so far

It is almost 65 years since the development of the first nuclear bomb, and yet only twice have nuclear weapons been used in war, namely Hiroshima and Nagasaki. We have been spared the horror of a large nuclear war during a time when more than 130,000 nuclear weapons were built. This is a very unusual in the history of mankind: so many weapons built, never to be used. Why has this happened? First, the leadership of the two nuclear superpowers and of the smaller nuclear states behaved as rational decision makers, as far as the control of nuclear weapons and the decision not to initiate the use of such weapons were concerned. In other words, *deterrence* worked. But we have to recall that the Cuban missile crisis of 1962 and others lesser crises (such as 1973) pushed the risk of a nuclear confrontation very close to the abyss. Moreover, the system of nuclear deterrence worked and still works on the basis of the capability of each nuclear superpower to react promptly if they receive information that they are undergoing a nuclear missile attack from their opponent. This is based on the strategy that each nuclear superpower should react against the opponent before its own nuclear missiles are destroyed while still on the ground (or in their silos). With this system, known as nuclear reaction alert or “launch on warning,” we have had numerous cases of false attack, and hence several cases involving a high risk of accidental nuclear war. Thus, among the factors that spared mankind the horror of a nuclear war, one also has to include *good luck* for not taking wrong decisions at critical moments, and keeping technical mistakes and failures ultimately under control.

We know that the probability of having a catastrophic event depends on the number of critical events: the higher the number, the higher the probability. Thus, the probability of a nuclear conflict depends clearly on the number of crises that could induce a nuclear war and on the number of technical failures of the nuclear control systems. In turn, these numbers depend crucially on the

number of existing nuclear arsenals, the number of nuclear weapons in those arsenals, and on the number of people who have access to the nuclear button.

In avoiding a nuclear catastrophe we have been helped by the fact that, contrary to the expectations of the early nuclear age, most nations have remained non-nuclear (in other words, *proliferation* was contained).

II. The non-proliferation regime

The basic document that helped contain the spread of nuclear weapons is the NPT [Non Proliferation Treaty] of 1968, which is generally considered to be the cornerstone of nuclear stability. The NPT distinguishes between Nuclear Weapon States (NWS) [States who conducted a nuclear test before 1967] and all the other states that, in order to be a member of the NPT, are classified as Non Nuclear Weapon States (NNWS). The treaty has basically three legs:

- **The Principle of Non Proliferation:** The NNWS refrain from acquiring nuclear weapons or from seeking the control of nuclear weapons, while the NWS agree not transfer nuclear weapons or parts of them to others. Moreover, all Parties to the Treaty should refrain from transferring [un-safeguarded] fissile material to NNWS
- **The Principle of Disarmament:** Parties to the Treaty, and particularly the NWS, commit themselves to negotiations in good faith aimed at achieving at an early stage nuclear disarmament and the cessation of the nuclear arms race
- **The Principle of Access to Peaceful Nuclear Technology:** All Parties to the Treaty have the right to develop and be assisted in the development of nuclear energy for civilian purposes

The Cold War ended with a significant effort in the direction of nuclear disarmament. Between the second half of the 1980s and the beginning of the 1990s, the US and Russia dramatically reduced the size of their arsenals.

Moreover, for some time around the end of the Cold War no non-nuclear state decided to acquire nuclear weapons, leaving the set of countries possessing nuclear weapons unchanged, namely the permanent five members of the U.N. Security Council and – unofficially – Israel. The Chernobyl accident in 1986 induced a negative picture of nuclear civilian activity, and for some time interest in this type of energy decreased worldwide, as did interest in proliferation problems associated with the nuclear fuel cycle and the spread of nuclear energy technology. The NPT itself was extended indefinitely in 1995, contributing to what seemed to be a bright prospect for nuclear non-proliferation and disarmament.

III. Managing disarmament and non-proliferation in the last two decades

In the mid-1990s, a significant shift occurred in the condition of the three legs of the NPT. First, Russia and the US basically froze their disarmament agenda, with the last signed treaty leaving some 1,700-2,200 deployed strategic weapons per side and an unspecified number of tactical, as well as other retired—but not destroyed—nuclear weapons per side. Moreover, the other (smaller) nuclear powers – France, the UK and China – stayed clear of the complete nuclear disarmament threshold. The total number of functioning nuclear weapons stayed and remains in the range of 25,000. In 1998, two new declared (but unofficial from the standpoint of the NPT) nuclear powers arose, namely India and Pakistan. And later, for the first time, one country exited the NPT and tested a nuclear weapon (North Korea).

Moreover, some remarkable initiatives—such as the establishment of the Comprehensive Test Ban Treaty (CTBT) to prohibit nuclear tests and hence hinder the development of new types of nuclear weapons—basically failed to become a reality, thus contributing to the feeling that the era of nuclear disarmament was over. Some other important initiatives (the so called 13 steps¹) aimed at reinvigorating nuclear disarmament were discussed and approved at the 2000 NPT Review Conference, but were not even mentioned in the 2005 Review Conference, which ended without a final document. Finally, an interest in civilian nuclear energy returned in various parts of the world. Questions about the possibility of an effective control to prevent covert utilization for military purposes of civilian technology became more and more relevant; the International Atomic Energy Agency (IAEA) in Vienna elaborated stricter constraints to be applied to countries developing civilian nuclear programs, notably the so-

called additional protocol². These stricter constraints have been received with mixed responses. Many critical countries (i.e., critical from the viewpoint of proliferation risks) declined to sign the additional protocol. A specific country (Iran) has been under extensive scrutiny and has been accused of developing an indigenous fuel cycle with the undeclared purpose of taking steps forward in the direction of building nuclear weapons.

In article VI of the NPT, explicit mention is made not only to nuclear disarmament as a final goal, but also to pursuing negotiations leading to an early cessation of the arms race [among nuclear powers], as an intermediate step. However, in the past two decades we have seen worrisome signs of the unraveling of the arms control regime as we know it. The cessation of the ABM Treaty, the threat by Russia of withdrawal from the INF (Intermediate Nuclear Forces) Treaty as a response both to the new proposed deployments of missile defense systems in Europe and to the increased intermediate range missile capabilities in many Asian countries, all present a gloomy picture of the status of the arms control regime.

It is thus clear why the NPT increasingly has been considered to be in critical condition.

No country supports nuclear proliferation. No government is buying the argument that “more is better” when speaking about nuclear weapon states, but individual countries may decide that *they* need to possess nuclear weapons. Moreover, countries differ in the strategy for enforcing non-proliferation, and in their individual perceptions of the threat posed by different cases of proliferation.

Countries may decide that they want to acquire nuclear weapons for two basic reasons:

- The presence of an external threat, especially, but not exclusively, when the external threat is represented by nuclear weapon states (whether official or de facto).
- The prestige and the power that is associated with nuclear weapons.

Up to now, the NPT has done a remarkably good job in inducing countries to refrain from the acquisition of nuclear weapons by addressing, albeit in an imperfect way, both of the motivations mentioned above. The principle of non-proliferation in the NPT helps to create an environment partially free from nuclear threats, while the principle of disarmament aims at decreasing both the relevance of nuclear weapons and the prestige associated with their possession. The NPT, as is well known, discriminates between haves and have-nots. This discrimination was



Paolo Cotta-Ramusino and the Dutch Pugwash Group.

meant to be temporary, as it was always understood that the only way to move towards a stable equilibrium is to resolve the distinction between haves and have-nots by eliminating nuclear weapons, namely by making them illegal (as in the case of chemical and biological weapons). Progressing towards such stability is tantamount to having a manifest, unequivocal and sustained progress in nuclear disarmament.

This lack of disarmament initiatives is not the only way in which the non-proliferation regime has been endangered by the nuclear weapon states. One of the most significant problems facing the NPT is that some nuclear weapons states, most notably the United States, as well as some other countries, have developed a strategy wherein they have sidetracked the NPT, while paying formal tribute to its role. Their fight against nuclear proliferation took then a more unilateral approach and included the following points:

1) Nuclear proliferation has been seen as a threat to the present system of international relations, but serious differences have been considered depending on who is in fact acquiring or attempting to acquire nuclear weapons. There were very bad (hostile) nuclear proliferators and others who were considered not so bad. The relatively good ones (like Israel and India) of course have been treated very differently from the so-called bad ones.

2) Progress in nuclear disarmament has been not deemed to have de facto an influence on the decision of another country to acquire or not to acquire nuclear weapons. Token reference has been made to previous achievements in nuclear disarmament, but with little or no consequence on the political decisions that are to be taken.

3) The fight against non proliferation has been primarily based on containment and repression of those countries that have been deemed to be both hostile and possible nuclear proliferators. Instruments of repression ranged from different types of sanctions to actual (preventive) war.

4) The need to control fissile material and to prevent unauthorized use by potential proliferators or non-national groups (terrorists) have been acknowledged in principle, although questions arose as to their actual position on the priority list to prevent the spread of nuclear weapons.

Let us elaborate more on the trend described above and on its consequences. One should not underestimate the degree of resentment that has been induced by this (real or perceived) unfair treatment, and the ensuing political consequences. Israel was never subjected to any pressure to renounce its possession of nuclear weapons. India and Pakistan were subjected to sanctions which were later

removed, while India in the end got the best deal—the so called US-India nuclear deal. North Korea, which withdrew from the NPT, is under severe sanctions. While we do not want to deny here that there may be serious motivations and reasonable considerations behind these unequal treatments, the overall impression is nonetheless that nuclear proliferation lost its character of being a shared ideal (or value) of the international community and instead became one of the many instruments of some partisan foreign policy. We should recall that the NPT itself was not meant to involve only countries with common foreign policy goals, but was instead an agreement among countries with different, if not antagonistic, views of the world, which agreed to some common constraints in the area of nuclear weapons.

While it is true that there is no immediate correlation between the major nuclear powers' pace of nuclear disarmament and the development of nuclear ambitions among non nuclear states, it is also true that if a general trend supporting nuclear disarmament is in place, then the global environment is less threatening to potential proliferators, and it is more difficult for countries to become nuclear without losing credibility and influence. And while the lack of disarmament may not be the immediate motivating factor for proliferation, it has nevertheless a general overall influence on allowing proliferation to develop. In other words, if nuclear powers keep telling others to “do as I say and not as I do,” there is no guarantee that this message will be listened to indefinitely.

Creating an environment where some powerful countries impose independent, autonomous non-proliferation constraints might even be considered necessary in order to effectively limit the transfer of dangerous nuclear technology and materials. One might thus appreciate a complementary role between individual countries and international institutions in the battle against proliferation (see the so called PSI or the 1540 UNSC resolution). Problems arise when the non-proliferation campaign is used as an excuse to impose sanctions or wage war against a country that is defined as *evil*, and where the main aim is not to stop proliferation, but to induce a regime change. The problems become bigger if the intervention results not in the restoration of peace and order (not to mention democracy), but in the creation of a grave situation of unrest and civil war. Even if we have no time to address the complexity of the problems related to the last Iraq war, we want to point out that, *from the point of view of nuclear proliferation*, the Iraqi war had the effect of greatly diminishing the significance of the non-prolifera-

tion issue, reducing it to a mere excuse for some other goal. Moreover, the war on Iraq sent two other sets of messages: first, that big powers can bypass international institutions such as the UN; and second, that countries much closer to reaching military nuclear capability (such as the DPRK) are punished far less than countries which are classified as “evil” yet are very far from that capability. This attitude creates an objective incentive for nuclear proliferation.

IV. The present prospect for managing non-proliferation and disarmament

Beginning in 2008 and, later on with the climate created by the new US administration, a different approach to disarmament and non-proliferation has begun to appear. A group of four famous former American high level officials published in January 2008 a well known article in the *Wall Street Journal*³ followed by groups of politicians in some European countries⁴. The general message of these political leaders has been a renewed call for nuclear disarmament. Later President Barack Obama said: “*I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons*” and he also restated clearly the goal of the NPT: “*Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy*”⁵. At present there is a clear interest in the US administration to restart dialogue with Russia over the renewal or replacement of the Strategic Arms Reduction Treaty (START) and making further progress in arms control and disarmament.

In 2010 there will be the NPT Review Conference. Expectations of the Conference are very high. Either we will have a very clear message that the three basic legs of the NPT should be rigorously respected, that disarmament should not be disconnected from the enforcement of non-proliferation, and that assistance in the development of nuclear energy should be given without undue restrictions or discrimination, but within a framework of serious and effective monitoring and control of nuclear activities or the non-proliferation regime itself will be in serious trouble. The entire international community and particularly the most powerful countries (*such as the G8*) should take steps in order to preserve the essence of the Non Proliferation Treaty, and to make it more effective and stable along the lines that have been highlighted by President Obama in his Prague speech. What follows below are a list of problems that should or could be addressed and a list of steps that

should be undertaken by the entire international community thinking ahead to the NPT 2010 Review Conference. Obviously responsibilities of the various states vary according to their involvement with nuclear programs (military or civilian). For instance, the arms reductions of US and Russia concern those two states and no one else. Still it is important that the concrete actions aimed at developing disarmament and at curbing non-proliferation be included in a framework strengthening all the obligations that lie at the basis of the NPT. All countries could and should contribute to this framework.

- Nuclear weapon states should *reduce their nuclear arsenals to the "minimum" possible level*. This line of thinking has been already made clear by Presidents Obama and Medvedev. Some of the concrete decisions in this area will be clear when a replacement of the START treaty will be discussed. Together with the reduction of the number of nuclear weapons, the reduction of the role or of the salience of nuclear weapons in military planning remains a problem. The key here is to *deemphasize the role of nuclear weapons* in military planning. Additionally, nuclear weapons should be taken *off alert*: no nuclear weapon should be launched within minutes from the notification of a missile attack. Avoiding a nuclear war by mistake is a task as important as ever.
- The development of system for *Ballistic Missile Defense* should be carefully considered. If the effectiveness of such systems is, as it appears to be, strongly doubtful, then countries should be very careful with the political and strategic implications of the deployment of such systems. It is not worth jeopardizing the reduction of nuclear weapons and the *preservation of past arms control agreements*, by deploying defensive systems of very dubious effectiveness.
- *Tactical nuclear weapons* should be clearly included in the list of nuclear weapons to be considered for reductions and/or elimination.
- Eliminated weapons should be *destroyed or dismantled*. They should not be put in deposits and left ready to be used if there should be a need to increase the nuclear arsenals.
- The problem of *nuclear weapons deployed on other countries' territories* should be carefully considered. Only American nuclear forces are currently deployed in other countries (5 European countries: Germany, Italy, The Netherlands, Belgium, Turkey). Other official or de-facto nuclear powers might in the future decide to do the

same, possibly creating very dangerous situations. It is then reasonable to forbid the deployment of nuclear weapons on other countries' territories before new dangerous situations may appear.

- NATO should deemphasize the role of nuclear weapons in its military planning and strategy.
- The entry into force of the CTBT (*Comprehensive Test Ban Treaty*) is bound to the ratification process of a list of 44 specific countries (annex 2 of the treaty). The entry into force of the treaty will give a powerful signal to the international community that no further modernization of nuclear weapons will be possible. The annex-2 countries that should sign *and* ratify the treaty are India, Pakistan and DPRK. The annex-2 countries that should ratify the treaty are: China, Egypt, Indonesia, Iran, Israel, US. The new US administration clearly supports the ratification of the CTBT but may have ratification problems, which requires a qualified majority in the US Senate. The international community should encourage the missing annex-2 countries to sign and ratify the treaty. As for the nuclear weapons states, the technical activities to ensure the reliability of the weapons in the (decreasing) nuclear arsenals should stay clear from any interference with the CTBT. This is technically possible and the reliability problems of warheads should not be used as a motivation to postpone or sidetrack the CTBT.
- Another important instrument for pushing ahead the agenda of nuclear disarmament is the FMCT (*Fissile Material Cutoff Treaty*) that will forbid the production of new fissile material for military purposes.
- Together with the two major nuclear States (US and Russia), there are also the so called smaller nuclear weapons States (*China, UK, France*). Even if the role in the global disarmament agenda of these countries is necessarily smaller than that of the US and Russia, it is apparent that all the five nuclear countries share a legal and political responsibility in promoting disarmament. None of them should be exempted from taking the appropriate steps in reducing their weapons and their reliance on them.
- Nuclear weapons states that are *not signatories of the NPT* (India, Pakistan, Israel) and the DPRK should be induced to take appropriate steps to reduce their reliance on nuclear weapons, to reduce the number of their weapons, to sign all the possible arms control agreements compatible with their status of non NPT members, to enforce strict control of the nuclear mate-

rial, to respect all the relevant agreement with the IAEA, and ultimately to join the NPT.

- Finally, the creation of new NWFZ (*nuclear weapon-free zones*) and the extension of the old ones is an important instrument in order to prevent the introduction of nuclear weapons in specific areas. The Middle East Nuclear Weapon-free zone (or M.E. zone free of weapons of mass destruction) should be constantly pursued, despite the obvious difficulties.

The possible *use of nuclear weapons for terrorist purposes* has been discussed for some time. Fortunately, up to now, no possession of nuclear weapons by terrorist groups has been detected and no terrorist group has been able to manufacture a nuclear explosive device⁶. The proper strategy to address (potential) nuclear terrorism is to reduce the relevant risks by controlling all fissile materials and eliminating the excess fissile material coming from the dismantlement of weapons (i.e., blending the excess HEU and disposing and/or utilizing the excess PU in MOX). It is also important to get the agreement of all States, irrespectively of their political orientation, in controlling any amount of fissile material produced with the strictest available safeguards. The international community is lagging behind on both counts. There remains a large amount of excess fissile material to be disposed of in Russia mainly (about 20 years after the INF treaty) and, as mentioned above, international consensus about new stringent measures to control nuclear activities is still relatively limited. Moreover, international control (by the IAEA) does not concern fissile material for military use. The causes for this state of affairs are manifold, from commercial problems that slowed the disposal of fissile material in the former Soviet Union, to the perception that stringent safeguards are at times an instrument of discrimination rather than an instrument aimed at protecting the security of every country. Failing a vigorous effort—both technical and diplomatic—to control and dispose of (when needed) fissile material, the spectrum of nuclear terrorism will be with us for some time. Again, one has to expect that the new Obama administration will be very sensitive to the argument of controlling nuclear material and protecting it against terrorist use, but the responsibility of this problem goes well beyond the US and is in fact a responsibility of the entire international community.

The final problem we have to discuss is the problem of preventing proliferation. As stated before, an effective battle against nuclear proliferation cannot be separated from clear progress towards disarmament. The other

important point to consider is that the battle against nuclear proliferation will be much more effective if the constraints required to enforce control and monitoring of nuclear activities will be seen as an impartial instrument required by the international community not as an instrument aimed at discriminating between various countries on the basis of their political or strategic orientation. As we said before, the NPT was born as an agreement between states that had a very different vision of the world. In the NPT, the “imperialistic” US cooperated with the “evil empire” (USSR) in keeping proliferation under control and, for some time, in dramatically reducing the nuclear arsenals. Different visions of the world did not impede the NPT from working. This should be true even now when the states antagonistic to the US are not as powerful as the USSR was, but may still be unlikely to yield to pressures.

Fairness and non discrimination (beyond the accepted discrimination between nuclear and non nuclear States as defined by the NPT) should be the key to the safe preservation and improvement of the non-proliferation regime.

In order to improve the collective security in nuclear affairs, there is an urgent need to revisit the entire system of safeguards and constraints on the production of fissile materials. The *additional protocol* itself (not yet adopted by a sufficiently large number of states) is probably not enough, and more stringent international control on the production of fissile material (for civilian purposes) should be established. New ideas along these lines have been put forward by the IAEA, in particular as far as the *internationalization of the nuclear fuel cycle* is concerned. More ideas are needed. IAEA membership could easily become universal, as even countries outside the NPT are members of the IAEA. There is, moreover, no objective reason why all countries that are members of the IAEA should not be induced to sign and ratify the additional protocol and other possibly more stringent measures, without exception.

The IAEA itself should be strengthened as this vitally important agency should be put in position to perform what looks to be an increasingly wider and demanding activity in the field of control of nuclear activities.

The issue of addressing *alleged violations* of the non-proliferation rules came up in the past and will most likely come up again in the future. The principle should be clear: violations should be met with sanctions aimed at reversing the behavior that originated the violations. The benefit deriving from the NPT membership (in terms of civilian nuclear programs) should be revoked from violators and the use of force could be considered. Problems arise when

sanctions are issued unfairly, when the credibility of “international justice” is low and when the definition of the alleged violations of the non proliferation rules become intertwined with other political or strategic controversies. Soft approaches may be better suited than hard pressures, though there is no general rule. Dialogue may be very difficult at times, but can go a long way, and should be the principal instrument for resolving disputes. If even a difficult case like North Korea has been put on a totally different track through dialogue and perseverance, many other cases could presumably be solved by a persistent effort towards dialogue. The effectiveness of sanctions depends on many factors; long-term large-scale sanctions, for example, are generally less effective, as countries tend to adjust to a prolonged sanction regime, and the resulting isolation fosters nationalistic attitudes and cuts off the political/economic leadership from the international arena. Moreover, authoritarian regimes tend to be strengthened by isolation and, if there is a determination to build nuclear weapons or WMD, this determination can be strengthened.

Military force has recently been used against countries suspected of violating the non proliferation rules. Leaving aside for a moment the important issue of the legitimacy of these actions, the results have altogether been rather a failure. In general terms, it may be true that some military actions slow down the construction of nuclear weapons (or WMDs) by destroying some specific infrastructure, but then what comes next? If, after the destruction of some specific nuclear infrastructure, the country is able to restart the program, then nothing has been “gained”, except possibly some time. And if military pressure on that country goes well beyond the destruction of nuclear plants, then the recent history of Iraq shows that the end result may be a situation of total chaos, where instability may spread and create an intractable problem.

We conclude this brief note by considering a specific case, namely the case of Iran, which is under various kinds of western sanctions, some of them introduced well before the Iranian nuclear controversy emerged. It is my personal belief that a soft and clever approach to the Iranian nuclear file is possible and offers the best chances of a satisfactory solution.

V. The Iranian nuclear file

The Iranian nuclear file represents probably one of the hottest topics of the last period. The origin of the problem goes back to the Iranian failure to report specific nuclear

activities. When this was disclosed, Iran agreed to suspend its nuclear activities, signed the IAEA additional protocol (but later did not ratify it), accepted IAEA inspections, and waited for a more comprehensive agreement that never came. Under the Presidency of Ahmadinejad, the suspension of nuclear activities has been revoked and the international pressure to force Iran to suspend nuclear activity has been successfully presented to the Iranian public as the last attempt of the bigger powers to arm-twist Iran and force it to be deprived of important technological developments. This nationalistic approach resonated with similar arguments developed in the last 200 years or so, when Iran faced the pressures of the United Kingdom, of Russia, and lastly of the US. On the other side, facing a wide concern about the real nature of Iranian nuclear activities, the UN Security Council required a suspension of the Iranian uranium enrichment programs (before negotiations could begin). Iran, conversely, while claiming that its nuclear activities were purely pacific and consistent with the obligations and the rights defined by the NPT, refused to suspend uranium enrichment.

The ensuing stalemate is a very risky one, as it has the potential of triggering a larger crisis with military actions that can cause a severe level of destruction and instability in the region. This instability would be connected to the already unstable situation in Afghanistan and Pakistan on one side and in Iraq on the other side, not to mention all the security and stability problems that affect the larger region ranging from Somalia to the entire Middle East. Even in the absence of any military action, a serious intensification of the sanctions against Iran could create an unbearable situation for the Iranian economy, and could induce Iran to isolate itself more from the external world. The most unlikely result of a stronger economic pressure against Iran would be the “capitulation” of Iran (however this could be defined) and/or the change of the Iranian government. The preferred solution of the Iranian nuclear file is naturally an agreement that would strengthen the non-proliferation regime. President Obama again gave a positive input to the situation by stating that the search for an agreement with Iran should be sought with talks without preconditions. Let us speculate briefly how such agreement could be shaped.

The starting point is that *the success of any negotiation requires that each party perceives the result as a victory. In this case, Iran must be convinced that it will have the possibility of acquiring economic and political gains through better relations with the West, and the West must be reas-*

sured about containing the risks of nuclear proliferation. Moreover, both parties should be interested in discussing regional issues in a constructive manner that could be conducive to a stable regional security architecture.

There is a general philosophical approach of the Iranian political leadership that should be understood. This approach deals with some “basic principles” such as “justice”, on which an agreement is possible, even if opinions can differ on conclusions and implications. A logical conclusion of the basic principles would be the rejection of nuclear weapons (NW) as an acceptable instrument of warfare. Any statement or agreement aimed at rejecting NW as a legitimate instrument of warfare should be considered positive and important. The specific nuclear problem could be fruitfully addressed if some basic principles of the NPT are recalled, assumed, and implemented. The Iranians will mainly stress the principle of “no extra discrimination,” in addition to the (already discriminating) distinction between Nuclear Weapon States and Non-Nuclear Weapon States. In particular, there is nothing in the NPT that forbids uranium enrichment. If Iran wants to enrich, the argument goes, it should be allowed to do so. On the other hand, regulating the enrichment capability on a mutually agreed basis, *strengthening the international monitoring regime and implementing multinational fuel cycle units or consortiums*, are all topics that could be easily discussed, and where a consensus should be possible. The ensuing framework should be reassuring enough for those who are concerned about the risks of Iranian nuclear proliferation. Moreover, the relationship between Iran and the IAEA is now a positive one (and could be made much better if the *additional protocol* were ratified by Iran). There should be no obstacle to continuing the review of past Iranian nuclear activities (if continuing such a review will be needed). Of course, there will be also the possibility of Iran giving up domestic uranium enrichment and fuel fabrication, if there will be an absolute guarantee of nuclear fuel supply. This is the preferred outcome for many in the west, which also makes sense economically. Iran, however, seems unprepared at this stage to agree with this viewpoint. But it should be pointed out that if future talks were focused on “enrichment in Iran yes vs enrichment in Iran not”, these talks will go nowhere. To prevent proliferation, what really matters is monitoring and international control.

The argument that monitoring cannot prevent the possibility of secret enrichment facilities is true, but it is

also a misleading argument. Nothing can exclude the existence of secret facilities in any country, unless a full-scale military occupation of that country by foreign forces and/or the destruction of its industrial infrastructure are carried out. If these apocalyptic options are, as they should be, out of the question for Iran, then one must accept that Iran already has an enrichment capability. Forcing Iran to declare that it will no longer enrich will not provide an absolute guarantee against secret enrichment facilities.

All the regional problems could be in principle discussed with Iran. All in all, Iran is interested in having its regional role recognized and wants to be treated as a legitimate, relevant regional player. The West too might be interested in seeing this development implemented, provided that some guarantees are given. For a successful result, compromises should be conceived, discriminations against specific countries and political groups should be abandoned, and all parties in the region should be induced to talk to each other with the idea of building common security. It will not be easy, but steps in this direction can be made and can have an immediate impact on the ground.

VII. Conclusions

Facing the 2010 NPT Review Conference there is the need of strengthening the three pillars of the NPT itself, which are nuclear disarmament, non-proliferation and assistance to NPT members in the development of nuclear programs for civilian purposes. Nuclear disarmament should be pursued in a clear way by all nuclear weapon states and monitoring systems should be improved for all the civilian nuclear activities, without adding further discriminations than those already present within the NPT. The development of nuclear energy should happen in a framework that guarantees and strengthens security for all, and fosters a sense of collective responsibility.

It is a clear task for the most developed countries to lead the international community towards a more cooperative and less discriminatory environment, where the danger of nuclear annihilation will be drastically reduced and ultimately brought to zero. Nuclear weapons should soon be declared illegal as all other weapons of mass destruction (chemical and biological weapons) are. This will require a nuclear weapons convention similar to the chemical and biological weapons conventions. Countries should clearly and unequivocally do their best to signal that they are moving in that direction.

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¹ 13 *Practical Steps to Nuclear Disarmament:*

1. The importance and urgency of signatures and ratifications, without delay and without conditions and in accordance with constitutional processes, to achieve the early entry into force of the Comprehensive Nuclear-Test-Ban Treaty.
2. A moratorium on nuclear-weapon-test explosions or any other nuclear explosions pending entry into force of that Treaty.
3. The necessity of negotiations in the Conference on Disarmament on a nondiscriminatory, multilateral and internationally and effectively verifiable treaty banning the production of fissile material for nuclear weapons or other nuclear explosive devices in accordance with the statement of the Special Coordinator in 1995 and the mandate contained therein, taking into consideration both nuclear disarmament and nuclear non-proliferation objectives. The Conference on Disarmament is urged to agree on a programme of work which includes the immediate commencement of negotiations on such a treaty with a view to their conclusion within five years.
4. The necessity of establishing in the Conference on Disarmament an appropriate subsidiary body with a mandate to deal with nuclear disarmament. The Conference on Disarmament is urged to agree on a programme of work which includes the immediate establishment of such a body.
5. The principle of irreversibility to apply to nuclear disarmament, nuclear and other related arms control and reduction measures.
6. An unequivocal undertaking by the nuclear weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament, to which all States parties are committed under article VI.
7. The early entry into force and full implementation of START II and the conclusion of START III as soon as possible while preserving and strengthening the Treaty on the Limitation of Anti-Ballistic Missile Systems as a cornerstone of strategic stability and as a basis for further reductions of strategic offensive weapons, in accordance with its provisions.
8. The completion and implementation of the Trilateral Initiative between the United States of America, the Russian Federation and the International Atomic Energy Agency.
9. Steps by all the nuclear-weapon States leading to nuclear disarmament in a way that promotes international stability, and based on the principle of undiminished security for all
 - Further efforts by the nuclear-weapon States to reduce their nuclear arsenals unilaterally;
 - Increased transparency by the nuclear weapon States with regard to the nuclear weapons capabilities and the implementation of agreements pursuant to article VI and as a voluntary confidence building measure to support further progress on nuclear disarmament;
 - The further reduction of non-strategic nuclear weapons, based on unilateral initiatives and as an integral part of the nuclear arms reduction and disarmament process;
 - Concrete agreed measures to further reduce the operational status of nuclear weapons systems;
 - A diminishing role for nuclear weapons in security policies to minimize the risk that these weapons will ever be used and to facilitate the process of their total elimination;
- The engagement as soon as appropriate of all the nuclear-weapon States in the process leading to the total elimination of their nuclear weapons.
10. Arrangements by all nuclear-weapon States to place, as soon as practicable, fissile material designated by each of them as no longer required for military purposes under IAEA or other relevant international verification and arrangements for the disposition of such material for peaceful purposes, to ensure that such material remains permanently outside military programmes
11. Reaffirmation that the ultimate objective of the efforts of States in the disarmament process is general and complete disarmament under effective international control.
12. Regular reports, within the framework of the strengthened review process for the Non-Proliferation Treaty, by all States parties on the implementation of article VI and paragraph 4 (c) of the 1995 Decision on “Principles and Objectives for Nuclear Non-Proliferation and Disarmament”, and recalling the advisory opinion of the International Court of Justice of 8 July 1996.
13. The further development of the verification capabilities that will be required to provide assurance of compliance with nuclear disarmament agreements for the achievement and maintenance of a nuclear-weapon-free world.

² The additional protocol: <http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc540c.pdf>

³ Kissinger, Nunn, Perry, Schultz : http://online.wsj.com/article/SB120036422673589947.html?mod=opinion_main_commentaries

⁴ Douglas Hurd, Malcolm Rifkind, David Owen and George Robertson, “Start worrying and learn to ditch the bomb” *The Times* (London), June 30, 2008. (http://www.timesonline.co.uk/tol/comment/columnists/guest_contributors/article4237387.ece)

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⁶ Often confusion exists between a so-called dirty bomb (that entails the dispersal of radioactive material in the environment) and a nuclear explosive device, where the explosion is caused by a nuclear chain reaction. We deal only with the possibility of terrorist acquiring or building nuclear explosive devices.

58th Pugwash Conference on Science and World Affairs *Peace, Justice and Nuclear Disarmament*

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REPORTS FROM THE CONFERENCE WORKING GROUPS

Report of Working Group 1:

Conveners: Sverre Lodgaard and Wael Al Assad

Rapporteur: Martin Butcher

Nuclear Disarmament, Nonproliferation, and the 2010 NPT Review Conference

During the 58th Pugwash Conference on Science and World Affairs held in The Hague, The Netherlands, Working Group 1 convened to explore nuclear disarmament, nonproliferation and the 2010 NPT Review Conference. The group comprised 41 participants, from 24 countries including notably all the key countries in Northeast Asia. As is Pugwash tradition, the working group observed Chatham House rules, which created a unique environment conducive to a creative substantive discussion. This report is not a consensus document, but a report by the rapporteur of his personal interpretation of the salient points. However, the working group as a whole agreed some timely recommendations that they put forward for consideration by the Pugwash Council, and those are included at the end of this report.

I. General Discussion

There was general agreement that President Obama's Prague speech has generated excitement and enthusiasm, primarily because it is a demonstration of strong political will. The speech drew a line under the Bush years, and 'pressed the reset button', returning to ambitious disarmament negotiations with Russia. There was, however, disappointment in the President's statement that a nuclear weapon free world (NFWF) would probably not happen in his lifetime. There was consensus it is important to try to reach the goal in a shorter time, and that there are both political and scientific/technical imperatives to move quickly to the final goal of eliminating nuclear weapons.

There was consensus that the most urgent work must be done by the United States and Russia, since they hold 95% of all nuclear weapons. In this context, the group welcomed Obama's statement that the US has a moral responsibility to lead because it is the only nation ever to

have used nuclear weapons. However, it was also noted that it will be necessary to include other nuclear weapon states in negotiations at an early date. President Obama stated his intention to involve other NWS and the group discussed the modalities by which this might happen.

There was an emphasis on the importance of entry-into-force (EIF) of the Comprehensive nuclear Test Ban Treaty (CTBT), both as a disarmament and a non-proliferation measure. US action was seen as key. It was noted that non-nuclear weapon states (NNWS) can assist in CTBT EIF by supporting and enabling full construction and operation of the CTBT Organisation International Monitoring System (IMS).

Several barriers to progress towards an NFWF were noted, including the lack of implementation of the 1995 Resolution on the Middle East; the role allocated to nuclear weapons in Russian security thinking; US missile defence programmes, particularly the mid-course radar and interceptors planned for European deployment; the continued high salience of nuclear weapons in national defence doctrines; continued development of nuclear weapons without testing by P5 countries; and the US Prompt Global Strike capability, particularly the arming of ICBMs with conventional warheads.

The chair highlighted three items to inform the rest of our discussions:

1) We should bear in mind the relationship between disarmament and regional conflict resolution, and consider how best to relate regional and global aspects of disarmament.

2) The advantages to a NFWF must be brought to bear on the consideration of specific measures. Otherwise, each specific measure, debated on its own merits, will be so vulnerable to political obstacles that they may be invisible. By what mechanisms can this be done?

3) The NFWF debate will be confined to a small elite if phrased only in security terms. There is a need for moral, normative and legal measures declaring the use of nuclear weapons a crime against humanity, inviting civil society in general, and humanitarian organisations in particular, to join the campaign for a NFWF.

II. Disarmament Measures

Ballistic Missile Defence

The Working Group heard presentations on Russian and American views on missile defence. There was general agreement that ballistic missile defence programmes are a destabilizing strategic factor, and do not enhance security. The offensive role of missile defences in nuclear doctrine was emphasized, as well as its effect as a stimulus to proliferation in countries that feel themselves under threat. This is particularly true for the Middle East. BMD deployments are thereby a barrier to disarmament.

The negative effect on US-Russia relations of the proposed deployment of missile defences in Eastern Europe was noted. The political, as opposed to truly military, nature of Russian concerns and the divisive effect in NATO of US BMD plans were highlighted. It was also stated that even BMD research by the United States can be destabilizing, as the enormous investment in R&D may give rise to some new and destabilizing technology.

Sub-Strategic Nuclear Weapons

The group considered aspects of short-range nuclear forces (SNF) and intermediate-range nuclear forces (INF), often referred to as tactical or sub-strategic weapons.

The INF Treaty is at risk. While the US and Russia have proposed globalizing the Treaty, there are some in the militaries of both countries who resent the fact that only those two countries are prohibited from using missiles with this range. It was pointed out that for regional powers, weapons with ranges between 500 and 5500km are strategic weapons. For this reason, it is unlikely that regional powers will accept the restrictions of the INF Treaty.

The discussion of sub-strategic weapons covered a number of aspects. Russian weapons are thought to number 2000 or more; US around 500. In addition thousands of weapons are kept in reserve. The US maintains a small force of around 200 sub-strategic weapons in Europe, still described as 'essential' to the transatlantic unity of NATO. The secrecy surrounding even numbers of sub-strategic nuclear weapons, and their locations, in Russia in particular, is a serious impediment to future arms control.

The nuclear sharing programmes of NATO were seen as a significant problem in the NPT context, since they may give a nuclear capability to nominally non-nuclear nations in time of war. NATO has its own nuclear use doctrine, and the nuclear umbrella this provides creates a

separate category of NNWS with nuclear privileges, sometimes perceived as a security threat by nations in the NATO periphery.

Nuclear Doctrine

There was general agreement that it is essential to reduce the salience of nuclear weapons in national defence strategies. The enhanced roles given to nuclear weapons in defence doctrines in recent years pose significant problems, and have undermined negative security assurances summarized in UN Security Council Resolution 984.

The group considered a legally binding No First Use declaration based on the 1925 prohibition on the use of chemical and biological weapons; a commitment by the NWS that they would not use nuclear weapons against non-nuclear parties to the NPT under any circumstances.

III. Non-Proliferation Issues

FMCT and CTBT

The group was briefed on the draft Fissile Materials Cut-Off Treaty elaborated by the International Panel on Fissile Materials. The US decision to reverse the Bush administration rejection of a verification regime for the proposed treaty was welcomed. The group discussed ways in which the problems involved in an FMCT agreement could be clarified.

The ratification by the US of the CTBT was seen as key to success in 2010. It was suggested that a Pugwash Workshop on this topic could be held in Charlottesville, VA. The Council is also asked to engage with all 9 Annex II countries which have not ratified the CTBT, with a view to ensuring EIF of the CTBT.

Nuclear Issues on the Korean Peninsula

The group benefitted substantially from the presence of individuals from both Koreas, as well as from Japan, Russia, China and the United States. They contributed to a long and thorough examination of nuclear issues on the Korean peninsula. The group heard perspectives on nuclear weapons and nuclear power from South Korea and the DPRK. This included the DPRK perception that they are under threat of pre-emptive nuclear attack by the United States, and that this was a significant driver for their weapons program.

President Obama during his campaign promised direct negotiations with Iran and DPRK. He has begun this process with Iran, but the DPRK is still waiting. There is a willingness to proceed with talks. The group heard that

the best way to solve outstanding issues is for the US and the DPRK to normalize relations, including a US guarantee that it will not attack the DPRK, and to fully implement the Agreed Framework in all its aspects.

Denuclearisation of the Korean peninsula is understood to mean the verified absence of nuclear weapons from the DPRK and from South Korea, the removal of the US nuclear umbrella from South Korea, no fuel cycle facilities under the denuclearization agreement of 1992, and the ratification by both countries of the CTBT. The point was made forcefully by speakers from all sides that nuclear weapons have not contributed to security in the peninsula. It was also said that it may be necessary for Japan to give up its nuclear guarantees from the US.

Some participants observed that the DPRK will fully comply with all its obligations on dismantlement of facilities when the US meets all its obligations, as stated in the Agreed Framework. The group heard the view that the DPRK had begun to comply, but that the agreement had been repudiated by the Bush administration.

There was agreement that, in the longer term, there must be a full peace agreement to replace the truce. South Korea will need to be a party to that agreement.

Universality

It was noted that the Working Group has no representation from India, Israel and Pakistan, the three countries that remain outside the NPT, despite the presence of individuals from those nations at the conference. Their absence meant our discussion was less productive than it could have been and Pugwash should remedy this at future meetings.

There was substantial feeling that universality is not achievable. The three countries will not join the treaty. Other approaches need to be found to engage them. This could be modeled on the French declaration (prior to acceding to the Treaty) that it would behave “as if” it was party to the NPT. Other criteria may also have to be met, including adhesion to the CTBT and a moratorium on fissile material production.

There was an equally strong feeling that there had been no pressure on the countries to join the NPT, and no incentives offered for them to do so either. This strand of opinion argued that universality should be a high priority for NPT States Parties in 2010. To the frustration of many NNWS the situation has been allowed to drift since 1995 when universality was an important part of NPT renewal. Indeed, in the case of India the situation has changed from mild pressure to active cooperation, supported by the

Nuclear Suppliers Group.

It was suggested that universality of the NPT could be approached as part of a wider civil society discussion on universality of other arms control treaties, such as the BTWC, CWC, and the CTBT.

Regional Issues

This discussion complemented that on universality. The Middle East resolution agreed at the 1995 Review and Extension Conference was part of a package, another element of which was indefinite extension. In 2000, it was recognized as an essential element of Treaty renewal. Some countries argue that if the resolution remains unimplemented then the legal status of the indefinite extension of the NPT is in doubt.

It was recognized that amongst Arab states there is mounting frustration at 15 years of inaction on this issue. This issue is a barrier to success at the 2010 NPT Review Conference. One idea is to appoint a person from outside the region to move implementation of the resolution forward.

IV. The 2010 NPT Review Conference

The group heard a presentation on developments in South African nuclear diplomacy. South Africa is playing an important role in the NPT since 1995. The presentation held that frustration with a lack of practical progress after the pursuit of moderate diplomacy is leading South Africa to pursue a more confrontational course which may be less effective at engaging the P5. If this were so, then the decline of the role of the New Agenda Coalition that is likely to result may have negative implications for the success of the 2010 Review Conference. The group discussed the pros and cons of this interpretation.

Article X – Withdrawal

States parties to the NPT have the sovereign right to withdraw from the Treaty in case of supreme national interest, giving 3 months notice of intent to withdraw to the UN Security Council. It was noted that without this provision, many countries would have refused to join the NPT at all. There is a widespread view, however, that the procedures for withdrawal should be stricter. The debate on this issue acknowledged the difference between the spirit and letter of the Treaty; examined the role of the Security Council in dealing with political and security consequences of withdrawal. We discussed a number of ways in which to approach Article X discussion, but there was no consensus on any one approach.

V. Recommendations for Pugwash Input to the 2010 Review Conference

The Working Group developed a number of proposals for the attention of the Pugwash Council. The Working Group believes that the 2010 Review Conference should:

- Reconfirm the validity of the NPT “Grand Bargain” and the interrelationship between its 3 pillars disarmament, non-proliferation and peaceful uses.
- Limit the role of nuclear weapons in national doctrines. Three proposals were put forward to achieve this: (1) No First Use tailored on 1925 Protocol prohibiting the use of CBW; (2) invite the Security Council or another body to declare the use of nuclear weapons a crime against humanity; (3) solidify previous NSAs and there should be a statement of non-use against NNWS without exception. The Council is asked to consider a Pugwash issue brief to address these topics.

The language of the 13 practical steps on Article VI should be reviewed, updated and reiterated.

Engage in constructive discussions on universality and the Middle East resolution, and appoint a representative of the NPT to move these issues forward.

Report of Working Group 2:

Conveners: Mohamed Al Mahrugy and Rosemary Hollis

Prospects for Security, Justice and Peace in the Middle East

Presentations and ensuing discussions in Working Group 2 were focused on three outstanding issues of the Middle East region, the US-Iranian relations, Iraq’s political-security issues, and the Israeli-Palestinian peace process, with a focus on the implications of these issues for the region’s peace and stability.

I. The United States, Iran and the Region

There was a consensus that proceeding with the U.S.-Iran negotiations would extensively affect the entire region. In this context, the nuclear issue will be at the top of the negotiating agenda. On the American side, the main objective for the U.S. is to achieve high confidence concerning the nuclear case, and on the Iranian side it was put forward that there is a genuine interest to normalize relations with the United States. There was a general agree-

ment on the fact that in order to achieve the objectives of the negotiations for both sides, there should be a process of building trust and confidence. Participants agreed that this can be accomplished through a comprehensive understanding of Iran’s politics, and of the fact that the decision-making process in Iran’s political system is complex; being the outcome of the interests of different political power centers to the extent that the final decision comes at last from a consensus.

There were some disagreements over whether or not a timeframe should be placed on the U.S.-Iran negotiations. One participant pointed out that implementing target dates might jeopardize the atmosphere of the negotiations. Another participant mentioned that because the status of the region is not static, there should be a timeframe on the negotiations; however, he concluded that after a few months of negotiations the true intentions of both sides would become apparent in any case, even if the necessary bureaucracy takes longer. Considering Israel’s position, it was mentioned that Israel has no apprehensions regarding the negotiations process, and it trusts the United States in this matter. It was also pointed out that the United States and Israel should come up with different scenarios and frameworks that might feasibly satisfy and build confidence on the nuclear case, including enrichment on Iranian soil. This is yet to be answered. Further on this issue, it was discussed that opening the gate for dialogue is the main objective and will be useful for the region. Other participants from the region had a positive outlook for the U.S.-Iran negotiations.

Regarding Iranian-Egyptian relations, it was noted that although both countries have their own particular differences, these disparities must, and can, be overcome. One Egyptian participant emphasized the fact that Egypt is fully supporting the dialogue with Iran in order to achieve stability in the region. Other participants from Iraq, the Arab world, and Turkey had the same positive attitude and argued that the region needs cooperation rather than hostility to be able to overcome the current issues.

II. Iraq, Iran, and the Region

The discussion commenced with a general acknowledgment of the progress Iraq has made over the past few years, and expressions of hope for what may be to come. The most important of its developments has been the elections, which are historical in the sense that the Iraqi people had the opportunity to choose their own government. The political process is moving forward, and dramatic changes

are on the way. There was a consensus among participants that a stable Iraq will greatly aid in the formation of stability and peace in the region, as long as the freedom to choose their political system is preserved for Iraqis. To safeguard Iraq's stability is to establish good relations with Iran, as well as other regional actors and the international community in general.

One participant argued that Iran's policies in Iraq are defensive and not expansionist. Given the bitter past relations, especially the eight-year war between the two countries, Iran has legitimate security concerns that no anti-Iranian government comes to power in Baghdad. Furthermore, he advanced that a modest nationalism in Iraq, referring to Iraq's Provincial Elections in January 2009, will favour Iran's national interests and help Iran to expand its relations with the Arab world. This point was welcomed by an Iraqi participant.

Furthermore, another Iraqi participant noted that Iraq's main challenge is in keeping an Arab Muslim identity and maintaining a balance in its relations with neighbouring countries. In the past, foreign powers unsuccessfully sought to weigh Iran against Iraq. If outsiders try to use this policy against Arab countries again, they will fail. There should be a partnership in parallel rather than in crossing. Another main argument was that utilising a "balance of power" policy in this region is also unbeneficial since it has so far brought only tension and division. Instead, the regional countries should move towards a "balance of interest" and fostering an environment of security.

III. Israel, Palestine, and the Region

The discussion started with the affirmation that the time has come to look for solutions with a surge of good faith and not force. There was a general agreement that the conflicts in this region are both unique and complex in nature, thus, requiring very well considered and innovative strategies for their resolution. The failure and implications of the systematic application of force must be remarked upon to avoid the implementation of such strategies in the future. In general, it was accepted that resolving the Israel-Palestinian conflict and reaching an agreement on this matter is the key to all regional issues.

One major argument was the need of "inclusiveness." Accordingly, Hamas and Hezbollah should be partners in peace. There should be inclusive dialogue if there is to be progressive appreciation of divergent viewpoints and a resolution of the conflict. Furthermore, it was agreed that

attempts to dictate and monopolize the attitudes of the states involved in the conflict is unhelpful. In relation to this it was mentioned that any attempt towards mediation and cooperation is welcome, being supported by Egypt, Turkey and other Arab countries.

Concurrently, it was pointed out that there is a will in the new Israeli administration to change the atmosphere surrounding the search for a resolution to this conflict, such as the acceptance of a Palestinian sovereign state evidenced by recent statements. Furthermore, the Israeli Prime Minister has stated that negotiations with the Palestinians are on the agenda.

It was also discussed that the occupation of the Palestinian territories should end so that the Palestinians can proceed with the formation of their own security arrangements and political solutions. In contrast, some participants asserted that Israel wishes to end this state of conflict; that it is not insisting on maintaining the occupied territories and that any final agreement will have public support. The result of the Israeli elections and the popularity of Hamas are both the consequences of the failures of the peace process. It was pointed out that passing over the opportunities presented by the Mecca Agreement was a mistake of Israel, as well as the U.S. and European countries. Such a failure should be avoided in future. Further on this issue, one participant stated that Egypt has a commitment to pursue the fundamental rights of Palestinians, the right to live in a sovereign state, with borders and resources and to have Jerusalem as their capital.

Concerning the issue of Hamas, the Israeli perspective on the negotiations was that Palestinians should be the ones who choose their own representatives and that they should be free in making their choice of negotiator, even if that is to be Hamas. However, some concerns were raised about the consequences and effects that the negotiations with Hamas might have for Fatah. The response to this was that Fatah now occupies only a position of failure, due to the role it has played in the peace process thus far, so it would be detrimental to incorporate it into any new dialogue. Hamas is a society-based movement and should be treated differently; it is gaining a great deal of popularity both in Gaza and the West Bank especially after the recent crisis in Gaza.

There was a disagreement on whether Hamas should make the first step toward negotiations or Israel, in light of the occupation. It was then agreed that the Americans and Israelis would appreciate the role of a mediator concerning negotiations with Hamas. Turkey has already taken some steps towards initiating mediation and also

Pugwash could play a role in bringing Hamas to the negotiation table.

Finally, the discussion extended to the existing and deep concern about the growing culture of dependency on external aid in Gaza. It was of course discussed that the situation in Gaza differs greatly from that in the West Bank, specifically because of the blockade, which is a very serious concern.

IV. New Ideas and Proposals

The last part of the discussions in the Working Group 2 was allocated to new ideas and proposals for moving forward in Israeli-Palestinian peace process. At first, the One-State solution was proposed which raised serious objections from both Israeli and Palestinian participants, considering it as an almost unfeasible solution. Subsequently, it was argued that the Two-State Solution for various reasons is the only viable and pragmatic proposal, most notably the very complicated body politic of both Israel and Palestine.

Further, it was discussed that the Two-State Solution is now acceptable to both Israelis and Palestinians and therefore any further negotiations should be based along these lines; the Arab initiative can be a good first step to this end. However, there exist some concerns about whether there is a consensus in Israel on moving towards this proposal or not. It is also very important to have a vision of what is the ultimate goal. Therefore, the main issue is whether or not the Two-State Solution can serve as a basis of negotiation for both sides, from which to move forward. In this context, it was noted that Israel should put forward a coherent and definite explication of its position on the Two-State Solution.

Another major point raised was that the United States must assume a key role in persuading Israel to reach a consensus on the Two-State Solution. The U.S. also has a role in attempting to recognize Palestinian negotiators through calling for elections and accepting the results even if they prove undesirable to them. Meanwhile, the United States must maintain a proactive role throughout the negotiations with a strict timeframe for the agreements to be put in place. Finally, it is very important for the United States to understand the connectivity between the countries and the issues within the region. Working on a grand strategy, which can accommodate this connectivity, is the key element in America effectively fulfilling its role.

Finally, it was agreed that it is crucial to let domestic and local welfare constructions take place with full support from the outside world. Meanwhile, it is very

important to maintain parallel support for different levels of negotiations and construction. In this context, the international community can play a very significant role in helping Palestinians in the state-building process. It is crucial to select the best mechanisms for each stage of development, and more importantly, to carefully monitor those mechanisms in Gaza.

Report of Working Group 3:

Conveners: Talat Masood and Amitabh Mattoo

Rapporteurs: Moeed Yusuf and Happyymon Jacob

Regional Stability in Central and South Asia: The situation in Afghanistan, and India-Pakistan Relations

The major themes that dominated the working group's discussions were the emerging situation in Afghanistan and its implications for regional security, Pakistan-Afghanistan relations, and the relationship between India and Pakistan after the terror attacks in Mumbai. There was also considerable focus on the role of the international community in Afghanistan, especially that of the United States, and the need to contain terrorism in the region, which is undoubtedly the biggest threat it faces today.

The issue of Afghanistan was discussed at length in the working group. Participants agreed on the importance of Afghanistan in terms of regional peace in South Asia. It was clear from the discourse that there is substantial divergence in perceptions among American, Pakistani, Indian, and Afghani positions regarding the fundamental origins of the insurgency. The problem of American insensitivity to the local context was mentioned time and again; yet everyone agreed that American success in its operations against extremists was essential for all interested parties. Participants also acknowledged the urgent need for Track-II dialogues between all parties, for which Pugwash was repeatedly cited as a preferred forum.

In terms of recommendations, participants suggested truth finding on all sides to dispel perceptions which are unnecessarily taken as realities and create disharmony in relations. Afghani participants pointed to the need of holding a referendum or taking a *loya jirga* consensus on legitimizing the presence of the international forces. While international assistance needs to continue, instead of following the currently employed laborious processes of contractual arrangements that leave only one-fifth of the

assistance in Afghanistan, the Indian model was suggested, whereby the projects are directly employed by builders after approval by the Afghan government. Participants emphasized the importance for a UNSC binding arrangement on neutrality in Afghanistan from all interested parties, while assuaging Pakistan's safety concerns in the country. However, there is still a need to build a minimal consensus by all parties before issues of neutrality and economic buildup (including a move away from poppy cultivation) can be seriously addressed.

The participants discussed at length the deteriorating state of relations between India and Pakistan and most felt that there was an urgent need for some corrective action. Many participants noted that the two countries had indeed, in the past, made significant progress in addressing many of their outstanding conflicts, including the Kashmir issue. Remarkable progress was also made on the Sir Creek and Siachen Glacier disputes.

Participants recognized the extraordinary challenges that the Pakistani state faces today. Pakistani participants underscored that Pakistan is riddled by multiple challenges that threaten its existence. It needs to be understood, they pointed out, that there are many actors within Pakistan who are no longer under the control of the state. Moreover, the state does not have the capacity to deal with these "Frankenstein." Furthermore, the situation in Swat, NWFP, and on the Pakistani western border was discussed in detail.

In this context, it was pointed out that India needs to be more sensitive towards the "trauma" that Pakistan is experiencing. Sabre-rattling by India, it was felt, would only precipitate the inability of the Pakistani state to deal with its problems. India, therefore, needs to realize that a peaceful and stable Pakistan is in its own interest. Peaceful coexistence of neighbors presupposes the existence of responsible and stable governments.

While it is a fact that Pakistan has not delivered on terrorism to the satisfaction of India, there is a need to deal with Islamabad with more sensitivity and understanding. More importantly, India needs to deliver on certain issues in order to ensure that the militants based on Pakistani soil, and their leaders inside and outside Pakistan, do not have an opportunity to use the India bogey to whip up passions in Pakistan. Pakistani participants were persistent in their objection to the suspension of the peace process. The Indian participants, however, remained realistic in their assessment that resumption of talks would be unlikely until after the elections.

All participants agreed that terrorism is a common threat to all countries and most certainly so for India and Pakistan. However, the discourse on terrorism within India and Pakistan has not yet been able to capture the importance of perceiving terrorism as a common threat affecting both countries, with the potential to disrupt daily life. Terrorism in India is still widely perceived to be a handiwork of Pakistan, used as a policy of statecraft. The participants were, however, willing to go beyond this popular perception and understood the Pakistani argument that terrorism has gone beyond the control of the state and thus needs to be tackled jointly by the two countries. Indian participants pointed out that it is important to investigate, prosecute and punish the 26/11 Mumbai terror perpetrators in order for India to join Pakistan on joint anti-terror initiatives. A Pakistani lawyer present however explained Pakistan's legal constraints, which slow this process despite unprecedented measures taken by Islamabad. In this regard, it was pointed out that the SAARC terrorism initiative can be explored for finding a common ground among the South Asian countries for effectively countering terrorism in the region.

Almost all participants shared the feeling that both the countries have indeed lost an opportunity to resolve some of their outstanding conflicts. It was pointed out that the two neighbors were very close to a solution to the Kashmir issue in 2006-2007. Participants also noted that public opinion in India, Pakistan, as well as in the Kashmir Valley, was in favor of a political solution along the lines of the Musharraf formula.

Perhaps the most important point of consensus among participants was that unofficial interaction between Pakistani and Indian experts should continue in an uninterrupted manner irrespective of the bilateral relationship between India and Pakistan. All participants felt that there was tremendous value added of such interactions; these could act as a genuine means to convince both governments of the need for rapprochement and provide new ideas to that effect. Overall, there was support for increased Track-II interaction.

Ultimately, the sense was clear: there were major differences of opinion amongst all players, each country was not a monolith in terms of opinion but in fact had varying constituencies. Some saw Pakistan and Afghanistan's survival as mutually beneficial, while others remained more ambivalent to the threat of such failure. Furthermore, all participants were of the view that the US needs to be more sensitive of the ground realities while dealing with the region. Additionally, the group, while

having differences of opinion regarding the specific approach to resolve the disputes, was convinced that the future lies in removing points of contention rather than looking away from each other. However, all agreed that there were no short-term and miraculous decisions in the offing. So all parties would have to behave patiently.

Specific Recommendations:

- Issues in the region should be looked at from the regional rather than the bilateral perspective; there is a need to have a more common understanding and coordinated approach to issues of mutual concern
- Despite the suspension of the composite dialogue, efforts should be made to continue, in fact enhance, track-II and people-to-people engagements
- The CBMs on security related issues agreed upon in the past between India and Pakistan should be continued and reinforced. CBMs, which were under negotiation when the peace process stalled, must be completed and implemented as soon as possible. Specifically, the back channel negotiations on Kashmir and other issues which had reportedly made tremendous progress should be revived
- Efforts should be made as far as possible not to allow relations to break after incidents of concern to one or the other side; efforts should be made to reinitiate the current peace process and it should begin from the point where it was left off
- All non-state exchanges between regional countries, especially youth groups and student exchanges, must be enhanced irrespective of the existing tensions. All bona fide PhD students from India and Pakistan should be provided with free access to the other side through SAARC approved travel documents
- The potential positive role of the media was singled out and the need for broader and deeper contacts between media groups and relevant quarters of the civil society was suggested
- Terrorist threats notwithstanding, the sovereignty of countries in the region must be respected, given the backlash that such breaches cause
- There was a strong convergence that the ultimate hindrance is the mindset of all sides involved. There was a need to revisit textbooks and materials of learning on both sides (Pakistan and India) to ensure emancipation of thinking
- The issue of terrorism should be singled out as the major problem for the region and should be addressed through coordination among all sides. A key issue is to determine where the militant groups are receiving their funding and how these channels can be checked
- Both countries need to convince each other that the other's stability is important and crucial for its own well-being. There was a level of divergence on this issue during the sessions
- There is now a need to set an agenda for specific concerns that Pakistan and India share and bring these to the table to discuss in future Pugwash meetings
- India and Pakistan should coordinate their strategies in international fora on issues of global importance which impact both countries
- Though the primary responsibility rests on the people of Pakistan, the international community, and specifically the regional countries, should do their bit to ensure Pakistan's security and stability. Pakistan's security concerns vis-à-vis India should be assuaged satisfactorily
- Although India's ex-Pakistan security concerns are well understood, there was a feeling that India and Pakistan should discuss the potential danger of thrusting the region into an arms race
- In future meetings, the presence of the Iranian point of view should be more pronounced given its role in ensuring Afghanistan's stability
- Afghanistan's role in South Asian stability and the Indo-Pakistan relationship should be addressed more directly in the context of India-Pakistan relations. There should be an effort to increase track-II and business-to-business contact between Pakistan, Afghanistan, and India. There is a need to address the mutual concerns of India and Pakistan in Afghanistan.
- Cognizance of the recognition of the divergence that exists among the various Taliban groups so that the decision to engage the 'reconcilable' ones can be made. However, there was a concern that the disconnect between democracy and their values should not be at the cost of virtues of democracy
- There is currently a lack of coordination among military establishments from Pakistan, Afghanistan, and the US on the War on Terror. Since the militaries remain at the forefront of the counter-terrorism policy, there is a need to ensure smooth collaboration on intelligence and other related matters.
- Set up a joint force to address the issues of narcotics and poppy cultivation in Afghanistan

Report Working Group 4:

*Conveners: Berma Klein Goldewijk and
Richard Goldstone*

Rapporteur: Murray Thomson

Preventing the Deterioration of Human Rights Standards: Policies and Practices

The theme of this Working Group was 'Preventing the Deterioration of Human Rights Standards: Policies and Practices.' The two conveners were Berma Klein Goldewijk and Richard Goldstone. The number of participants taking part in the six sessions ranged from 25 to 31, coming from 21 different countries.

The conveners provided a framework for the discussions, as follows:

- Substantiating the assumed deterioration of human rights standards;
- Declining norms and standards versus non-compliance with these standards;
- Effects of the weakening of human rights standards on wider justice-related issues;
- Connecting human rights standards to human security and human development;
- Concrete policies and practices to prevent the deterioration of human rights.

No attempt was made to reach a consensus on all issues discussed or offer unanimous resolutions on the different positions taken by participants. Rather, an open discussion and continuous exchange enabled all participants to freely contribute within the overall framework and, thus, to express a variety of opinions on the issues that were raised in the framework.

Part II of this report records the views of participants on human rights standards today. Part III examines contemporary shifts in perceptions of human rights, security and development. Part IV summarizes some concrete policies and practices.

I. Deterioration of Human Rights Standards: Perceptions of Participants

Universal Application

As a preliminary point, the working group underlined the universality of human rights. Though the great diversity of cultural and religious contexts in which human rights are being implemented was recognized and appreciated, universal compliance was seen as a consequence of the



Justice Richard Goldstone.

acceptance of the Universal Declaration of Human Rights (UDHR, 1948) and the ratification of subsequent international human rights conventions, protocols and national legislation by states. The working group discussed the various moral and legal standards as they are present in the UDHR, the African

Charter of Human and People's Rights, the UN Charter, and in

religious texts such as Quran. In addition, freedom of religion was briefly reviewed as a universal human right.

At the same time, an apparent increase in fundamentalist orientations in the world religions was recognized, with tendencies towards extremism and the use of violence - whether in Christianity, Hinduism, Islam, Buddhism, or Judaism. Examples were given of some Muslim mullahs issuing *fatwabs* (religious edicts) that have violated human rights, while some militant Protestant ministers, Jewish rabbis, Hindu priests and Buddhist monks have called for the use of violence in dealing with ethnic conflicts as well. It was also recognized that the universality of human rights has not been accepted by all states. In North Korea, for example, human rights are deemed bound up with questions of national security and the state's fundamental right for national sovereignty.

Next to the attention paid to the universality of human rights standards, the working group asked attention for the different forms of transitional justice in post-conflict settings. Often based on local and traditional forms of truth-telling and restorative justice after atrocities, transitional justice could be of support in efforts towards durable conflict resolution and reconciliation, if care is taken to avoid gender and generational biases that are sometimes inherent to traditional and local structures. In this connection, UN Security Council Resolution 1325 (on women, peace, and security) and Resolution 1820 (on sexual violence in conflict and post-conflict situations) were referred to for guidance.

Positive Developments

The working group noted a number of salient developments in the field of human rights standards. The overall picture was diversified. In some geographic areas and institutional domains (international criminal law) gradual progress could be observed, while elsewhere in the world and in other domains (especially in relation to counter-

terrorism), a sometimes severe deterioration in human rights standards occurred. The working group discussed a few particular cases, such as Egypt and Palestine.

The establishment and subsequent development of the International Criminal Court (ICC) was considered a significant step in the development of the international justice system, while also some developments under the new US administration were seen to offer positive prospects for the future. Though perhaps often not spectacular, the continuing efforts by NGOs remain a relevant contribution to human rights standards as well as to their implementation, and need to be sustained. The working group referred to the many initiatives being taken today at all levels of society: local, national, regional and global - designed to support non-violent, legal and political resolutions of conflict, which can add to or strengthen human rights and other areas of international law.

Backlash of the War on Terror

On the other hand, there were also reasons to be more pessimistic. The war on terror and related measures taken to deal with alleged security threats did not only curtail civil liberties, but also led to severe violations of human rights around the globe. Within six months of 9/11, a series of laws detrimental to human rights were adopted and applauded by both authoritarian and democratic governments around the world. The working group noted a world-wide increase in the militarization of weapons, personnel, training, secret intelligence agencies, national security laws, and large expenditures of public funds for defense - as being an important compounding factor in the deterioration of human rights. However, the increase in non-state violent actions, whether labeled 'terrorist', 'freedom fighting,' or seeking self-determination, does not justify the use of force against civilians. The group was concerned that an 'over-securitisation' of terrorist and other threats may lead to the adoption of exaggerated emergency measures with negative and counter-productive side-effects.

Though the negative human rights effects of these measures are clear, even more so in retrospect, it is difficult to judge whether these effects were in all cases intended. Yet, the working group recognized that certain regimes consider human rights in general - or special categories of rights in particular - as inimical to their own national, cultural or religious interests. A number of such regimes have demonstrably appropriated the counter-terrorism discourse for their own political and opportunistic reasons

in order to eliminate political opposition or carry on suppressive campaigns directed against their own populations.

In a 2009 Report entitled 'Assessing Damage, Urging Action', the Eminent Jurists Panel on Terrorism, Counter-terrorism and Human Rights recognized the extent to which state-related responses to the events of 11 September 2001 have changed the legal landscape and have put the international legal order in jeopardy. This independent Panel, commissioned by the International Commission of Jurists, concluded that basic principles of international human rights law have been actively undermined, often by liberal democracies that have been loud in proclaiming support for international law. Whereas intelligence agencies acquired new powers and resources, there has often been little legal and political accountability. The Panel clearly rejected the claim that any 'war' on terror excuses states from abiding by international human rights law. Preventive measures and mechanisms are acceptable as long as they are not in conflict with international human rights principles.

The working group largely subscribed to the analysis of the panel, but felt in addition that measures in the field of, economic, social, cultural as well as political development need to be taken for dealing with the underlying reasons as to why terrorism emerges under particular conditions and why sections of the population are attracted to it. It underlined that unlawful violence by non-state actors can be dealt with by the usual means available to any state so that the use of force in such a case against a non-state actor is legitimate and carried out in conformity with the law.

The use of weapons of mass destruction (WMD) should vigorously be objected from a human rights point of view. In Vietnam, the residues from the war remain: Agent Orange and other chemicals destroyed forests and land, and devastated labor ability. The effects are felt up to this very day. The production of, and willingness to use, nuclear weapons was seen as a violation of the basic human right to life. Making the *use of all weapons of mass destruction a crime against humanity*, in response to the gap in international law concerning the legality of the threat or use of nuclear weapons, was mentioned as an important step to be further explored by Pugwash in the near future (see also the widely disputed 1996 Advisory Opinion of the International Court of Justice on issues of legality).

Human Security Issues

The working group also discussed the impact of current economic trends on human rights. It was concerned about the situation of food security. Some argued that the use of large amounts of grain for producing bio-fuels will contribute to a consequent scarcity of food in some regions - whereas food is a basic right for everyone. More generally, the increasing social and economic disparities also may lead to decreasing entitlements to food among increasingly larger sections of the population.

The working group noted the importance and need of greater knowledge or awareness of human rights in many parts of the world and recommended that such awareness be promoted. The example of an adult education program in West Africa, which translated and promoted the African Charter of Human and Peoples' Rights into the three languages of that region, was referred to as something to be adapted elsewhere as well.

II. Human Rights, Security and Development: Shifts in Perception

An important shift has developed in the perception of the interlinking of human rights, human security and human development. This shift involves the central premise that people must be put before states, which has grounded a whole series of humanitarian interventions from the mid-1990s. Rights, security and development are 'human-centred' today, in that their principal focus is on the individual in a universal sense, that is, people collectively. In the notion of human security, for example, the sovereign legitimacy of the state rests upon its support of the people and how the state meets basic humanitarian standards, on which basis it draws its legitimacy. Such a shift in perceptions of security opens up new avenues for strengthening human rights in all its manifestations. Moreover, the primacy of the inherent dignity of all human beings has become the core value that underlies and informs such new perceptions. Economic, social and cultural rights can now benefit from the public recognition that, in matters of security, individuals and their communities have primacy.

However, many policy-makers today fail to grasp the underlying and unifying 'human' dimension common to issues of rights, security and development. In addressing the two major global challenges of violent conflict and poverty, human security is too often limited to the protection of citizens. This excludes too many individuals and groups: the stateless, non-documented refugees and all those without citizenship – whose number is rapidly increasing. What is required by policy-makers is a

sustained effort to understand and close the gap between 'citizens' and 'humans'. Human rights, human security and human development contribute to such efforts by reaffirming the universal basis common to all humans.

The International Criminal Court can be perceived as a new legal institution that reflects this new thinking. In effect, the ICC not only affirms that everyone has the right to be protected. The ICC has also established that not only a State Party and the UN Security Council can refer a situation to the Court, or that the ICC Prosecutor can begin an investigation on his or her own authority: individuals can bring their complaints to the Court as well - to be further investigated. The working group discussed these elements thoroughly. As from its start in 2002, when the 1998 Rome Statute entered into force, the ICC is conceived as *complementary* to national justice systems and functions as a court of last resort. It was deemed important in the working group that further ratification of the Rome Statute of the ICC is supported, that possible constitutional and legislative obstacles to ratification are publicly addressed, and that the ICC would muster as broad international support as possible, for example by actively cooperating in areas such as providing evidence.

The 'responsibility to protect' (R2P), which is part of the 2006 UN Security Council's unanimous adoption of Resolution 1674 on the Protection of Civilians in Armed Conflict, is a concrete example of the right to intervene in sovereign states for humanitarian reasons. Unfortunately, the acceptance of the universal human core of the concept has been compounded by suspicions on behalf of some nations who allegedly felt that the 'responsibility to protect' would facilitate the imposition of Western agendas. In many cases, however, the 'responsibility to protect' would in effect have put on the agenda serious violations of human rights in which such nations were involved themselves - and that now often can go on unhindered.

III. Policies and Practices

The final sessions of the Working Group examined some policies and practices, which stemmed from the previous discussions.

The recognition of a major shift taking place, from state-related security and military defense to human security, will have major significance in setting future priorities for funding, policies and programs. This relates to a different approach to security, which is preventive, bottom-up, participative, and less based on coercive means than the erstwhile conventional military

approaches of security. In designing post-conflict reconstruction and development packages, donor-centric and top-down approaches need to be avoided as they tend to create resentment and are deemed Western impositions. Recognition of local agency is therefore of major relevance.

The recognition of the inter-relations between civil, political, economic, social and cultural rights, should lead human rights practitioners to seek strong public support for the UN Millennium Development Goals. The working group felt that the attainment of the Millennium Development Goals by 2015 (varying from ending extreme poverty and hunger, achieving universal primary education, promoting gender equality and fairness to women, reducing childhood deaths, to combating HIV/AIDS and other diseases, taking care of the environment, and building global partnerships) could help contribute to a lessening of the underlying causes of conflict and terrorism. The working group specifically noted the importance of having access to health care as an element of human rights standards and referred to the WHO program 'Health for All in 2000'.

Pugwash should further pay attention to the effects of technology on human rights and human security - in particular information technology, by means of which a great majority of the world population is currently connected. Scientists evaluate the applications of nanotechnology for improving health and for positive effects on the environment. Equally, they should challenge current efforts of corporations striving to obtain exclusive control of intellectual property rights, and oppose the application of nanotechnology to warfare.

The recognition that any use of nuclear weapons would cause massive human suffering and indiscriminate and long-term harm to civilians as well as to the shared environment - and in view of Pugwash's founding mission and principles - the working group recommended that efforts be taken to recognize and declare that any use of such weapons would fall under the category of the 'most serious crimes of international concern', *in casu*, constitute a 'crime against humanity'.

Protracted conflicts are difficult to resolve. Early action is needed and further investments have to be made in early warning systems and early response mechanisms. Solutions must also include identifying the underlying causes, such as historical and contemporary injustices, the need for non-discriminatory and non-exclusionist legislation and government policies, and developing the political will to control corruption and identity-based patronage. A

vital role for the international community and human rights organizations is to insist on the avoidance of double standards, and to deal equally with the victims of violence inflicted by terrorists, police or the defence forces.

The working group agreed on the need to work towards a world in which all people respect the dignity and worth of each and everyone - irrespective of caste, class, language, religious, ethnic, and political differences - and recognize and celebrate the human roots that are common to us all.

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Report of Working Group 5:

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Climate Change and Environmental Security

The focus of Working Group 5 was to discuss strategies for combating climate change within the context of the Pugwash mission of promoting communication on issues of science and world affairs that may be too controversial for open honest debate under normal conditions.

Discussion fell into three main categories: I. Questions of technology choice; II. Discussion of the merits of various policy and market measures; and III. The underlying tension between development and climate change mitigation.

I. Technology Choice

The first step in facing the challenge of climate change is through analysis of the immediate technological choices for mitigation and adaptation. This debate focuses on scientific questions of what will work and what is feasible.

There is a large menu of options for climate change mitigation, any combination of which can be applied to the issue of climate change. The working group emphasized the importance of prior mitigation of climate change, rather than adaptation after the fact, while recognizing that due to past and current greenhouse gas emissions already a significant adaptation effort is necessary. Adaptation will likely resemble a constellation of independent projects from the bottom up, rather than a unified global top-down program like a “green new deal.”

Some participants emphasized the importance of considering all options. We cannot merely focus on the financially beneficial “efficiency” strategies. Real sacrifices will be required. According to them, a comprehensive climate change solution must also consider some controversial options. Nuclear power may be part of the solution, as the risk of climate change seems more threatening to them than the issues which have kept nuclear power from being popular in recent years, including the nearly unsolvable risk of nuclear weapons proliferation. Carbon Capture and Sequestration is a new and unproven technology but it too will have to be part of a climate change strategy. Even advanced technologies, like geo-engineering, which are so far untested, need to be considered. Other participants disagreed with considering either the nuclear or the geo-engineering options, or both. They preferred to first seriously try to meet the challenge with the large-scale introduction of renewable energy sources (such as solar, wind, biomass).

II. Policy and Market Measures

Choosing technological solutions to climate change is only a small part of taking steps to actually mitigate climate change. It seemed clear to the working group that the largest challenges facing climate change mitigation are political and economic, not technological. The need for financial and political support for the different technological solutions is critical. Large amounts of money are needed, much beyond the amounts involved in the Clean Development Mechanism of the Kyoto Protocol. Appropriate price signals, like carbon taxes or trading, will also be necessary to promote the innovation required for climate change mitigation.

Private investment cannot be the only source of financial support for climate change mitigation; national governments must also be called upon to provide public financing. National action on the part of individual governments will be key to implementing policies to spur

innovation and investment in climate change solutions. Without legislative support, many policies may fail. The working group suggests that individual national plans for climate mitigation will be important in the new climate regime to be agreed in Copenhagen. National governments will also be the main funder of climate change adaptation measures. Both for mitigation and adaptation actions in developing countries, large-scale funding will need to come from developed countries (see III.).

III. Development Issues

The final challenge facing climate change mitigation is deciding how to best reduce carbon emissions in a way that is just for both developed and developing nations. For some developing nations, climate change mitigation is a lower priority than meeting basic needs and there is a certain amount of resentment that developing nations are being asked to solve a problem caused by the developed world. The working group agreed that we must choose policies that do not hurt the developing world.

We identify the need to come up with a global solution for climate change that does not discriminate against either developed or developing nations. We need a comprehensive joint global solution between developed and developing nations. This is especially important for countries that are rapidly expanding and may face “lock-in” with technologies that do not conform to a vision of low carbon emissions. The working group called for a “low-carbon” development model formed through bilateral and multilateral talks.

In sum, we recognize that the climate change is an urgent global security threat and urge leaders of both developed and developing countries to work together to meet these challenges, while at the same time meet the special needs of developing countries. We welcome the positive attitude of the new US administration that indicates it understands the urgency to act immediately on this threat. The upcoming Conference of the Parties (COP) meeting at Copenhagen must secure the commitment of all nations to undertake major changes, which will result in a global society that satisfies its energy needs from low-carbon sources. We must undertake large-scale effective technology transfer and diffusion of “low-carbon technologies.” This will require measures such as increased funding, better financing, management of intellectual properties, and trust-building that satisfy needs of both developing and developed countries.

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28th Workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions *The Second CWC Review Conference and After*

5–6 April 2008, Noordwijk, The Netherlands

Report

By *Katie Smallwood*
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This was the fourteenth of the current Pugwash CBW workshop series to be hosted by Pugwash Netherlands. The Dutch ministry of foreign affairs provided financial assistance for this meeting.

Attending the workshop were 35 participants from 13 countries (Argentina, Australia, Canada, the Czech Republic, France, Germany, Ireland, the Netherlands, New Zealand, Russia, Sweden, the United Kingdom and the United States), all by invitation and in their personal capacities. This report of the workshop is the sole responsibility of its author, who was asked by the meeting to prepare a brief report in consultation with the Steering Committee. It does not necessarily reflect a consensus of the workshop as a whole, or of the Study Group, nor does it follow the order in which topics were discussed. Attached to this report are the workshop agenda, a list of papers and the list of participants.

I. The BWC Intersessional Programme

The workshop, which took place the weekend before the Chemical Weapons Convention's Second

Review Conference (7–18 April 2008), opened with a customary presentation on developments in the Biological Weapons Convention's (BWC) intersessional programme. The BWC currently holds a one week meeting of states parties every year which is prepared by a one week meeting of experts. The 2007 intersessional programme was chaired by Ambassador Khan of Pakistan; the meeting of experts closed with a list prepared by the Chairman of proposals covering implementation, international cooperation and export controls. NGO participation involved the suspension of the formal meetings to allow each NGO to deliver a brief presentation which was also distributed on paper. The two 2008 meetings will be chaired this time by the Eastern European Group and will cover measures to improve biosafety and biosecurity, and oversight/education/awareness-raising/codes-of-conduct. It is expected that NGO participation will again be high. The Chairman of the 2008 programme, submitted a written statement to the Pugwash Study Group. In this statement, the Chair wrote of his wish to cast his net wider to achieve broader participation, he encouraged scientists to contact their foreign ministries to assist in state party preparation, and he encouraged states to include scientific experts in their own delegations.

The subsequent discussion picked-up on a number of issues, amongst these was the notion that some states receiving assistance from multiple sources or donors for the implementation of various international agreements had begun displaying what was termed "implementation support fatigue". Caution was expressed in applying such a term, as some workshop participants felt there was a danger it could become a self-fulfilling prophecy; smaller states were currently building up momentum as a result of implementation being encouraged and, in general, government officials were grateful for any implementation support offered. In this context the importance of highlighting the role of implementation in attaining development goals was stressed¹. However, it was noted by some, that difficulties in implementation might result from insufficient coordination and excessive aggressiveness resulting in diminished synergies between separate regimes. The clash in timing of the BWC's Meeting of States Parties and the CWC's Conference of the States Parties at the end of this year was mentioned as an example of this.

II. CWC Status

A presentation was given on the status of the Convention at the eve of the Second CWC Review Conference. The presentation noted that

with 183 states parties, the Convention's key elements of success were in the destruction of 35% of all declared stockpiles, one state party having completed its destruction activities and two others (India and South Korea) are nearing completion. Russia has destroyed 26% of its stockpile and new destruction facilities were due to begin operating. The United States has destroyed over 50% of its stockpile, including its youngest weapons.

Although a term whose usage certain member states had recently criticized, non-proliferation was highlighted as a core success of the Convention that has been demonstrated by over 1,300 inspections in the chemical industry over the period of the past ten years. All requests from states parties for assistance and protection have been addressed by the Organization and, equally, programmes for international cooperation under Article XI were continuing apace to benefit those states parties involved. However there still remained significant gaps in the fulfilment of state party obligations under Article X. Considerable progress has been made in the implementation of Article VII since the first Review Conference; for instance, all states parties have designated a National Authority, and the percentage of states parties with "comprehensive legislation" has increased from 25% to 50%. In this respect, the presentation noted that the implementation of the general purpose criterion could act as a useful benchmark for legislation. Outreach to a wide range of stakeholders was stressed as equally important and should be addressed at the Review Conference, particularly in terms of maintaining and building on regular contact with the chemical

industry, academia and non-governmental organisations.

Still twelve UN member-states short of full universality, the Convention was expecting ratifications from at least a further two states in the near future, Iraq and Lebanon. The presentation also noted the continued relevance of terrorism as the Iraq chlorine attacks have demonstrated, and although the full implementation of the Convention will contribute to the prevention of chemical terrorism, continued interaction between the OPCW and the UNSCR 1540 is also necessary.

The group heard that the challenges to the CWC are not insignificant. There remain 65% of declared chemical weapons still to be destroyed and in many cases the small-sized munitions that remain are the most difficult to destroy both safely and expeditiously. On the other hand, political commitment to destruction is strong and confidence building visits have been initiated to build transparency and trust in the determination of possessor states to vigorously pursue CW destruction. If the situation so warrants, a Special Session of the Conference could be held closer to 2012 (the final extended deadline for destruction) to discuss the status of destruction. This proposal could be considered by the Review Conference, without prejudice to the reaffirmation of the deadlines for destruction.

In contrast, non-proliferation will remain a perpetual objective of the Convention. The overall verification regime will have to adapt to address this change, although the actual obligations of the treaty will remain the same. As science and technology continue to evolve and the chemical industry continues to reshape, verification will have to prove its flexi-

bility. Currently, facilities and plant sites handling the three schedules of chemicals are being adequately inspected but the same could not be said for Other Chemical Production Facilities (OCPFs). Although a number of improvements have been made for the inspection of OCPFs (for example through the Director-General's own interim decision on the site-selection algorithm), the presentation stressed that further improvements will be required. Increasing the frequency of OCPF inspections has also come against political hurdles, and efforts have been made by the Technical Secretariat in an attempt to persuade some states parties that the policy to increase OCPF inspections is not of a malign nature.

Noting that continuous attention by states parties to changes in science and technology is a legal obligation, the presenter maintained that the second Review Conference should recognise this obligation. Importance should also be assigned to the work of the Scientific Advisory Board (SAB) at the Review Conference: its financial support increased and its meetings more frequent.

Substantial work has taken place to implement Article X and Article XI even though there have been signals from some states parties that both Articles are only in their first stages of implementation and will require further efforts. The Secretariat's International Cooperation and Assistance branch has also, in the past years, received a growing share of the core funding whereas in the future the presentation asserted that there should be a focus on programme improvement.

On 'non-lethal' chemical weapons, the presentation held that a discussion at within the context of

the Review Conference (and with the current levels of understanding) would be fruitless as the issue was so politically charged. In essence, the Review Conference would largely be focused on the same old issues: definitions; the 2012 deadline for destruction; non-proliferation; OCPFs; terrorism; and Article VII. New issues will be in the rebalancing of core objectives of the Convention with a parallel discussion taking place on the approach for the budget. None of the issues would be insurmountable, but ambiguous language on some might be required.

There was a general feeling of concern and surprise amongst the workshop participants at the scepticism about non-proliferation, and it was noted that the Non Aligned Movement (NAM) had a very different view of non-proliferation in its statements in Geneva. It was evident however, that the opposition to the term non-proliferation had been led by a small number of states and not broadly discussed within the NAM. On the other hand, feelings on the subject ran high and there would be resistance to stating what some states parties viewed as a change in the CWC's agenda. It was argued by some that non-proliferation was a useful term and that its use should be encouraged as much as possible, especially in the sense of inhibiting abuse of dual-use technologies that are diffusing around the world. Throughout this debate there was a notion of 'rebalancing', and some sought to characterise the second Review Conference as a 'transitional' conference given that destruction was scheduled to have been completed by the time of the next Review Conference.

III. The Second CWC Review Conference

Setting the workshop's theme, the workshop was given an outline of the general context of the Second CWC Review Conference; the conference was to take place five years after the first Review Conference, eleven years after Entry into Force of the CWC and four years before the final, extended deadline of 2012 for current possessor states. During the first eleven years of implementation of the Convention, valuable experience has been gathered but there has been no steady state. This lack of steady state is due to a number of changes, for example, ten to fifteen years of significant developments in the chemical industry since the CWC was negotiated and a shifting security environment with a higher emphasis on terrorism and less emphasis on state programmes. Therefore it was argued that it is of utmost importance that the Second Review Conference consolidates the existing processes and does not rock the boat.

It was noted that the Open-Ended Working Group, chaired by Ambassador Parker of the United Kingdom and established to prepare for the Review Conference a year and a half ago, has resulted in a 'Chairman's text' to form the basis for negotiations for the Review Conference's Report. Although developments in science and technology, part of the mandate of the Conference, would affect some of the Conference's agenda items it would only be to colour the discussion.

On destruction, it was thought that there would be agreement on the urgency of the matter and on the need to reaffirm possessor states' obligations, and the Conference might also consider the Director-

General's proposal for a special session of the CSP closer to the deadline itself. Some discussion would take place on how the industry verification regime could evolve but there were huge differences in the understanding of certain issues, particularly in the determination of 'risk'. OCPFs would also receive a good amount of attention on the following areas: the intensity of inspections at OCPFs; the shift in the balance of inspections; how effectively the Technical Secretariat worked from state party declarations; and, recognition of the need for further work. Although the Review Conference would probably not endorse proposals on how the OCPF regime could develop further (for example to cover peptides or other manifestations of convergent chemistry and biology), the presentation asserted that this longer-term issue needs further attention.

Little practical discussion would take place on topics such as alleged use or on optimisation, and some discussion on national implementation – particularly on deepening links with the chemical industry – could come against conceptual problems originating from the wider 'North-South' debate over barriers to development. Attention to assistance and protection (Article X) could result in a shift towards regional capacity building.

There has so far been no enthusiasm to discuss the tenure policy of the OPCW, and there has been reluctance to discuss terrorism and even more reluctance to link into UN Security Council resolution 1540 (2004). However, the Industry and Protection Forum held last year in conjunction with the OPCW's Tenth Anniversary celebrations, strongly linked assistance and protection to the subject of

terrorism and has thus far kept the door open for further discussion.

The Open-Ended Working Group (OEWG)

A short presentation then followed which focused more generally on the character of the OEWG discussions. The debate had so far been of a consolidating, but also of a rebalancing nature generally between the NAM and the Western Group. There was a feeling amongst many delegations, that the 'original owners' of the Convention will have to accommodate the national interests of the newer members, one political example of this is in the relatively broad opposition to the use of the term "non-proliferation".

The position of China was noted, particularly with respect to its national papers submitted to the Review Conference which signal a departure from its usual position associated with the NAM: for example, referring to national implementation China endorses voluntary reporting; awareness-raising amongst various stakeholders; industrial management; and, commits itself to non-proliferation measures. The discussion observed that the evolution of China's position was also consistent with other domains, where the same could be observed.

The position of Iran is also noteworthy, and it was largely assumed that Iran would be working towards a positive outcome.

Regarding the broader political context of the Second Review Conference, the workshop heard that there were several political players who are reluctant to jump into new things; in this respect, it was of utmost importance that the Second Review Conference keep the door open for further discussion of certain

areas by the policy making organs of the Convention. A case in point here is on so-called 'non-lethal' chemical weapons. Although Switzerland has submitted a national paper on the topic, there was little confidence that the issue would be discussed at the Review Conference itself, such a discussion is seen as a bridge too far by the United States for whom a more subtle mechanism might be required to bring the subject of 'non-lethals' to the agenda.

IV. National Implementation

Legislation: from quantitative to qualitative

Many workshop participants drew attention to the crucial necessity for the Review Conference to contribute to improving the qualitative dimension of national implementation of the Convention. Although since the First Review Conference, much success has been achieved on the legal front through the Action Plan on National Implementation, there still remains a vast body of work on improving the effectiveness of national legislation. At the moment, work on Article VII was continuing apace towards achieving a qualitative shift albeit with less visibility.

The workshop considered possible means for adding greater weight to the already heavy investment made by the Technical Secretariat on national implementation. Although the premise of bilateral assistance had been a core objective of the Action Plan, in reality the multilateral route was politically neutral and therefore more workable on a practical level. However, a number of participants highlighted the benefits in raising awareness amongst other practitioners, in particular parliamentarians and law

enforcement agencies, and to sound out champions to spearhead implementation efforts. Exploiting linkages with other, higher resonance issues could also reinforce enthusiasm for national implementation: chemical safety and Article XI were cited as two examples of these.

Outreach, Education and Codes of Conduct

Two presentations were given on this subject. The first dealt with the involvement of the SAB in discussions relating to education, outreach and codes of conduct. In this regard, the primary obligation of states parties is the dissemination of correct information to various levels of society. A number of participants believed that further activities in education and outreach should be developed by the OPCW as a formal project. The workshop also discussed the useful role that media can play in education and outreach, but noted that the level of interest assigned to the Convention by the media was rapidly decreasing.

The second presentation on this subject took into account the various activities that have been undertaken to discuss the use of codes of conduct in both the chemical and biological weapons regimes. For example, a joint OPCW/IUPAC meeting held in Oxford (June 2005) concluded that codes of conduct would complement national legislation and recommended the adoption of a three tier systems to include universal, society and workplace codes. Further activities have since been conducted by IUPAC, through its Committee on Chemistry Education, and other special projects, and the Director-General of the OPCW has recognised the positive role that codes can play in promoting compliance. Placing the issue in the wider

context of other safety and environmental concerns and regulatory systems (such as UNESCO/COMEST Codes of Ethics for Science, the Strategic Approach to International Chemicals Management (SAICM), UNEP Chemicals, and Responsible Care®) it was argued that a comprehensive and integrated approach applicable to all those working in the chemical sector is needed.

During the discussion of this paper, many felt that the advantage of a code of conduct was that it both expresses and reinforces a pre-existing norm. There was some discomfort on the part of some participants about where the line would be drawn between issues that were relevant and issues not relevant to the Convention. In addition, the effectiveness of universal codes was put into question when applied to government personnel.

Destruction of chemical weapons

Under this topic, a detailed presentation covered developments in the destruction of declared chemical weapon stockpiles in possessor states, focusing largely on destruction in the two main possessor states; Russia and the United States. According to the presentation, at the time of the workshop destruction had progressed to: 6,200 to 10,600 tonnes (or 15%–26%) in Russia; 15,430 tonnes (or 54%) in the US; >1002 tonnes (or >96%) in India; 388–970 tonnes (or 97%) in South Korea; 16 tonnes (or 100%) in Albania; and Libya was yet to begin its destruction activities.

Albania, the first state party to complete the destruction of its chemical weapon stockpile under CWC verification, overshot its April 2007 deadline by two months.

In the United States (which like Russia has its final deadline set for

2012) current government projections have set complete destruction to be achieved no earlier than 2017, however military projections set the date at 2023. Reasons for the US delay include the abandonment of an accelerated programme as resources were diverted to Iraq. Law suits have also resulted from instances where public concerns were overlooked (in this regard the case of Newport, Indiana, and the resulting secret shipment of chemical weapons across eight states to Port Arthur in Texas is most pertinent). In Russia, concentration on first stage neutralisation and the forgoing of any second stage treatment has resulted in huge volumes of toxic neutralisate being stored at the destruction facilities. Further to this, the health and safety standards under which the Russian facilities are operating (Kambarka) and being constructed (Schuch'ye) are troubling, particularly as a number of sites are located very close to extremely poor communities. The funding of the Russian programme which is heavily dependent on foreign funds through the Global Partnership has also suffered in the past year, as the US have withdrawn their contribution in the 2008 financial year. Taking these factors into account, the political will is there but the chances of Russia completing its destruction activities by 2012 remain very slim.

At the review conference, the presentation stressed that emphasis should be placed on the following issues: the critical importance of the full funding and full implementation of destruction programmes; possessor states should not underestimate political and public concerns and should certainly not become tangled up in law suits; states should recognise the tensions that arise between cost, schedule, transparency

and safety; and, relations between the main possessor states, Russia and the US, must be improved. Another issue highlighted under this session, was the technical difference between the destruction of bulk chemical weapons and the destruction of individual munitions (a much more time consuming and difficult process).

From its discussion, the sense in the workshop was that careless destruction could have disastrous consequences, and, in dealing with any non-compliance resulting from possessor states overshooting their final extended deadlines, the OPCW should refer to Article XII on redressing and ensuring compliance.

V. The Changing Emphasis of the OPCW Verification and Compliance Regime

Chemical industry and the OCPF regime

The presentation of a paper under this agenda item addressed the question: after destruction, what for the chemical industry? A functional shift would be seen, was the answer, whereby the OPCW's inspection system would shift from verifying destruction to verifying against the misuse of chemicals through technology governance. As the destruction phase of the Convention nears its end, appropriate accommodation of the chemical industry by the chemical weapon convention regime will be of increased importance: resources freed-up from destruction could be diverted to activities not prohibited by the Convention and a rethinking of the dual-use issue will be required to take into account intangibles and technological systems. The relationship with the chemical industry will need further nurturing so that it may be further integrated into the implementation of the CWC, particularly

in order to ensure the full effectiveness of the general purpose criterion, to create governance networks that extend beyond the industry, and awareness raising. This sustained interaction will have to occur at both the national and the international level, making full use of advisory systems to both the Technical Secretariat and National Authorities.

The discussion of this paper focused mainly on the nature of the transition from destruction to non-proliferation. In this regard, there was a strong feeling that the shift would be seen in specific terms; no assumption should be made that all resources previously devoted to destruction would be channelled to industry verification; it was much more likely that a smaller organisation will result. The concentration of activities on non-proliferation will be an evolutionary process developing out of the current inspection regime for OCPFs (bearing in mind the Conventions boundaries for inspections at these sites). There was scope, however, for the Organisation to build on its use of open-source material, even though this will come up against opposition from some states parties; broader declaration information; and for enhancing the overlap between non-proliferation and development goals. One of the pertinent challenges here was the current scepticism associated with the term “non-proliferation” by a significant number of states parties in the NAM – this will need to be overcome before the OPCW can delve effectively into the future shape of the Organisation.

The General Purpose Criterion (including the issue of disabling chemicals)

The next presentation under this section addressed the nature of the

risks posed to the Convention after the second Review Conference. Or in other words: is the definition of a chemical weapon, as set out by the treaty text, fit for purpose? Resulting from the foresight of the treaty negotiators, the CWC provides protection against the risk of proliferation and addresses the problem of resurging or emerging chemical weapons through its comprehensive provisions and definitions. However factors such as new utilities for chemical weapons (such as the relatively new ‘counter-terrorist’ use), new actors, and changes in science and technology could all have the potential to undermine the carefully worded definition of a chemical weapon unless care is taken at successive Review Conferences to reaffirm that such developments are embraced by the provisions of the Convention. The definition in the Convention uses the broad scientific concept of toxicity alongside the categorising notion of intent to generate the commonly termed General Purpose Criterion. Where theory and practice differ is in the ‘operationalizing’ of the General Purpose Criterion. The opening of the second paragraph of Article VI, otherwise known as the ‘Molander Chapeau’, states the positive obligation of states parties to adopt necessary measures to ensure that toxic chemicals are only used for permitted purposes, however, this paragraph is read in many different ways: some are ignorant of the comprehensiveness of the powers for implementation and many ignore the issue altogether. In this context, an international study of how the General Purpose Criterion should be implemented is due.

Hand in hand with the General Purpose Criterion is the definition of toxicity. However, a number of phrases within this definition are deliberately broad and are poorly

understood by some member states; therefore a clearer understanding of terms such as “chemical action” as well as “life processes” could be helpful. Does butyric acid, a foul smelling compound, for example class as a toxic chemical under the CWC? And do riot control agents fall under the same category? In considering these questions, it is important to note that there are no qualitative or quantitative limitations on toxicity in the Chemical Weapons Convention and this was a product of design rather than accident. Discussing the paper, participants agreed that conceptual topics should be raised but that it might provide ammunition for states parties to claim that the definitions were unclear and that they should be revisited. A general feeling was that it would be a huge mistake to change or alter the Convention’s definitions; the need was instead for shared understanding of their meaning.

Drawing from a paper written before the CWC had entered into force, a brief presentation was made on proposed guidelines for the use of riot control agents under the Chemical Weapons Convention. Such guidelines should be designed to avoid the existence of a dedicated culture of use of toxic chemicals against people, and must be clearly stated and agreed. The complexity of the term “law enforcement” was explored in terms of national jurisdiction and its distinction from warfare (itself a difficult term to define).

Another presentation maintained that the correct interpretation of Article II, paragraph 9, on law enforcement was to be taken in good faith and in the light of the object and purpose of the Convention, as mandated by the 1969 Vienna Convention on the Law of Treaties.

VI. Chemical Terrorism, Chemical Security and Article X

The first presentation under this agenda item concentrated on how barriers to chemical terrorism can be raised using a variety of tools such as increased international cooperation, accurate intelligence, effective law enforcement, and efficient chemical regulation. Although the CWC is not a treaty specifically designed to address terrorism, the presentation demonstrated that a number of its provisions are relevant to the issue and that its resonance with other UN initiatives was clear. In addressing terrorism, lessons can be drawn from the use of three elements of terrorism prevention—legislation, regulation, and outreach—in the nuclear and biological weapon regimes. Such lessons include the current limits of chemical security as compared to biosecurity, and recognition of the various ‘levels of implementation’ for codes of conduct including the relative roles of different codes. The potential benefit of combining efforts against terrorism with chemical security in developing countries under Article XI was highlighted. It was concluded that the most effective approach would follow high levels of international cooperation between governments as well as between organizations.

The second presentation on this topic identified three separate features of the threat from terrorism: the theft of chemicals; the illicit and ‘homemade manufacture of chemical weapons; and, attacks against chemical infrastructures. Even though the OPCW could never operate on a first-responder basis, it was said that the Organisation has a large role to play. Activities under Article X were not only limited to traditional, large

scale, state uses of chemical weapons but to *any* instance of chemical weapon use by any person, state or individual. In this respect, the presentation highlighted the measures undertaken in the Czech Republic through its heavy investment in defensive research and development against chemical weapons.

The subsequent discussion addressed a number of items relating to chemical terrorism, including a necessity to increase the institutional linkages between the OPCW and other relevant organizations (particularly within the UN framework). The workshop briefly discussed the ways in which a soft approach from initiatives such as codes of conduct in the chemical field could also lend support to other measures.

VII. Case Study—Taiwan

Taiwan, a huge chemical user for the electronics trade², is a so-called “adherent” but not a state party to the CWC as it is bound by the constraints of the One-China policy. In the context of the Second Review Conference, a paper was presented highlighting the concern arising from Taiwan on the possibility of strengthening the Convention’s regulations on transfers of Schedule 3 chemicals. In 2000, the CWC put into effect a ban on the transfer of Schedule 2 chemicals to states not party to the Convention which, according to Taiwanese sources, has had significant effects on its industry: a decrease in quality resulting from forced sourcing from mainland China; changes in production routes; and several industry closures. Any changes in the Schedule 3 transfer provisions would be likely to have more severe repercussions in Taiwan due to the importance of some

Schedule 3 chemicals in the production of integrated circuits.

During the subsequent discussion, it was highlighted that the subject of transfers of Schedule 3 chemicals was discussed by the OPCW in 1999, and many states parties had concluded that there was no ban mandate (for Schedule 3 chemicals) set out in the Convention.

VIII. Proposed Group of Independent Experts

The workshop was presented with a conceptual proposal for an independent group of experts to meet (in their personal capacities) to discuss difficult issues facing the CWC, and so pave the way for solutions that could be fed into the OPCW’s Technical Secretariat. This group would work in close collaboration with the Technical Secretariat and the Scientific Advisory Board.

Reactions from workshop participants were varied; some found that the description was similar to the work of this very Study Group, others supported the proposal but saw merit in the fora already set up such as the Academic Forum and the Industry and Protection Forum. There was a general feeling, however, that there was a need for a safe environment for the discussion of politically sensitive issues and that the proposal warranted further consideration. This concluded the proceedings of the meeting.

ENDNOTES

¹ This issue has also recently been raised at the Second International Forum on Biosecurity held in Budapest, Hungary from 30 March–2 April 2008.

² Taiwan’s chemical industry is worth a figure close to \$100 billion for 2008.

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Pugwash/SOAS Pugwash Workshop on Nuclear Energy, Risks of Proliferation, and a WMD-Free Zone in the Middle East: A Middle East Weapons of Mass Destruction Free Zone

London, UK, 17–18 June 2008

Following a public conference on the possibility of establishing a WMD Free Zone in the Middle East, Pugwash, in collaboration with the SOAS Disarmament and Globalisation Project, convened a private workshop on the same theme. The workshop took place on June 16-17 2008 in London. It gathered regional participants from Egypt, Iran, Iraq, Israel, Kuwait, Oman, Syria and Sudan and extra-regional participation from Canada, Germany, Italy, Sri Lanka, the United Kingdom and the United States, as well as representatives of key regional and international organizations, such as the Arab League.

The objectives of the meeting were to assess the state of compliance with major arms control agreements in the region; to gain insight into the causes behind the refusal of many Middle East states to adhere to some of the non-proliferation treaties; and to examine ways in which the goal of a WMD-Free Middle East could be achieved. The participants devoted particular attention to the NPT and the current debate about the prospects of nuclear weapons elimination in the Middle East.

The profound political differences that underlie the lack of compliance with arms control treaties and prevent the emergence of a new security architecture were immediately apparent. As noted at the beginning

of the meeting, the Nuclear Weapons-Free Zones (NWFZs) that have been established around the world have been relatively 'easy' ones where no nuclear powers were present beforehand and all states extended diplomatic recognition to each other. Even so, the case of the NWFZ in Africa had to await changes in South Africa's political system before it could be finalized after many years of negotiation.

The Status of Non-Proliferation Agreements in the Middle East

Prima facie, the status of compliance with non-proliferation agreements in the Middle East is not dismal. Most Arab states have signed the Chemical Weapons Convention (CWC) and the earlier Biological and Toxin Weapons Convention (BTWC) and have deposited the instruments of ratification with the relevant international bodies. The countries that have not signed are Sudan, Syria, Somalia, Lebanon, Libya and Egypt with regards to the CWC. With regard to the BTWC, all member states of the Arab League have signed. However four of them, Syria, Somalia, Egypt and the U.A.E. have not deposited the instruments of ratification. In the case of Syria and Egypt this last act has been explicitly linked to the behavior of Israel. For its part, Israel has signed the CWC but has not deposited the instruments of ratification and it has not signed

either the NPT or the BTWC.

The focus of the meeting, and of much of the world's diplomatic activity and media attention, is of course the tension surrounding Iran and Israel over the question of nuclear proliferation. Israel has not signed the NPT and it is believed to have an extensive nuclear arsenal that crucially includes second-strike capabilities. Israel has stated that it will sign, ratify and abide by all WMD treaties some time after the achievement of full peace in the region. Iran, as was remarked at the meeting, both in terms of declaratory policy and in terms of verified activities has signed and ratified all existing non-proliferation agreements. However, questions have been raised by the IAEA and others over its compliance, and some in the international community do not trust that the final goal of Iranian activities is an exclusively peaceful nuclear program.

This demonstrates how the obstacles to a Weapons of Mass Destruction Free Zone (WMDFZ) in the Middle East, far from being legal or technical, are political. Therefore, the discussion during the meeting kept constantly focusing back to the political disputes in the region, chiefly the Arab-Israeli conflict, whose resolution was seen as a precondition for the establishment of a Middle East WMDFZ. This indicated the primacy

of politics in the realm of non-proliferation agreements in the region, which too often is disingenuously tied to issues of international law or technical verification. In other words, it transpired clearly from the meeting how a technical infraction by Iran is treated by relevant international bodies in a wholly different manner from a technical infraction by South Korea. The same way as possession of intermediate ballistic missiles by North Korea is treated differently from the same British capability.

Regional Arms Control in the Middle East

This intermingling of political and technical issues was quickly recognized by most participants at the meeting, and an interesting discussion ensued on the reasons behind the lack of a regional arms control regime. What transpired is that most Arab states, not to mention Iran, would consider the establishment of a multilateral arms control regime in the Middle East as a sign of “normalization” with Israel. This is considered unacceptable before a comprehensive political agreement is reached. Meanwhile, as noted previously, Israel is determined not to give up its nuclear capabilities until it has enjoyed an unspecified period of full peace with all regional states.

The first proposal for a Middle East NWFZ was formulated by Iran in 1974 and received the immediate support of Egypt. Although Israel has formally expressed support for the concept of a WMDFZ, after full peace is achieved in the region, it tends to view existing proposals for such a Zone as diplomatic maneuvers aimed at creating pressure on it without fundamentally altering the security situation of the region. Not surprisingly, more than thirty years

later, the actual implementation of a NWFZ in the region is still a remote possibility and the attention of the international community is focusing on the chances of additional proliferation.

As noted during the discussion, the Israeli nuclear posture is regarded domestically as a success. Furthermore, the leaders who advocate territorial concessions and a return to the 1967 lines are the ones who always leaned towards maintaining the nuclear option for some period of time after a peace deal is signed with the Arab states. This is in stark contrast to the Israeli political leaders who frame the issue in terms of “defensible borders”. Therefore, in Israel it is the people who are pushing for a peace deal who are highlighting the strategic value of retaining for some period a nuclear deterrent as a hedge against such a deal going wrong.

The Arms Control and Regional Security (ACRS) multilateral working group, which met between 1992 and 1995, was then discussed. ACRS made some good progress in the discussion of regional CBMs. However, ACRS collapsed due to differences over the nuclear issue and concerns over “normalization,” thereby demonstrating the sensitivity of discussions over a new security architecture in the region. And yet a new regional security compact is a necessary precondition to expand membership and ratification of existing non-proliferation agreements. The collapse of the multilateral talks in the 1990s, though, is an indicator of the fact that a political resolution of current regional conflicts is a necessary but perhaps not a sufficient condition to achieve a WMDFZ in the Middle East. In fact, the retention of a strategic option by

Israel could be an important card in trying to sell a peace deal to the Israeli public until it is clear that a peace deal will be durable. This is especially the case for those in Israel who see their country’s qualitative edge in conventional capability eroding as other regional states gain access to sophisticated Western weaponry. Therefore, even if we conceive of the creation of a WMDFZ in the region as a process and not as a cathartic event, the workshop participants made it very clear that a resolution of current political disputes is the key to initiate this process.

Conclusion

There can be no progress in the direction of a NWFZ in the Middle East without a comprehensive political settlement. As of now, many regional states do not extend diplomatic recognition to each other. In this context, agitating for a WMDFZ will likely only be seen by some in the region as diplomatic maneuvering. Even after a comprehensive peace is reached, Israel will probably decide to retain a strategic deterrent capability for some period as an insurance policy against bellicose regimes coming to power in the neighboring states. Until this perception is reversed, it is difficult to foresee dramatic steps in the direction of a WMDFZ.

In fact, if we were to base ourselves on the discussions during the workshop, and to venture a prediction regarding nuclear proliferation, we could not possibly be optimistic. In addition to the much-scrutinized Iranian nuclear program, Egypt and the UAE have approached the International Atomic Energy Agency (IAEA) to jumpstart peaceful nuclear programs under the agency



(from left): Paolo Cotta-Ramusino, William Perry, Jayantha Dhanapala, Pieter de Gooijer, and Georg Frerks at Special Symposium, New Steps in Nuclear Disarmament, 58th Pugwash Conference, The Hague, April 2009

supervision, which they have a right to do, of course. Other regional states are sure to follow leading to a more volatile situation in which as one participant remarked “these programs start off as peaceful but you are never 100% sure of what is going to happen 15 years from now”.

The picture is a little rosier when it comes to other WMD non-proliferation treaties. Significant work could be done with regards to the CWC and the BTWC. This provided that: the states in the region adhere to the notion that non-proliferation should be conceived as a collective good; and that they come to the conclusion that the normalization of relations, and communication between countries for the purpose of discussing regional security can be treated as analytically and diplomatically distinct. These two principles are essential to further progress.

Communication does not mean that you agree on everything; a

nominal state of hostilities can be maintained even as new approaches to regional security are discussed. Thus, to analytically decouple communication from normalization would be very beneficial to non-proliferation efforts. Similarly, diplomatic steps could be taken and incentives could be offered to encourage states in the region to stop conceiving of adherence to non-proliferation treaties as a tit for tat issue. If this approach were to prevail we could have some concrete progress. Israel could sign and ratify the BTWC and deposit the instrument of ratification of the CWC, thereby building confidence without much prejudice to its security posture. Likewise, Syria and Egypt could theoretically deposit the instruments of ratification of these two treaties without waiting for Israel to sign the NPT (although it seems clear that at least Syria regards its CW capabilities as a deterrent to Israel’s nuclear capabilities). The

message would simply be that chemical and biological weapons are considered unacceptable instruments of war by all the states in the region.

The consensus of the meeting seemed to be that these (discussions of regional security frameworks and unilateral, but reciprocal arms control steps) are the two avenues to be explored in further discussions and on which some concrete progress could be achieved. Given the absence of a political deal over the wider differences in the region, nuclear proliferation is regarded as too sensitive an issue to be tackled head-on at an official level before a comprehensive political deal is reached, or, at the very least, before diplomatic recognition is extended by all states in the region to each other. However, work could go forward on nuclear issues in terms of discussions over such technical questions as a verification regime for a future NWFZ in the region.

NATO Advanced Research Workshop *The role of independent scientists in assessing the threat of WMD*

13–16 November 2008, Zagreb, Croatia

EXECUTIVE SUMMARY

This is an excerpt of the preliminary report by the co-directors, Prof John Finney and Prof. Ivo Slaus, on the workshop and its findings. It was provided to NATO and will appear in the book to be published in the NATO Science for Peace and Security series, subject to revision in the light of the final contributions received for the book.

A NATO Advanced Research Workshop on “The Role of Independent Scientists in WMD Threat Assessment” took place in Zagreb, Croatia from 13-16 November 2008. It was co-sponsored by British Pugwash and Croatian Pugwash, in cooperation with the Institute for International Relations (IMO). The meeting involved a total of 35 experts from 12 countries: 19 were from NATO countries, 13 from Partner Countries and 3 from Mediterranean Dialogue Countries. The objective of the workshop was:

To gather together non-governmental scientists from NATO and partnership countries, to compare best practices and limitations in independent scientific advising on the threat of WMD, to explore areas in which this interaction can be strengthened, and to explore the potential impact of better scientific advice on strengthening current non-proliferation, counter-proliferation and defence strategies in national and Alliance strategies.

Using the definition that *Threat = Capability x Intentions*, we focused on the role that independent scien-

tists can play in determining capability. We used as case studies a wide array of examples of mechanisms in which independent scientists have been utilized successfully in treaty regimes, executive and military advisory panels, national academies, NGOs, industry, think tanks, industry associations, international commissions and international organizations.

The main impetuses for involving independent scientists are the pace and complexity of scientific

advances, and the need to maintain connection with cutting edge science, a task too large and technically demanding for the intelligence and security agencies to hope to be able to handle without external expert input.

Specific recommendations for NATO include the following:

NATO could usefully begin a dialogue with Member States as to best practices in each country of the involvement of independent scientists in threat/risk assessments, and seek to mirror the best practices in NATO’s own structures.

A shared risk methodology and terminology could be developed to better understand how countries



NATO Headquarters.



Participants in the NATO Advanced Research Workshop.



Dr Gabrielle Kraatz-Wadsack.



Dr. Ralf Trapp, Dr Mohamed Kadry Said, Dr Annetegrete Falter, Prof. Branko Vitale, Dr Avner Cohen.

perceive threats differently. This could be the framework for another ARW.

A small subgroup of experts would be willing to meet with appropriate staff at NATO (either in the WMD Centre, the RTO or other relevant departments) to discuss the structures and to propose ways to strengthen the scientific advice NATO receives.

The 1961 von Kármán Committee report could be revisited, and independent scientists be involved in reexamining that 48-year-old categorization in order to form a view on

the relevance of Type C chemical weapons to today's risk assessments.

A region-wide cooperative security system for the Mediterranean could be established, involving functioning institutions, to assess threats and adopt preemptive measures. For example, the establishment of a regional task force of independent scientists on missile defense is essential for confidence building and for

supporting any future regional forum in this area.

A high-level review of the role of NATO's non-military civil functions could be conducted, so as to appreciably increase the resources for this component and to secure the interaction of the Science for Peace and Security Program with the EU, OECD and the R&D programs of the various countries.

NATO Advanced Research Workshop

The role of independent scientists in assessing the threat of WMD

13–16 November 2008, Zagreb, Croatia

Agenda

Thursday, 13 November

All day Arrival of participants

18.30–21.00 Session 1: Welcoming Reception

Ivo Slaus, *Emeritus Professor, Rudjer Boskovic Institute, Zagreb, Croatia and former Member of Parliament*

John Finney, *Professor, Department of Physics and Astronomy, University College London*

Mladen Stanicic, *Director, Institute for International Relations (IMO), Zagreb, Croatia*

Friday, 14 November

9.00–10.30 Session 2: Scientists and Policy Formation on CBRN Weapons: Current Structures
Chairs: Ivo Slaus and Brian Heap

2.a. Paper: Global Security, Weapons of Mass Destruction and the Responsibility of Scientists

Ivo Slaus, *Emeritus Professor, Rudjer Boskovic Institute, Zagreb, Croatia and former Member of Parliament*

2.b. Paper: The Role of Independent Scientific Input in NATO
Sir Brian Heap, *Vice-President, European Academies Science Advisory Council, The Royal Society, London, Former UK Representative NATO Science for Peace*

2.c. Paper: NATO in Post Cold War Era: Shift of Strategies
Noha Bakr, *Assistant Professor, The American University in Cairo*

10.30–11.00 Coffee

11.00–13.00 Session 3: How Threat Assessment Affects Policy
Chairs: Jo Husbands and Zvonimir Mahecic

3.a. Paper: The Paradox of Priority: The Impact of Divergent Threat Assessments in the Mediterranean

Mohamed Kadry Said, *Maj.Gen. (ret.), Military and Technology Advisor, Head of Military Studies Unit, Al- Abram Center for Political and Strategic Studies, Cairo*

3.b. Paper: The Role of Scientists in Verification: The Example of Iraq and Lessons Learned

Gabrielle Kraatz-Wadsack, *Chief, Weapons of Mass Destruction Branch, Office for Disarmament Affairs, former chief inspector for the United Nations Special Commission on Iraq*

3.c. Paper: Assessment of the Iranian Nuclear Threat and the Impact on Regional Stability

Avner Cohen, *Senior Fellow, USIP, former Senior Research Fellow, Center for International and Security Studies at Maryland*

3.d. Paper: Beyond a Threat Assessment: Evaluating the Effectiveness of Defenses and Other Countermeasures, and Counter-Countermeasures on the Part of the Offense

Richard Garwin (video/audio presentation), *IBM Fellow Emeritus, scientific advisor to the US government in many capacities*

13.00–14.00 Lunch

14.00–15.45 Session 4: Chemical Weapons Panel Discussion
Chairs: John Finney and Kirill Babievsky

4a. Paper: WMD Threat Assessment in the Chemical Industry: Plant Site Level

Don Clagett, *US Department of State, former OPCW*

4.b. Paper: Why it is Important to Explore the Role of Independent Scientists in CBRN Threat Assessment at this Time: A Case Study of Non-Lethal Chemical Weapons

Michael Crowley, *Project Coordinator, Bradford Non-Lethal Weapons Research Project, Bradford University, presenting paper co-authored with Malcolm Dando*

4c. Paper: Chemical Weapons Convention and Role of Engineers and Scientists

Jiri Matousek, *Former chairman, OPCW scientific advisory panel, Prague*

4d. Paper: Scientists and Chemical Weapons Policies

Robert Lovsin, *PhD candidate, University of Sussex, will present a paper by Prof. Julian Perry Robinson*

15.45–16.15 Coffee

16.15–17.45 Session 5: Biological Weapons
Chairs: Kruno Pisk and John Finney

5.a. Paper: Dual Use Aspects and Challenges for Threat Assessment

Ben Koppelman, *presenting paper by Geoffrey Smith, Royal Society*

5.b. Paper: “Responsible Stewardship” of Advances in Life Sciences Research: Lessons from the Fink and Lemon-Relman Reports

Jo Husbands, *Senior Project Director, the National Academy of Sciences, Washington, DC*

5.c. Paper: Best Practices: Follow on the Fink report – Dual use biotechnological research oversight – an Israeli perspective

David Friedman, *Col (ret.), Institute for National Security Studies, Tel Aviv, former Special Assistant for Bio/Chem Defense in the office of the Assistant Minister of Defense*

18.30–20.30 Dinner

Saturday, 15 November

- 9.00–10.30 **Session 6: Nuclear Threats**
Chairs: Götz Neuneck and Vladimir Knapp
- 6.a. Paper: Uranium Enrichment: Guns or Butter?
Houston G. Wood, III, *Professor of Mechanical and Aerospace Engineering, former manager of the Centrifuge Physics Department at the Oak Ridge Gaseous Diffusion Plant*
- 6.b. Paper: Best Practices: Collège de la prévention des risques technologiques
Venance Journé, *Researcher, National Scientific Research Council (CNRS), Paris*
- 6.c. Paper: Threat Evaluation of Ukrainian Nuclear Energy Infrastructures
Borys Zlobenko, *senior researcher, Institute of Environmental Geochemistry of the National Academy of Sciences and Ministry of Emergencies of Ukraine*
- 10.30–11.00 **Coffee**
- 11.00–12.00 **Session 7: Ballistic Missiles**
Chairs: Mohamed Kadry Said and Mile Aleksoski
- 7.a. Paper: Missile threat assessment
Geoffrey Forden, *Research Associate, MIT Program in Science, Technology, and Society*
- 7.b. Paper: Independent Scientists and Ballistic Missile Defence
Götz Neuneck, *Professor at the University of Hamburg and Head of the “Interdisciplinary Research Group Disarmament, Arms Control and New Technologies” at the Institute for Peace Research and Security Policy, Hamburg*



Dr. Geoffrey Forden.

- 12.00–13.00 **Lunch**
- 13.00–14.30 **Session 8. Panel Discussion: NATO's Role in South-Eastern Europe in Light of WMD Threat Assessments**
Chair: Mladen Stanicic

Zvonimir Mahecic (Col-ret.), “Cost-Benefit Analysis of Croatia’s Accession Process to NATO in the Light of WMD Threat Assessment,” *Security and Defence Analyst*, IMO, former assistant head, military cabinet, office of the President

Srdjan Gligorijevic, “A View from Serbia,” *Founder and Program Director, International and Security Affairs Centre*

Mile Aleksoski (Lt. Col-ret), “A View from Macedonia,” Secretary-General, Balkan Security Forum

- 14.30–15.00 **Coffee**
- 15.00–16.30 **Session 9. The Way Forward: Breaking the Threat-Counter Threat Cycle**
Chairs: Mladen Stanicic and Sandra Butcher
- 10.a. Paper: Confidence Building Measures and the Role of Independent Scientists
Colonel Tomislav Vibovec, *Chief of Staff and Deputy Director, Regional Arms Control Verification and Implementation Assistance Centre, Bestovje, Croatia*
- 10.b. Paper: Best Practices: Advising the CWC and BTWC about Trends in Science & Technology
Ralf Trapp, *independent consultant on chemical and biological weapons disarmament, formerly of the Technical Secretariat of the OPCW*
- 10.c. Paper: Including Civil Society in Confidence Building: Protecting Whistleblowers and Societal Verification
Annegret Falter, *Federation of German Scientists*
- 16.30–17.30 **Session 11: Conclusion**
John Finney, Ivo Slaus, Mladen Stanicic
- Directors’ Roundtable: Key Points from the Discussions & Recommendations

18.00–21.00 **Dinner**

Sunday, 16 November

All day **Departures**

Background Papers:

- Kirill Babievskiy and Daniil Rodionov: How Deadly Could be Non-Lethal Weapons?
- Jens Erik Fenstad (unable to attend): NATO and Science
- Götz Neuneck et al: Missile Defence and European Security
- Götz Neuneck and Jurgen Altmann: US Missile Defense Plans in Europe
- Götz Neuneck: Technical and Political Realities of Ballistic Missile Defense in Europe
- Houston Wood et al: The Gas Centrifuge and Nuclear Weapons

An International Workshop on Nuclear Weapons in Europe: *Time for Disarmament?*

Antwerp, Belgium, 21–23 November 2008

Report

By Bob van der Zwaan

The Pugwash Conferences on Science and World Affairs held a workshop entitled “Nuclear Weapons in Europe: Time for Disarmament?” in Antwerp, Belgium, from 21 to 23 November 2008. Local organizers Tom Sauer and Bob van der Zwaan of the Netherlands chapter of Pugwash gathered a group of 22 participants from 10 different countries to discuss the ways through which the number of nuclear weapons in Europe could gradually be further reduced and eventually eliminated, with a special focus on tactical nuclear weapons. The workshop took place in Hotel Prinse in the historic city centre of Antwerp.

Introduction

The total number of US tactical nuclear weapons deployed in several European members of the NATO alliance currently approximates 200. Table 1 summarizes the corresponding breakdown by country and indicates the airbases where these active US nuclear weapons are presumably stored. While the data reported in Table 1 are probably fairly good estimates – more accurate information regarding the precise numbers of US nuclear weapons in

Europe is kept confidential by NATO, the US, and the respective host countries.

The total number of 200 US nuclear weapons stationed in Europe represents several reductions achieved during this decade. The tactical nuclear weapons previously deployed in Greece were withdrawn by the US in 2001. Until 2007, US nuclear weapons were located in Germany at two different bases. However, the 130 nuclear bombs at the Ramstein airbase were in all likelihood taken away that year and shipped back to the US. Similarly, the 110 US nuclear weapons at Lakenheath in the UK are thought to have been removed in 2008. Most recently there was speculation that the 40 nuclear bombs deployed at the Ghedi Torre air base in Italy were withdrawn in the summer of 2008. Of the remaining five European countries currently possessing US tactical nuclear weapons, only three

(Belgium, Germany and the Netherlands) are in charge of nuclear strike missions for their national air forces, through so-called dual-key arrangements. The other two, both on NATO’s southern flank (Italy and Turkey) – which together possess 2 out of 3 US nuclear weapons based in Europe – are involved in the nuclear burden-sharing of NATO by hosting US airplanes and the nuclear warheads assigned to them.

Russia possesses an estimated 3,000 to 6,000 tactical nuclear weapons that at present are all assumed to be stationed on Russian territory. Certainly in the US, but perhaps also in Russia, the original figures of available tactical nuclear weapons were significantly higher. Mid-1980s, around 6000 weapons were deployed in Europe by the US under NATO auspices. These included a large variety of different types, including bombs, mines, artillery weapons and cruise missiles.

Table 1. Estimated number of US tactical nuclear weapons deployed in Europe anno 2009¹

Country	Airbase	Number of tactical nuclear weapons
Belgium	Kleine Brogel	20
Germany	Büchel	20
Italy	Aviano	50
Netherlands	Volkel	20
Turkey	Incirlik	90
Total		200

Currently the overall size of the US arsenal of operational tactical nuclear weapons is thought to be approximately 500, with another 800 presumed to be in an inactive stockpile. These weapons include gravity bombs and warheads usable on both land-attack and sea-launched Tomahawk cruise missiles. None of the approximately 100 active Tomahawk sea-launched cruise missiles with nuclear warheads are currently likely to be deployed at sea. The 200 tactical nuclear weapons based in Europe are all of the gravity bomb type for delivery by US or NATO aircraft.

The presence of American and Russian tactical nuclear weapons in Europe originates from the Cold War between these two opposing powers during the second half of the 20th century. The severe political tensions and unprecedented arms race by which the bipolar world order was characterized, however, ended two decades ago. This, as well as the observation that significant reductions have recently been achieved in the deployment of tactical nuclear weapons by the US in Europe, begs the question why some 200 of them remain at present. This workshop was dedicated to inspecting the rationale behind these residual nuclear warheads and investigating whether they could also be removed from the European non-nuclear weapon states concerned, complemented by their dismantlement and eventual elimination.

Forward Deployment

NATO's prime motivation for deploying US tactical nuclear weapons in Europe during the Cold War was to possess a deterrent against what was perceived as a conventional superiority of the

Warsaw Pact. As such, these weapons allegedly served as a means to increase security. The reasoning, however dubious, was that the threat of escalation of any East-West conflict into a "mutually-assured-destructing" US-Soviet exchange of strategic nuclear weapons, triggered by the use of tactical nuclear weapons in Europe, would withhold the USSR and its allies from initiating such a conflict, e.g. by invading a NATO member state. Today, NATO has significantly enlarged to include all Central European members and the three Baltic States that were previously members of the Warsaw Pact. With the disappearance of this adversary, NATO does not seem to have an adequate reason to retain its US forward deployed nuclear weapons in Europe.

It is thus understandable that "eliminating short-range nuclear weapons designed to be forward-deployed" is one of the concrete steps recommended recently by four American statesmen on the road toward a world free of nuclear weapons. In two widely publicized articles in the *Wall Street Journal* these respectable statesmen – George Shultz, William Perry, Henry Kissinger and Sam Nunn – make an appeal for the elimination of all nuclear weapons and describe a way via which this long-term goal could practically be achieved in a step-by-step manner².

Currently, the US is the only possessor of short-range tactical nuclear weapons that are forward deployed in other countries. In the late 1950s, the US began deployment in several West-European countries to convince them that they did not need to develop these weapons. Instead, the nuclear umbrella provided by their powerful ally would protect them. Except for

France and the UK, these countries became members of the NPT as non-nuclear weapon countries and none at present wish to build nuclear weapons domestically. In the absence of such desire, one of the original reasons to forward deploy US tactical nuclear weapons in Europe has disappeared. Unsurprisingly, several other non-nuclear weapon states have expressed their discontent with the presence of US nuclear weapons on the territory of several European NATO countries and argue that this practice is in conflict with the spirit of the NPT. The NPT commits non-nuclear weapons states not to acquire or possess nuclear weapons. Nuclear sharing was once considered a privilege by several NATO members, given it implied automatic and exclusive access to the Nuclear Planning Group (NPG). Today, however, the NPG is open to all NATO members, which removes this motivation for hosting nuclear weapons.

Continuing the practice of forward deploying US tactical nuclear weapons in Europe may increase the risk that other nuclear weapon states are tempted to similarly deploy their nuclear weapons in 'third' countries. These could not only involve the other four official nuclear weapon states – China, France, Russia and the UK – but potentially also the three *de facto* ones – India, Israel and Pakistan. In order to avoid such an undesirable scenario, the US has another reason for withdrawing its tactical nuclear weapons from Europe. Entirely eliminating forward deployed tactical nuclear weapons, and doing so publicly by the US, may also constitute a motivation for Russia to undertake a similar, if not as drastic, step regarding its own arsenal of tactical nuclear weapons.

NATO Policy

Regrettably, during the Bush administration NATO has largely distanced itself from arms control and disarmament policies. While in 2000 NATO still endorsed the '13 steps' for disarmament adopted during that year's NPT Review Conference, NATO's commitment to multilateral disarmament agreements steadily decreased in the following years. This reflected mostly the antipathy of the Bush administration to international agreements – especially those thought to restrict the US' freedom of action with respect to its national security – but also the reluctance and lack of power of European NATO members to stand up in support of multilateral reduction of nuclear weapons. Over the past years, NATO essentially suspended attempts to reduce security threats through arms control, non-proliferation and disarmament strategies, in favour of a military reply to potential threats from adversaries armed with weapons of mass destruction³. This downgrading of the role of non-proliferation primarily reflects the foreign and security policy of the Bush administration, rather than the collective

view of the Alliance. The EU still appears to place more emphasis on multilateral diplomacy to construct security from weapons of mass destruction than is now exercised in NATO. Within NATO, unfortunately, European policy seems to have been overruled by a determined Bush Administration that dominates with what can be characterized as an opposition to arms control measures.

Meanwhile, however, since 2001 approximately 300 US tactical nuclear weapons were removed from deployment in Europe: in two countries all weapons were removed (Greece and the UK) and in two other states sizeable reductions took place (Germany and Italy). If, as expected, NATO recommits itself to the '13 steps' under the Obama administration, the process of gradual withdrawal of forward deployed tactical nuclear weapons may continue, although there is no tangible evidence that this will happen with certainty in the near term. In any case, such further reductions will not be realised overnight, and may be delayed for a variety of reasons. Yet it is not unthinkable that at some point during the Obama presidency this course of action will occur. In the not

too distant future, it may then lead to a complete removal of these weapons from the European continent, in line with the call towards zero nuclear weapons by the four American statesmen. Barack Obama has expressed support for their vision, but seems well aware that, however important such a vision may be, it is not enough by itself. Also needed is a strategy on how to get to zero, as formulated in the form of a four-step transition in a recent article in *Foreign Affairs*⁴. Abandoning the controversial practice of forward deploying tactical nuclear weapons seems an evident early step in such a strategy. Moreover, drastically cutting domestic stockpiles in combination with removing its weapons from Europe could give the US the credibility necessary to convince the world of the logic of zero.

Many argue that the deployment of US nuclear weapons in NATO Europe, as well as the nuclear sharing programme under which these may be used by the Alliance in time of war, constitutes an impediment to progress at large on global nuclear disarmament and non-proliferation. If the 2010 NPT Review Conference fails like its predecessor of 2005, it may well be possible that the negotiators will retrospectively have to conclude that it partly did so because of a lack of advancement regarding the issue of forward deployment. Indeed, many countries and diplomats consider the non-nuclear weapon status of the 5 European countries that host tactical nuclear weapons confusing, and may raise this ambiguity in the agenda of the forthcoming Review Conference. Each of the 5 European nuclear weapon host states could individually advance the cause for nuclear disarmament, and thereby non-proliferation, if they expressed unilaterally (if



Planes leaving from Kleine Brogel, Belgium.

not openly) their preference to end their participation in the nuclear sharing programme and return the weapons back to the US. Such action would strengthen and restore belief in the NPT.

Currently, the greatest nuclear weapons threat to NATO is Iran, even though it remains (most likely) years away from the development of a nuclear weapon (in the worst-case scenario that Iran is actually developing such weapons). While it is uncertain whether US nuclear weapons forward deployed in Turkey involve a certain level of deterrence and constitute strategic pressure on Iran (but will most likely not keep the latter from developing its own nuclear bomb if it so desired), their removal from Turkey could have a beneficial effect in the process of negotiating a security guarantee for the Iranian government and a conditional acceptance of its civil nuclear programme in exchange for an agreement on its presumed support for terrorist activity and its alleged attempt to develop a latent nuclear weapons capability.

If one considers the removal of forward deployed tactical nuclear weapons from Europe timely, the question is whether one ought to act quietly or not. Arguments exist both in favour and against the full public disclosure of such removal. The media paid virtually no attention to the recent withdrawals mentioned above. A potential advantage of withdrawing these weapons silently is that no undue attention is drawn that otherwise may arouse concern with politicians interested in keeping them, for instance as a symbol of national prestige. Countries in Central Europe that are now members of the EU may express interest in keeping some NATO tactical nuclear weapons deployed in Europe. These nations

continue to hold reservations vis-à-vis their mighty neighbour, as demonstrated recently during the short war between Georgia and Russia in August 2008. A nuclear weapon in a nearby European ally could yield the sense of enhanced national security they desire. On the other hand, one may argue in favour of removing tactical nuclear weapons publicly from Europe. Much of the population is unaware of their presence in 5 European countries, and their existence deserves attention by the public. Publicizing their removal in one country may also prompt others to follow suit. Furthermore, public debate may reduce any misunderstanding that Europeans may have regarding the US' role for these weapons. Concurrently, the US may believe that the Europeans still prefer forward deployment (for whatever reason it may). Last but not least, one may wonder why 5 NATO members actually host US tactical nuclear weapons, while a large majority of 18 NATO countries do not see the need for their presence domestically.

Nuclear weapon states in Western Europe

Most agree that on the path towards a zero nuclear weapons world, Russia and the US bear the greatest responsibility, as they possess over 90% of all such weapons. Among these weapons are the thousands of tactical nuclear devices produced by these two nuclear weapon states, and in particular the small share of these weapons that are forward deployed. However important the arsenals of Russia and the US are in this respect, in as far as Western Europe is concerned two other countries that have NPT nuclear weapon status, France and the UK, should also be considered. The continued existence

of nuclear weapons in these two smaller countries renders non-proliferation efforts more difficult, because other medium-sized or small states, and potentially non-state actors, may see in these weapons the same virtues of deterrence and symbol of status and power.

The core argument of France and the UK for foreseeing a continued long-term role for nuclear weapons in their national security strategies is that by abandoning their weapons, then a country with nuclear weapons could pose a threat to their vital interests⁵. Only the possession of their own nuclear weapon gives these countries, they claim, the freedom to confront blackmail and acts of aggression against their vital interests by nuclear-armed opponents.

Of the 188 states party to the NPT, all but 5 have committed themselves to a non-nuclear weapon status. Many of them have the technical capacity to construct a nuclear weapon, if they so desired, but have explicitly chosen not to, since they do not consider themselves potential victims of nuclear blackmail from countries that possess nuclear weapons. The vast majority of states has voluntarily accepted non-nuclear weapon status and does not seem to suffer any disadvantage from this choice. If they do not, why would France and the UK be any different? In fact, the argument could also be turned around: it is not clear at all that any of the nuclear weapon states has so far in the past derived any benefit from its nuclear weapons by way of coercing a non-nuclear weapon state⁶.

Conclusion

Some may argue that withdrawing the remaining US tactical nuclear weapons from Europe should not figure high on the list of nuclear

priorities, given the urgency with which other cases of nuclear problématique need to be addressed, including North Korea, Iran, and the tensions between India and Pakistan. Other issues also appear significantly more relevant at present, including the ratification of the CTBT, the negotiation of an effective FMCT, and achieving a successful NPT Review conference in 2010. Several clear reasons and benefits may nevertheless be distinguished for imminently removing the remaining tactical nuclear weapons forward deployed in Europe. Firstly, their withdrawal is long overdue, given that they were introduced on the European continent during the Cold War, which concluded 20 years ago. Secondly, taking the US nuclear weapons away unilaterally could motivate Russia to make similar, or perhaps even more drastic, reductions in its arsenal of tactical nuclear weapons. Thirdly, removing them would provide a clear signal to all countries that nuclear weapon states ought to refrain from deploying their weapons in other (non-nuclear-weapon) states, thereby strengthening the NPT and increasing the chances for a successful Review Conference. Fourth, removing them would more broadly constitute another indication that the US, along with its NATO partners, takes its commitments under article VI of the NPT seriously to gradually reduce its nuclear arsenal. Fifth, the US would, by acting accordingly and thereby enhancing the chances in its own benefit to render the 2010 NPT Review Conference successful, stimulate a series of other countries to live up to their obligations under the NPT, be they official nuclear weapon

states, countries with military nuclear aspirations, or non-nuclear weapon states.

Postscript

The organizers greatly acknowledge the generous financial support from the *Flemish Peace Institute*, in particular Tomas Baum, the *Flemish Community*, and the *Belgian Ministry of Foreign Affairs*, without whom this workshop could not have been realized.

ENDNOTES

- ¹ Data in this section are taken from various sources, among which H.M. Kristensen, FAS Strategic Security Blog, www.fas.org/blog/ssp; R.S. Norris and H.M. Kristensen, "US Nuclear Forces 2008", *Bulleting of Atomic Scientists*, 64, 1, 50-53/58; M. De Andreis, USPID, "Eliminating NATO Tactical Nuclear Weapons", May 2008, www.uspid.org.
- ² "A World Free of Nuclear Weapons", *Wall Street Journal*, 4 January 2007 and "Toward a Nuclear Free World", *Wall Street Journal*, 15 January 2008.
- ³ See for example M. Butcher, paper presented in Evidence to the House of Commons Foreign Affairs Select Committee Inquiry into the Non-Proliferation Policies of the British Government, 2008.
- ⁴ I. Daalder and J. Lodal, "The Logic of Zero: Toward a World without Nuclear Weapons", *Foreign Affairs*, November / December 2008.
- ⁵ In case of the UK, see White Paper, "The Future of the United Kingdom's Nuclear Deterrent", Cm 6994, December 2006. For the French case, see *Le Livre Blanc, Défense et Sécurité Nationale*, Odile Jacob, 2008.
- ⁶ A long list of historic examples is given for the UK, USA and the Soviet Union in H. Beach, "What Price Nuclear Blackmail?", 2008, paper proffered to this workshop.

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29th Workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions: *Moving Towards the Seventh BWC Review Conference*

Geneva, Switzerland, 29–30 November 2008

Report

By Catherine Jefferson
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This workshop was hosted by the Association Suisse de Pugwash in association with GIPRI, the Geneva International Peace Research Institute. The meeting was supported by a grant provided by the Swiss federal authorities.

The workshop took place on the eve of the 2008 Biological Weapons Convention (BWC) Meeting of States Parties and was attended by 53 participants, all by invitation and in their personal capacities, from several countries including Australia, Canada, China, France, Germany, India, Italy, the Netherlands, New Zealand, Pakistan, Russia, Sweden, Switzerland, the United Kingdom (UK) and the United States of America (USA). This report is the sole responsibility of its author, who was asked to prepare a brief account of the proceedings of the meeting in consultation with the Steering Committee. It does not necessarily reflect a consensus of the workshop as a whole, nor of the Study Group. The workshop was strictly governed by the Chatham House Rule, so reference to specific speakers is not detailed here.

I: Introductory Sessions

In Memoriam

Before the business of the workshop, there were tributes to three colleagues who had passed away during the summer: Lenna Kaplan, wife of Martin for 60 years, who had made it possible for Pugwash work on CBW to keep moving since its inception in 1958; Ian Kenyon, chemical engineer, British diplomat, architect of the OPCW, and participant in most of the Pugwash CBW meetings since 1993; and Vladimir Vojvodic, participant in thirteen Pugwash CBW meetings during 1974-91, pharmacologist, and last head of the Yugoslav CW programme.

The Outcome of the Second CWC Review Conference

The workshop opened with an examination of the outcome of the Second Review Conference of the Chemical Weapons Convention (CWC). It was suggested that the outcome of the process was generally a positive one – it confirmed the political will of States Parties to support the implementation of the convention; it confirmed the basic objectives of the treaty; and it made steps forwards in allowing the system to work constructively with the Organisation for the Prohibition of Chemical Weapons (OPCW).

The extent and organisation of preparatory work, and the role



played by the OPCW in this, was also commented upon. Significant contributions to preparatory work were made by the OPCW Secretariat, particularly in relation to the events of the 10th anniversary of the CWC, such as the Academic Forum and the Industry and Protection Forum. The importance of initiatives of particular governments in organising seminars to aid preparatory work was also noted, and it was pointed out that the extension of deadlines for CW destruction (for the US and Russia) had been successfully resolved by the Conference of the States Parties.

The final document contained positive dimensions for the future, including the recognition of the potential role of the CWC in mitigating the threat of terrorism; the recognition of the evolving role of the OPCW; and the recognition of the role of wider stakeholder engagement.

Yet despite a number of positive outcomes, it was noted that important elements were left out of the final declaration, including the toxin issue and the question of incapacitants. It was suggested that the substance had been compromised by the struggle to arrive at a final declaration which ensued in the final days of the conference. This also raised concerns over how a Review Conference with such extensive preparation could have faltered towards the closing days. It was suggested that preparatory work did not engage all governments equally, nor in a timely enough fashion. It was also suggested that procedural difficulties had created suspicions (especially in the Non-Aligned Movement) that some States Parties were not being included in the full negotiation process.

Finally, comments were made on the lack of opportunities for interac-

tion with civil society during the Review Conference, particularly in comparison to the BWC process in Geneva. It was suggested that outreach activities should be improved to aid fuller participation.

International CBW Criminalization: the Harvard Sussex Draft Convention

A brief presentation was made on the Harvard Sussex Draft Convention on the international criminalization of CBW. The Draft Convention proposes to harmonise domestic law with international law by conferring on national courts jurisdiction over individuals present in their national territory, regardless of their nationality or official position, who order, direct, or knowingly render substantial assistance to the use of biological or chemical weapons anywhere.

The initiative originated from research begun in the mid-1990s and has received expressions of interest from a number of governments. It was suggested that the time might now be ripe for meaningful discussion of moving the draft convention forward into the domain of public policy.

Meeting of Experts BWC 18-22 August 2008

This session examined the outcomes of the 2008 Meeting of Experts (MX) at which, for the first time, poster sessions had been held involving participants from both government and civil society. It was noted that a high level of preparation had been conducted, generating a large volume of high quality information, including background papers prepared by the Implementation Support Unit (ISU) and working papers from States Parties. There was also participation throughout by

guests of the meeting. There were several positive and tangible results from the MX. Key outcomes on the topic of biosafety and biosecurity include:

The recognition that ‘no one size fits all’

- A clear statement of what is meant by biosafety and biosecurity in relation to the BWC
- The recognition of the need to involve all relevant stakeholders
- The recognition of the need for capacity building and the harmonisation of national legislative and regulatory regimes
- The recognition of the importance of engaging with the private sector

Key outcomes on the topic of education and awareness-raising include:

- The recognition of the importance of education and awareness-raising programmes, and the role that States Parties should play in developing and implementing such programmes
- The recognition of the need to encourage scientists to take active responsibility in addressing the threats posed by BW
- The suggestion of formal requirements in training programmes

A question was raised as to the criteria used to judge the outcome of the intersessional process a success. It was suggested that success could be defined in terms of continued relevance and could be measured by the increased participation in the MX process. The positive level of interaction between governments and industry (and the scientific community more broadly) was also stressed. It was further suggested that the value of the MX lay in providing rich and fruitful debates as part of the preparatory work of a longer-term process.

II: Moving Towards the Seventh BWC Review Conference

The Intersessional Programme 2008

Biosafety and biosecurity

This session began with a brief examination of the new EU Joint Action mandate. The new Joint Action provides a framework for cooperation on:

- National implementation assistance
- Universalisation of the BWC
- Improved modalities of Confidence-Building Measures (CBMs) forms
- Promotion of the intersessional process at regional levels
- Providing legal advice
- Promotion of the establishment of networks of national and regional actors and organisations in the arena of biosafety and biosecurity.

The next discussion examined the activities of the World Health Organisation (WHO) in respect to biosafety and biosecurity. The WHO Partnership, a collaboration of 4 WHO departments, has conducted a range of activities, including the 2006 scientific working group; technical regional meetings, raising awareness of biosafety practices and issues of biosecurity; and outreach activities on the management of risks. Feedback from these outreach activities has demonstrated the disparity of knowledge and awareness of the topic among different member states. It was suggested that guidance must be available to member states, and that a spectrum of risk management strategies applicable to different regions would be necessary.

The last discussion in this session was based on a study of dual use life sciences and their potential application in bioterrorism. Areas of life

science research activities of particular concern were identified and the potential threat posed by terrorist misuse was assessed, looking at both necessary capabilities (expertise and equipment) of terrorists and the likely resulting consequences. The results of the study suggest that the most likely bioterrorist threat scenarios are 'low tech' (require only basic knowledge and equipment) and are unlikely to produce high consequences in terms of casualties. However, it was noted that terrorists might acquire sophisticated BW capabilities through theft or diversion. A number of suggestions to mitigate the threat of bioterrorism were put forward:

- Need to enhance biosecurity to minimise the risk of unauthorised access, loss, theft, misuse, diversion or intentional release
- Need to raise scientists' awareness of potential risks since they are the first port of call in noting deviant behaviour
- Need an international, harmonised process of review for work involving 'enhanced' biological agents
- Need a verification mechanism within the BWC to minimise the possibility of illegal states programmes
- Need for transparency in biodefense programmes

Questions were raised over the process of review. It was suggested that the review process should take place before research goes ahead due to the difficulties of preventing the publication of dual use research. However, the problem of tackling inadvertently or accidentally dual use research was also recognised.

Questions were also raised over the need for transparency in biode-



fense programmes. It was noted that transparency at this level would potentially open access to dangerous dual-use knowledge. It was also suggested that transparency in biodefense programmes could lead to misinterpretations and fear in other states and, therefore, an increase in their biodefense activities. However, it was generally agreed that biodefense programmes should be made as transparent as possible.

Oversight, education, awareness-raising, and adoption and/or development of codes of conduct

This session began with a brief discussion of the Green Customs Initiative, a partnership that offers information and training materials for customs officials to combat illegal trade in commodities of environmental concern. The OPCW became a partner in the Green Customs Initiative in 2005 and it was suggested that the involvement of the BWC in the Green Customs Initiative would also be an excellent opportunity for States Parties to promote awareness-raising.

The next discussion was based on a study of biosecurity education in the life sciences. The need for education of the life scientists was stressed in order to ensure that scientists have an awareness of international law and the potential misapplication of

the life sciences, but also to mitigate feelings of over-regulation and to foster a culture of responsibility. The study examined a sample of 142 university courses across 57 universities in 29 European countries for evidence of modules on biosecurity, biosafety and bioethics, as well as references to the BWC, BW arms control, dual use and codes of conduct.

The study found only 3 out of 57 universities offered an optional biosecurity module. While there were a greater number of references to biosecurity in the sample of university courses (37 out of 142), a large number of courses made no mention at all. About one fifth of the 142 degree courses offered a biosafety module, but several of these were optional. Bioethics modules were far more prevalent. One of the biggest barriers in considering the development of biosecurity education appears to have been the growing body of competing topics which life science educators are required to teach. It was suggested that the integration of biosecurity issues into existing course structures, such as bioethics modules, could provide a means of developing biosecurity education.

The European focus of the study was emphasised and extrapolations to the global context were cautioned, though it was suggested that the results would be likely to apply globally. However, it was also noted that higher education structures and standards vary widely from country to country. As such, it was suggested that adaptable resources, rather than core content, needs to be available to countries. The possibility of introducing compulsory biosecurity courses was discussed though it was argued that this approach would not

be problem-free since it might turn biosecurity education into a simple 'tick-box' process rather than helping to foster a culture of responsibility.

The next discussion examined oversight, focusing on the US Department of Homeland Security (DHS) Compliance Review Group. The Compliance Review Group reviews all DHS-related biodefense projects to determine if they are in compliance with the BWC. Reviews of projects are made in advance of their commencement and are based on three categories – low risk (unless flagged, research is automatically approved); research that might raise questions in public; and research that is flagged as a possible compliance concern. The Compliance Review Group also maintains continual oversight as projects evolve.

While the Compliance Review Group process was considered to be robust, it was noted that the procedure was entirely internal to the DHS and it was suggested that interagency review would provide a more rigorous mechanism of oversight. It was further suggested that the DHS oversight procedure could serve as a model for consideration by State Parties of the BWC at its Seventh Review Conference. It was also noted that oversight procedures would be necessary for all dual use research activities, not just for biodefense projects.

The Seventh Review Conference 2011

The Convergence of Chemistry and Biology

This session began with a discussion of the challenges presented by synthetic biology and the overlap of chemistry and biology. It was noted that there has been an increasing interest in creating synthetic viruses

in the laboratory and the process is becoming faster, easier, cheaper and more reliable. It was noted that as well as being able to recreate traditional BW threat agents, synthetic biology could also lead to the creation of new agents through the design and construction of biological components and systems that do not already exist in nature. It was suggested that this could pose a huge challenge to the BWC in terms of the control of agents and could make the traditional select agents list obsolete.

Furthermore, it was noted that the application of engineering principles to biology means that the procedures are becoming less skill-based and more knowledge-based, which could potentially open up access to more people. It was suggested that this could have serious ramifications for the BWC in terms of regulation and verification.

The next discussion further examined the issue of dual use knowledge, focusing on an example of the new centre for molecular medicine in Sweden. The research centre is producing a compound library which includes data not only of compounds that kill bacteria, but also of compounds that kill cells. It was noted that this database could potentially provide a library of many new toxic compounds. Concerns were raised over access to and security of the database.

The next discussion examined the problem of the convergence of chemistry and biology from the perspective of the treaty regime. It was noted that both treaties have mechanisms to ensure adaptability to changes in science and technology. However, while it was agreed that the treaties could be interpreted broadly to continue to *prohibit* all new threat agents, doubts were raised over the

effectiveness of the treaty regime to *regulate* new developments.

It was suggested that greater dialogue should be initiated between the chemical and biological arms control worlds to encourage convergence of the regimes. While the difficulty of implementing verification at the international level was recognised, it was suggested that this needs to be examined as a possibility. It was further suggested that as convergence becomes more widespread the role of individual criminal responsibility becomes increasingly applicable. It was proposed that developing a concept of individual criminal responsibility and raising awareness of it could help to discourage misuse.

The next discussion provided some historical perspectives on the negotiations leading to the BWC and CWC and examined the implications of CB convergence. It was noted that while both conventions prohibit the weaponisation of toxins, this overlap has resulted in gaps rather than reinforced safeguards. It was suggested that the overlap should be rebuilt through the improved implementation and transparency-enhancing procedures of both treaties. For the BWC, a way forward would be in developing the existing CBM regime; for the CWC, there are possibilities in developing the verification regime for Other Chemical Production Facilities.

The discussion continued with an examination of the evolution of the BWC mechanism. It was proposed that the evolution of the BWC mechanism should take into account two phases – incremental changes as a result of annual meetings and review conferences; potentially fundamental changes as a result of the convergence of chemistry and biology. It was said that bridges need to be built between

the BWC and CWC, though it was noted that it could be problematic for the OPCW to engage in new objectives until the CW destruction deadlines had been met.

The discussion on convergence ended with an examination of the idea of a Framework Convention. It was suggested that the CWC and BWC, being essentially Cold War arms control treaties concerned with state programs, are insufficient for the twenty-first century. It was argued that a legal instrument was required to deal with the accelerating rate of change in science and technology, particularly as the threat moves from crude killing capabilities to the more subtle manipulation of human physiology.

Based on models from environmental law, a Framework Convention could provide capabilities to react to changes, with protocols being produced as issues become negotiable. The Framework Convention could outline objectives and principles (i.e., to protect present and future generations from being subjected to the non-consensual manipulation with malign intent of their bodies' regulatory systems through biological, biochemical and chemical agents); general guidelines for state action; established organisation infrastructures; and procedures for implementation.

Concerns were expressed that the negotiation of a Framework Convention would be difficult, especially with the extant treaties still in place, though it was noted that it could provide a useful bridge between the two treaties. Concern was also expressed that priority should be given to improving national implementation of the BWC and CWC rather than diverting resources and efforts towards the negotiation of a

new convention.

Preparing for a Successful Outcome

This session highlighted a number of issues to be considered in the run-up to the Seventh Review Conference of the BWC. Of particular note was the issue of verification of compliance. It was suggested that it would be an error for States Parties and civil society groups to expect to revert back to an attempt to continue to negotiate a BWC Protocol from where it had been in 2001. It was argued that the 2001 draft Protocol was a product of its time and new measures for verification will require careful consideration of what the BWC needs from 2011 and beyond. As was pointed out, even in terms of advances in science and technology, huge progress has been made that will impinge upon attempts to produce an effective verification protocol. It was also emphasised that the focus on verification of compliance should not distract from concerns over implementation.

A number of recommendations and courses of action were made for civil society involvement in preparations for the Seventh Review Conference:

- Production of a reference guide to all problems/contentious issues within the CWC, BWC and wider regime
- Learning from other types of treaties and regimes, including non-security agreements
- Establishment of a BWC *wiki* for the Seventh Review Conference in order that civil society groups may share and test ideas to facilitate the production of a feasible set of policy proposals and possible solutions that could be presented to States Parties.
- Do not allow preparations for 2011

to completely distract from consideration of the important topics in the ongoing intersessional programme – promoting capacity building in the fields of disease surveillance, detection and diagnosis, and containment of infectious diseases (2009); and the provision of assistance and coordination in the case of alleged use of biological or toxin weapons, including improving national capabilities for disease surveillance, detection and diagnosis and public health systems (2010).

Improving the CBM Regime

The session began by noting that CBMs continue to be an important agenda item at intersessional meetings and review conferences, which suggests that States Parties do want to obtain greater clarity. A number of themes were identified that might be useful in the discussion of CBMs during the Seventh Review Conference including the development of guidelines; clarification on the nature of past programs; elaboration of parameters; consideration of the CBM structure, procedures and political support; general consideration of non-state actors; and the revision of forms to take into account new science and technology.

The next session provided a summary of open source CBM data. At the time of discussion, 60 states had submitted a CBM form in 2008. It was stressed that this is a far cry from universal implementation for a Convention of 162 States Parties. It was noted, however, that about 50 states submitted CBMs last year and had not done so this year. It was suggested that a simple mechanism for confirming that there had been no changes would be useful. It was further pointed out that, while

important, CBMs placed a large burden on the resources of many countries, particular in regard to the rapid rate of growth in biotechnology industries. To this end, it was suggested that the forms could be redesigned to improve options for indicating changes.

Strengthening the effectiveness and improving the implementation of the Convention

This session began by examining mechanisms for strengthening the effectiveness and improving the implementation of the BWC. It was noted that a number of States Parties in the 2008 MX made reference to the importance of an implementation mechanism for the BWC in the form of a legally binding instrument of verification of compliance. A number of State Parties also highlighted the importance of the implementation of the CBM regime. It was suggested that States Parties should be encouraged to develop these thoughts by preparing Working Papers which should be submitted during the intersessional period in order to help prepare the ground for the Review Conference.

The final discussion in this session examined Vertic's Sample Act for National Implementation of the BWC which was developed to assist countries in drafting legislation to implement the BWC as well as the BW-related provisions of UN Security Council Resolution 1540. It was stressed that the Act was still a work in progress and several questions remained, the following being of particular note in discussion:

- Is it a Sample Act life scientists can live with?
- Does the certification process go far enough?
- Is the issue of publication

adequately addressed?

- Is there an adequate balance between freedom of scientific research and national security/public health?

Concerns were expressed over the inclusivity of scientists in the process, though it was noted that representation could be included in the establishment of a responsible authority for enforcement. In terms of the reaction of the scientific community it was suggested that this might depend on the process. A multistakeholder approach that included scientists around the table was recommended. It was also noted that scientists are already regulated in many other areas (eg, genetic engineering) and so should be receptive to the need for accountability. However, it was pointed out that the level of acceptability depends on the extent of the regulation and the extra work involved. Finally, concerns were expressed over the cost to countries in developing this legal framework, particularly if little or no existing provisions were in place. It was suggested that assistance from other states could provide some help in this direction.

Future Work

The session closed with the observation that a new perspective had emerged from the Pugwash workshop, one that addresses the hostile use of biology and biochemistry not only as an arms control issue, but also as a humanitarian concern. The growth of new science and technology and the attendant challenges of compliance and verification of the treaty regime were stressed, and the value of developing the idea of individual criminal responsibility was reaffirmed.

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Mr. Yu Peng, Attache, Permanent Mission of China to the UN Office at Geneva and Other International Organizations in Switzerland

Ms. Anna Zmorzynska, Researcher, Research Group for Biological Arms Control, Carl Friedrich von Weizsäcker Centre for Science and Peace Research, University of Hamburg, Hamburg, Germany

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Joseph Rotblat Centenary Celebration

London, UK, 10 December 2008

CO-SPONSORED BY PUGWASH AND BRITISH PUGWASH

Speech

By *Sir Martin Rees*
President, *The Royal Society, UK*

I'm delighted that Pugwash has chosen to hold this meeting here at the Royal Society. Its topic is, of course, timely as well as important — and a fitting way to commemorate Jo Rotblat.

Jo Rotblat helped to make the first atomic bomb. But for decades thereafter, he campaigned to control the powers he'd helped unleash. Until the last few months of his long life — he died less than four years ago — he pursued this aim with the dynamism of a man half his age, inspiring others to join the cause. It was a privilege to have known him and I'll say a few words about his life.

Jo was born in Poland in 1908. His family suffered great hardship in World War 1. He was exceptionally intelligent and determined, and managed to become a respected nuclear physicist. After the Nazi invasion of Poland, he came as a refugee to England to work with James Chadwick in Liverpool — his wife was a victim of the Nazis.

He then went with Chadwick to work on the Manhattan Project. But in his mind there was only one justification for the bomb project: to ensure that Hitler didn't get one first and hold us to ransom. As soon as this ceased to be a credible risk, Jo left Los

Alamos — the only scientist to do so.

He returned to England; he became a professor of medical physics, an expert on the effects of radiation; and a compelling and outspoken campaigner.

In 1954, Jo met Bertrand Russell, and encouraged him to prepare a manifesto stressing the extreme gravity of the nuclear peril. Jo got Einstein to sign too — it was Einstein's last public act: he died a week later. This 'Einstein-Russell manifesto' was then signed by ten other eminent scientists, all Nobel Prize winners. (Jo was diffident about adding his own signature, but Russell urged he should, as he might one day earn a Nobel himself.) The authors claimed to be speaking on this occasion not as members of this or that nation, continent or creed, but as human beings, members of the species Man, whose continued existence is in doubt". This manifesto led to the initiation of the Pugwash Conferences. In the decades since, there have been about 300 meetings; right until his death, Jo attended almost all of them.

Particularly during the 1960s, the Pugwash Conferences offered crucial 'back door' contact between scientists from the US and the Soviet Union — these contacts eased the path for the partial test ban treaty of 1963, and the later ABM treaty.

When the achievements of these Conferences were recognised by the

1995 Nobel Peace Prize, half the award went to the Pugwash organisation, and half to Jo Rotblat personally—as their 'prime mover' and untiring inspiration.

Jo's crusade was to rid the world completely of nuclear weapons. This view was widely derided as woolly idealism. But it gained broader 'establishment' support over the years. The 1997 Canberra Commission, which involved Robert McNamara and other 'establishment figures', put forward step-by-step proposals for moving towards eliminating nuclear weapons completely. Its report stated that, "The proposition that nuclear weapons can be retained in perpetuity and never used — accidentally or by decision — defies credibility". And two years ago the US gang of 4 — Shultz, Nunn, Perry and Kissinger — espoused a similar cause. And they were followed by a UK group.

Jo Rotblat lived long enough to gain public recognition for his exceptional achievements. (He was elected FRS at the age of 85 — shamefully late — and was active in the Society's affairs throughout his last decade of life). He lived long enough to see his vision become a mainstream goal. But of course we are far from its achievement. That's why this meeting is so timely. We owe it to Jo's memory to persevere with the nuclear disarmament agenda, striving — with idealism but without illusions — for an eventual nuclear-free world.

Rotblat Centenary Celebration
*Progressing the nuclear disarmament agenda:
Policy, diplomacy and science*

London, UK, 10 December 2008

Programme

9:00	Arrival	11:30–13:00	Session 2: Progressing the agenda of a nuclear weapon free world: mechanisms, methodologies and institutions <i>Chair: Professor John Finney</i> Presentation 3: ‘Taking the IISS report forward: roles for governments, think tanks and the general public’ by Dr James Acton (Carnegie Endowment for International Peace) Presentation 4: ‘Developing the disarmament laboratory concept’ by Dr Christopher Watson (British Pugwash and Royal Society Standing Committee on Scientific Aspects of International Security) Presentation 5: ‘Changing attitudes and ‘identity’: reaching pivotal constituencies’ by Carol Naughton (Co-ordinator, WMD Awareness Programme) Concluding remarks: ‘possible ways forward’
9:15–9:20	Welcome speech from Professor Martin Rees , Lord Rees of Ludlow OM Kt PRS (President of the Royal Society, Master of Trinity College, Professor of Cosmology and Astrophysics at the University of Cambridge)		
9:20–9:30	Keynote address: ‘Getting to zero: a vision of a nuclear weapons free world’ by Baroness Williams of Crosby (Advisor on Nuclear Proliferation to Prime Minister Gordon Brown):		
9.30–9.45	Opening presentation: ‘Current HMG thinking on the way ahead on nuclear disarmament and non-proliferation’ by Simon Manley (Director, Defence and Strategic Threats, FCO)		
9.45–10.45	Session 1: Creating and maintaining the conditions for a Nuclear Weapons Free World <i>Chair: Baroness Williams</i> Presentation 1: ‘Implications of present regional conflicts for nuclear disarmament Speaker’ by Professor Paolo Cotta-Ramusino (Secretary-General, Pugwash Conferences on Science and World Affairs) Presentation 2: ‘Working towards a strengthened NPT in 2010 and beyond’ by Amb. Jayantha Dhanapala (President, Pugwash Conferences on Science and World Affairs)	13:00	Seminar ends

International Pugwash Workshop on Reducing Nuclear Threats: *Possible Cooperation Between Japan and the United States*

Tokyo, Japan, 24–25 January 2009

CO-SPONSORED BY PUGWASH JAPAN AND US PUGWASH
AND THE CENTER FOR GLOBAL PARTNERSHIP

Report

By Jeffrey Boutwell

With support provided by the Center for Global Partnership, Pugwash Japan and US Pugwash brought together 27 participants from six countries for a workshop devoted to how Japan and the United States – as the two countries linked by a special bond in the nuclear age – can bring their respective strengths to bear to support international nuclear disarmament and non-proliferation efforts, especially in the period leading up to the 2010 Review Conference of the Nuclear Non-Proliferation Treaty, taking place in May 2010 in New York.

The workshop opened with keynote addresses from Amb. Rolf Ekéus of Sweden, former head of the UN Special Commission on Iraq (UNSCOM) from 1991-1997, and Prof. Mitsuru Kurosawa, Osaka Jogajuin College, and advisor to Japan's delegation to the NPT Review Conference in 2000 and 2005. In his remarks, Amb. Ekéus pointed to the critical need for ensuring a successful 2010 NPT Review Conference, and the important role that major non-nuclear weapons states like Japan, and Germany, need to play to ensure

a strengthened NPT regime. For his part, Prof. Kurosawa called for a paradigm shift in Japanese and US security thinking, one component being the transformation of the Six-Party Talks into a Regional Security Framework that includes a Nuclear Weapons-Free Zone in Northeast Asia.

In addition to the keynote speakers, workshop organizers greatly appreciated the participation of Amb. Nobuyasu Abe, former UN Under Secretary for Disarmament Affairs, and Dr. Shunsuke Kondo, Chairman of Japan's Atomic Energy Commission, both of them are now appointed as advisors to the International Commission on Nuclear Non-proliferation and Disarmament (ICNND).

Workshop Sessions

The workshop occurred only a few days after the inauguration of Barack Obama as the 44th President of the United States, an event which has created great optimism and hope around the world that a markedly different American foreign policy than that pursued by President George Bush during the previous eight years will produce a new spirit of international cooperation on many different issues, including nuclear non-proliferation and disarmament.

As one of the first presentations noted, however, Pres. Obama is

confronted by a very complex set of domestic and foreign policy issues, dominated above all by the worst economic crisis facing the US and the world since the 1930s. Expectations must be tempered as to how much the Obama administration can accomplish in foreign policy, when its top three public policy priorities will be the economy, the economy, and the economy.

Nonetheless, the President has enunciated a set of foreign and security policy goals that has resonated with the international community, including his campaign pledge to work towards a “world free of nuclear weapons.”

Workshop sessions were held on 1) raising awareness of threats posed by nuclear weapons; 2) critical examination of the role played by nuclear weapons; 3) compatibility of the peaceful use of nuclear energy with nuclear nonproliferation; and 4) opportunities for US-Japan cooperation.

Throughout the sessions, participants were reminded to keep their remarks as focused as possible on concrete policies and initiatives that could be taken by the US and Japan separately, or together, to help reinvigorate international momentum for making substantial progress toward large scale reductions in existing nuclear weapons, controlling and

diminishing extant fissile material, promoting nuclear verification and proliferation-resistant technologies, and strengthening barriers between civilian and military uses of nuclear technology and materials.

Policy Recommendations from the Japan-US Workshop

The following were the main initiatives/recommendations that participants felt could be realized in the near to medium-term through concerted efforts on the part of Japan and the United States.

1) Organize and make public a statement by former senior Japanese government officials on the desirability of eliminating nuclear weapons, similar to the Wall Street Journal article by George Shultz, Henry Kissinger, William Perry, and Sam Nunn, and similar statements from former statesmen in the UK, Germany and Italy.

- 2) More broadly, to raise international public awareness about the very real dangers posed by nuclear weapons so that publics in both the nuclear and non-nuclear weapons states keep up the pressure on their governments to reduce and eliminate these horrific genocidal weapons.
- 3) President Obama should reaffirm his campaign pledge to work for the elimination of nuclear weapons, and should seriously consider becoming the first sitting US President to visit Hiroshima and Nagasaki.
- 4) The Obama administration should seek early ratification of the Comprehensive Test Ban Treaty and work toward early entry into force of the treaty.
- 5) The two countries should seek early negotiations on concluding a verifiable Fissile Material Cut-Off

Treaty (FMCT), in part by working together to convince China to drop the linkage between the FMCT and space weapons.

- 6) Japan and the US should coordinate research and development of new technologies to improve and disseminate verification and proliferation resistant technologies, with the aim of strengthening both the disarmament and non-proliferation objectives of the Nuclear Non-Proliferation Treaty.
- 7) The US and Japan should coordinate strategies, with other countries in “coalitions of the willing,” to expand IAEA safeguards agreements to some 30 NPT states parties that do not yet have them.
- 8) As technological leaders in the civil nuclear field, Japan and the US can help build international support for international fuel cycle arrangements, such as the MNA concepts proposed by the IAEA.
- 9) Recognizing the grave threat posed by terrorist acquisition and use of a nuclear device, the two countries should accelerate efforts to further safeguard fissile material and work with work with countries to implement UN Resolution 1540 measures.
- 10) Japan and the US could seek international support for globalizing the 1987 Intermediate-Range Nuclear Weapons Treaty (INF) – possibly through the Conference on Disarmament (CD) - thus completely eliminating this destabilizing class of weapon, as the US and Russia have already done.
- 11) The two countries could begin a dialogue on concluding a bilateral No First Use agreement.



Mitsuru Kurosawa and Rolf Ekeus.

There are other issues on which the US and Japan could consult, bringing in other countries as necessary, to forge coalitions of countries with particular interest in issues relating to nuclear disarmament and non-proliferation. Such cooperative efforts could be particularly important vis-à-vis the concerns of major non-nuclear weapons states (NNWS) concerning their obligations and rights under Article VI of the NPT. One can also imagine that Japan's technology could be of interest to Iran in providing a solution to the issue of Iran's nuclear program.

Analysis is also needed to examine whether long-standing strategic concepts are still relevant in the greatly altered security environment of the 21st century. In particular, teams of Japanese and American strategic thinkers could analyze:

- 1) The future of extended deterrence in East Asia and the extant relevance of the US nuclear umbrella;
- 2) The global environmental and climate change affects of even a limited nuclear war, for example in South Asia;
- 3) The feasibility of devising prior penalties and sanctions for countries that violate their NPT obligations, in order to establish clear red lines for punishing such violations before they occur.

These and other studies could be useful in helping to devalue the role of nuclear weapons in political and military affairs and increase public awareness of the threat posed by nuclear weapons.

In sum, the next 12-18 months, from January 2009 through June of 2010, will be an important period in



John Finney, Tadahiro Katsuta, Tatsujiro Suzuki.



Right to left: Wakana Mukai, Takao Takahara, Zhao Wuwen, Masako Ikegami, Lynn Eden.

which to reverse the setbacks to the non-proliferation regime that have occurred in recent years. The goodwill that Pres. Obama brings into office and the opportunity for setting in place the foundation for a successful NPT Review Conference in May 2010 are opportunities that Japan and the US can take advantage of in many different ways.

Workshop participants and Japan Pugwash and US Pugwash are grateful to the administration and staff of the Institute for International Studies, Meiji Gakuin University in Tokyo, for providing the conference facilities and superb workshop support.

Participants

Nobuyasu Abe, Japan Institute of International Affairs, former UN Under-Secretary General for Disarmament Affairs, Japan

Nobumasa Akiyama, Hitotsubashi University, Japan

Jeffrey Boutwell, Pugwash Conferences on Science and World Affairs, US

Jor-Shan Choi, University of Tokyo, Japan

Lynn Eden, Center for International Security and Arms Control, Stanford University;

PUGWASH COUNCIL, US

Rolf Ekéus, Swedish Pugwash Group, Sweden

John Finney, University College London, Member, Pugwash Council, UK

Masako Ikegami, Stockholm University, Sweden

Miki Imai, Japan Foundation Center for Global Partnership, Japan

Tomohiro Inagaki, Hiroshima University, Japan

Katsuko Kataoka, International Physicians for the Prevention of Nuclear War, Japan

Tadahiro Katsuta, Meiji Gakuin University, Japan

Shunsuke Kondo, Atomic Energy Commission, Japan

Akira Kurosaki, Rikkyo University, Japan

Mitsuru Kurosawa, Osaka Jogakuin College, Japan

Yasunori Morino, Ministry of Foreign Affairs, Japan

Wakana Mukai, University of Tokyo, Japan

Sadaaki Numata, Japan Foundation Center for Global Partnership, Japan

Hitoshi Ohnishi, Tohoku University, Japan

Susan Pickett, University of Tokyo, Japan

Tatsujiro Suzuki, University of Tokyo, Japan

Takao Takahara, Meiji Gakuin University, Japan

Masafumi Takubo, Kakujoho Nuclear Information Center, Japan

Richard Tanter, Nautilus Institute, Australia

Philip White, Citizens' Nuclear Information Center, Japan

Fumihiko Yoshida, Asahi Shimbun, Japan

Wuwen Zhao, China Academy of Engineering Physics, China



Zhao Wuwen, Jeffrey Boutwell, Masako Ikegami, Rolf Ekeus.

Pugwash meeting on “Prospects for Restarting India-Pakistan Dialogue”

Islamabad, Pakistan, 5-6 March 2009

The Pugwash meeting on the ‘Prospects for Restarting the India-Pakistan Dialogue’ was held at the Marriott Hotel, Islamabad, Pakistan on 5-6 March 2009. Thirty-one participants from India, Pakistan, and Indian and Pakistani Kashmir attended the meeting. The participants included leaders of major political parties in Indian and Pakistani Kashmir, retired government servants, diplomats, academics, analysts, and prominent civil society actors from India and Pakistan. While the meeting was held specifically to address the emerging bilateral relationship after the Mumbai terror strikes on the November 26, 2008, it was part of the larger Pugwash track-II dialogue initiative in the region that began in 2002.

The meeting featured a healthy and candid discussion. The first day of the conference centered around the current state of India-Pakistan relations, the Mumbai terror strikes and its impact on the peace process, and the way to restart the peace process. Discussions on the second day honed in on Afghanistan and its effect on the Indo-Pak relationship.

Key Issues

1. Perhaps the most important point of unanimous consensus among participants was that unofficial interaction between Pakistani and Indian experts, like this Pugwash meeting in Islamabad, should

continue uninterrupted irrespective of the bilateral relationship between India and Pakistan. All participants felt that there was tremendous value added of such interactions; these could act as a genuine means to convince governments of the need for rapprochement and provide new ideas to that effect. Overall, there was support for increased track-II interaction.

2. In a show of unity, the participants decided to begin the proceedings with a one-minute silence for the victims of the terrorist attacks in Mumbai and Lahore. There was a consensus among all participants that terrorism is a common enemy, to defeat it India and Pakistan must work together. Participants agreed that the mutual blame game was counterproductive and played into





Alexander Nikitin, the late Robert McNamara, and former Foreign Minister Abdul Sattar at Pugwash workshop in Lahore in March 2003.

the hands of those perpetrating the attacks.

Pakistani participants were extremely candid about the capacity problems the Pakistani state is facing to deal with non-state actors. They agreed that Pakistan was infected by terrorism and that its instability could destabilize the whole region. They argued that Pakistan needs reinvigorated efforts to tackle militant activity within its borders, while India needs to be more understanding towards Pakistan in its posturing.

In line with the spirit of collaboration, participants argued that India and Pakistan should increase the

number of joint mechanisms to deal with issues of common interest. These ought not to be limited to terrorism but should also include trade and commerce, among other sectors.

Participants stressed that irrespective of the level of tensions between India and Pakistan, Kashmir's importance could not be undermined; normalization of the lives of Kashmiris is a goal that participants felt should be pursued without disruption. There was unanimous support for enhancing interaction among Kashmiri politicians and civil society across the LoC. Participants

requested Pugwash to provide a regular forum for these groups to come together and discuss means of enhancing cross-LoC interaction, which is especially when Indo-Pakistani relations are particularly volatile.

On Afghanistan, participants felt that future meetings should include an Afghan presence in a bid to understand Kabul's preference on Indian and Pakistani roles in ensuring Afghanistan's return to normalcy. Participants suggested that both Pakistan and India should look beyond the current zero-sum approach they have adopted in their Afghan policies. They contended that a number of areas of mutual interest existed where, by starting with modest initiatives and objectives, the two sides could complement each other's efforts. Some of the areas highlighted were women's development, institution building, and revamping the education sector.

Overall, despite some differences on the timing and manner of execution, most delegates expressed their desire to restart the peace process and urged India and Pakistan to create mechanisms whereby bilateral relations are not held hostage to the designs of non-state actors.

Participants

A. PAKISTAN

Sherry Rehman, Information Minister and spokesperson, Government of Pakistan

Abdul Sattar, former Foreign Minister

Najmuddin Shaikh, former Foreign Secretary

Aziz Ahmad Khan, former Ambassador to Afghanistan and High Commissioner to India

Humayun Khan, former Foreign Secretary and High Commissioner to India

Lt. Gen. (ret) Talat Masood, former Defense Secretary

Ahmer Bilal Sofi, Advocate Supreme Court and President, Research Society for

International Law

Rustam Shah Mohmand, Pakistan Afghanistan Jirga, Former Chief Secretary NWFP, former Ambassador to Afghanistan

Safyia Aftab, Resarch Fellow Strategic and Economic Policy Research

Waleed Rasool, AJK University

Sardar Attique Ahmed Khan, former PM of Azad JK & Leader of the Opposition AJK Assembly

Arif Kamal, Ambassador & Director Global Studies, National Defence University

Tariq Osman Haider, former Foreign Additional Secretary

Shah Ghulam Qadir, Speaker AJK Assembly

Abdul Hameed Toor, Professor, Department of Physics QeA University

Zahid Hussain, journalist, the Times, Wall Street Journal

Nasim Zehra, journalist and associate, Harvard University

Ismail Khan, journalist

Shafqat Kakakhel, diplomat

Moeed Yusuf, Harvard University and Boston University



Alexander Nikitin, Paolo Cotta-Ramusino and Claudia Vaughn at the Pakistan-India border, March 2003

B. INDIA

Amitabh Mattoo, Professor JNU University, former Vice Chancellor Jammu University

Uday Bhaskhar, Cmdr (ret.)

Raja Menon, Rear Admiral (ret.)

Mehbooba Mufti, President PDP of JK, Member of Parliament (Lok Sabha)

Iftikhar Hussain Ansari, Molvi and PDP of JK

Uma Singh, Professor, JNU University

Kapil Kak, Air Vice Marshall (ret.)

Madhu Kishwar, journalist

Ved Bhasin, chairman Kashmir Times

Happymon Jacob, JNU University

C. PUGWASH

Paolo Cotta-Ramusino, Secretary General, Pugwash

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Autonomous Province of Trento

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INTERNATIONAL SCHOOL ON DISARMAMENT AND RESEARCH ON CONFLICTS

23rd WINTER COURSE

The Road to Nuclear Zero and Arms Control

ANDALO (TRENTO), ITALY, 10-17 JANUARY 2010

ISODARCO has organized residential courses on global security since 1966 primarily in Italy but also in China, Germany, and Jordan with the generous support of private foundations and international and national institutions and organizations. The courses are intended for those who would like to play a more active and technically competent role in the field of international conflict resolution as well as those who already have a professional interest and experience in this field. The courses are intensive, interactive, and interdisciplinary in focus. The subject matter spans the technical and scientific dimensions of these problems as well as their sociological and political implications. After a decade and more during which the issues posed by nuclear weapons were largely eclipsed by concerns over ethnic wars and the threat of terrorism, there is renewed serious interest in the goal of nuclear disarmament. The 2010 ISODARCO Winter School will be devoted to the practical steps to be implemented to arrive to a nuclear-weapon free world, with emphasis on the potential role for arms control.

INVITED LECTURERS

James Acton (Carnegie Endowment for International Peace, USA)*; Alexey Arbatov (Carnegie Moscow Center, Russia); Nadia Arbatov (Institute for World Economy and International Relations, Russia); Sergey Batsanov (Pugwash Conferences on Science and World Affairs, Geneva, CH); Emma Bonino (Italian Parliament, Italy); Marco De Andreis (Italian Customs Agency, Italy); Matthew Evangelista (Cornell University, USA); Lukasz Kulesa (Polish Institute of International Affairs, Poland); Giorgio La Malfa (Italian Parliament, Italy); Andre Meerburg (Former Ambassador from the Netherlands, NL); Andreas Persbo, (VERTIC, UK); Randy Rydell (Office for Disarmament Affairs, United Nations); Bruno Tertrais (Foundation for Strategic Research, France); Jean Pascal Zanders (European Union Institute for Security Studies, France)*

* - to be confirmed

Additional information on the School can be found at www.isodarco.it

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Pugwash Consultations on Iran's Relationship with the West *The Hague, The Netherlands, and Vienna, Austria, 2008*

By Paolo Cotta-Ramusino
Secretary General of Pugwash

In 2008, Pugwash held four meetings in Europe that included, in their personal capacities, several Iranian officials and some experts from the West and a few other countries. The scope of the meetings was to address ways to develop discussions with Iran that could bring about a more constructive climate and possibly yield some positive results.

This brief note contains informal observations and suggestions on a future US-Iran or EU-Iran dialogue, based on the experience of these four meetings. It should be stressed, however, that this note reflects solely the opinions of the author. No participant in any of these meetings shares any responsibility for this note, since the purpose of the meetings, as is the case for any Pugwash meeting, was not to reach a formal consensus among the participants.

The starting point is that *the success of any negotiation requires that each party perceives the result as a victory. In this case, Iran primarily must be convinced that it will have the possibility of acquiring*

economic and political gains through better relations with the West, and the West primarily must be reassured about containing the risks of nuclear proliferation. Moreover, both parties should be happy that regional issues might be constructively discussed and could possibly be conducive to a better regional security architecture.

From this experience, I offer some specific observations about negotiations with Iran. These points take into consideration what I perceived as significant concerns on the Iranian side more than the so-called western concerns or western redlines, which are daily recalled to us in many ways. The aim here is to see if compromises may be possible. Of course, those actually participating in official future talks will say the final word.

There is a general philosophical approach of the Iranian political leadership that should be understood. This approach deals with some "basic principles" such as "justice," on which an agreement is possible, even if opinions can differ on conclusions and implications.

A logical conclusion of the basic principles would be the rejection of nuclear weapons (NW) as an acceptable instrument of warfare. Any statement or agreement aimed at rejecting NWs as a legitimate



instrument of warfare would be considered positive and important.

The specific nuclear problem could be fruitfully addressed if some basic principles of the NPT are recalled, assumed, and implemented. The Iranians will stress mainly the principle of “no extra discrimination,” in addition to the (already discriminating) distinction between Nuclear Weapon States and Non-Nuclear Weapon States. In particular, there is nothing in the NPT that forbids uranium enrichment. If Iran wants to enrich, the argument goes, it should be allowed to do so. On the other hand, regulating the enrichment capability on a mutually agreed basis, strengthening the international monitoring regime and implementing multinational fuel cycle units or consortiums, are all topics that easily could be discussed, and where a consensus should be possible. The ensuing framework should be reassuring enough for those who are concerned about the risks of Iranian nuclear proliferation. The additional protocol with the IAEA should be implemented (even if the ratification procedure will take time). The relationship between Iran and the IAEA is a positive one and could be made better if the additional protocol will be ratified. There should be no obstacle to continuing the review of past Iranian nuclear activities (if continuing such a review will be needed). Of course there is also the possibility of Iran giving up uranium enrichment and fuel fabrication inside Iran, in front of absolute guarantees of nuclear fuel supply. This is the preferred opinion of many people in the west. Economically it can make sense. Iran, however, does not seem ready, at this stage, to agree to this viewpoint. But it should be pointed out that if future talks will be focused on “enrichment in Iran yes vs. enrichment in Iran no”, these talks will go nowhere. From the point of view of preventing proliferation what really matters is monitoring and international control.

The argument that monitoring cannot prevent the possibility of secret enrichment facilities is true, but it is also a misleading argument. Nothing can exclude the existence of secret facilities in any country, unless a full-scale military occupation of that country by foreign forces and/or the destruction of its industrial infrastructure is carried out. If these apocalyptic options are, as they should be, out of the question for Iran, then one must accept that Iran already has an enrichment capability. Forcing Iran to declare that it will no longer enrich will not provide an absolute guarantee against secret enrichment facilities.

Using the argument that the “International Commu-

nity” does not trust Iran only antagonizes Iran. Furthermore, the argument limits the definition of the “international community” to primarily Western countries. This will be pointed out immediately by Iran.

“Isolating” Iran will neither improve the situation, nor will it eliminate the risks of proliferation. On the contrary, multiplying opportunities for business, cultural, and scientific cooperation could facilitate confidence building across the existing dividing lines and enhance mutual understanding.

The idea of dealing with selected authorities (such as the supreme Leader as opposed to say the President or his representatives) in Iran is not really a sensible one. In any negotiation it is not up to one of the two parties to select the representative of the other party.

Specific issues of regional security (Iraq, Afghanistan, etc.) could be discussed easily in parallel talks. There is a large commonality of interests in preserving and strengthening regional stability and avoiding the spread of areas of lawlessness where terrorist groups might prosper.

One of the most controversial topics is the issue of Israel and Palestine. We have heard very harsh rhetoric from all sides. *Beyond the rhetoric*, in a nutshell, the Iranian position is that a just solution for Palestine should be a State where each citizen (be s/he a Jew, Muslim, or Christian) has the right to vote and be represented. Namely, Iran supports a one-state as opposed to a two-state solution—a legitimate position to hold, albeit different from the equally legitimate position supporting the two-state solution. The common ground here should revolve around the prospect that every country or (national-political) group can contribute to peace in Palestine. It may be pointed out by the Iranians that to ask that Iran withhold its support of Hezbollah (or Hamas), would be like asking the US to withhold support of Israel.

All in all, Iran is interested in having its regional role recognized. Iran wants to be treated as a legitimate, relevant regional player. The West too might be interested in seeing this development implemented, provided that some guarantees are given. For a successful result, compromises should be conceived, discriminations against specific countries and political groups should be abandoned, and all parties in the region should be induced to talk to each other with the idea of stopping violence and building common security. It will not be easy, but steps in this direction can be made and can have an impact on the ground.

In order to facilitate the negotiating process, groups of non-officials could develop:

- Discussions on disarmament and non proliferation issues, and on the value of specific safeguards for the nuclear civilian programs. Such discussions could be explored among an international group of scientists, crucially including Iranian scientists.
- Dialogue on regional security issues, starting with maritime security in the Persian Gulf and proceeding with Iraq, Afghanistan, Palestine, etc.

Among the other topics discussed in our meetings, I would like to mention the following proposals :

- Proceeding towards the re-establishment of US-Iran diplomatic relations, by first having interest sections manned by nationals of the respective countries, who should be entitled to issue visas.
- Reaffirming the Algiers accords (1981) that, *inter alia*, forbid attempts to work towards regime changes in Iran.
- Establishing direct flights between the two countries and solving the relevant security problems by mutual agreement (there are few hundred thousands of passengers travelling annually between Iran and the US).
- Organizing Parliamentarians' exchange visits and inter-parliamentarian meetings.

- Discussing economic cooperation in conjunction with the switching off of sanctions.
- Facilitating cultural and scientific exchanges and visits of citizens.

After the elections of June 12th in Iran, the situation got more complicated. The lack of fairness and the non-correctness of the elections is, of course, a very important problem that pertains primarily to the Iranian people and their political system. The foreign countries can certainly call the Iranian leadership to respect human rights and to respect of the will of the Iranian people. Yet ultimately, the managing of the post-election life in Iran is an internal Iranian problem and should not be used as an excuse to block negotiations between Iran and other countries. In very politically uncertain situations, like the current Iranian situation, proper time should be allowed for the dust to settle and for the Iranian political system to redefine its priorities and get properly organized. Excessive time pressures on Iran from the west may well be counter-productive and lead to unwanted results. This is particularly true if such time pressures are accompanied by the prospect of a military attack.



Paolo Cotta-Ramusino at an International Conference on Iran's Nuclear Energy Program, Tehran, April 2006.

Pugwash Policy Outreach

Holdren Brings Science Back to the White House

By Jeffrey Boutwell

9 July 2009

In December 1995, on a chilly winter's day in Oslo, John Holdren delivered an eloquent Nobel Peace Prize acceptance speech on behalf of the Pugwash Conferences on Science and World Affairs. For the first time in its 95-year history, the Nobel Peace Prize had been awarded jointly to an organization, Pugwash, and to an individual, Joseph Rotblat, Pugwash's co-founder and then-president. Coincidentally, Holdren, who attended his first Pugwash meeting in the early 1970s and was chair of the Pugwash Council Executive Committee from 1987 to 1997, had developed an incredible bond with Rotblat over the years and remained devoted to him until Rotblat's death in August 2005.

Fast forward to this April and a meeting Holdren held with the Pugwash leadership – President Jayantha Dhanapala, Secretary General Paolo Cotta-Ramusino, and myself – shortly after he assumed his new duties as science adviser to President Barack Obama and director of the White House Office of Science and Technology Policy. In a rich tradition of Pugwash-linked presidential science advisers going back to George Kistiakowsky (under President Dwight D. Eisenhower) and Jerome Wiesner (under President John F. Kennedy), Holdren expressed great optimism about the positive role that science and technology will play in the Obama administration's policies. Whether helping fuel economic recovery, utilizing renewable energy sources on a far greater scale, unlocking new discoveries in medicine and the biosciences, or constraining (and ultimately, eliminating) nuclear weapons, the scientific and technical communities (including Pugwash) will be at the forefront of shaping policies that maximize the benefits of science and technology for all.

Throughout the globe, there is renewed hope and optimism that progress can be made toward a nuclear-weapon-free world. In his joint April communiqué with Russian President Dmitry Medvedev and his Prague speech a few days later, Obama committed himself to reducing U.S. and Russian nuclear arsenals through a new, verifiable START agreement, U.S. ratification of the

Comprehensive Test Ban Treaty (CTBT), and a Fissile Material Cutoff Treaty. These and other actions would certainly improve the prospects for a successful Nuclear Non-Proliferation Treaty Review Conference in 2010, which is crucially important after years of decay in the foundations of the nonproliferation regime.

But optimism must be translated into results, and the Senate's advice and consent to the CTBT isn't a foregone conclusion. At least eight Republican votes for ratification will be needed. It would be a Faustian bargain if those votes were secured with any quid pro quo that involves the Reliable Replacement Warhead Program. In fact, the international community more than likely would reject such a deal as undermining the very purpose of the CTBT.

Even assuming the United States ratifies the CTBT, that is only the first step. The eight other countries (China, Egypt, India, Indonesia, Iran, Israel, North Korea, and Pakistan) whose signature and/or ratification are necessary for the treaty to enter into force and be implemented also must be convinced to sign on. As perhaps the only international nongovernmental organization with credible, long-standing contacts in all of these countries, Pugwash is well positioned to make this happen. Even as the U.S. ratification process and other international negotiations proceed, Pugwash will be working, as it often has, on the "steps after next" (as Rotblat often phrased it) to ensure the long-awaited total ban on nuclear weapons testing.

In the recently concluded 58th Pugwash Conference held in the Netherlands, the Pugwash Council issued a statement noting, "Recent statements by many senior political leaders and others around the world calling for a nuclear-weapon-free world are surely welcomed, and give credence to a goal that Pugwash has espoused for more than 50 years."

There is growing broad-based political support, from liberals and conservatives, on all continents, for the zero nuclear weapons goal. And now Obama – president of the first country to develop nuclear weapons and the only country to use them in war – has declared, "The United States has a moral responsibility to act . . . to seek the peace and security of a world without nuclear weapons." In this vein, the upcoming U.S. Nuclear Posture Review will be vitally important in implementing fundamental

changes in U.S. military policy that reduce the role of nuclear weapons and more largely, devalue nuclear weapons around the world.

Undoubtedly, incremental steps toward zero will be necessary. But this shouldn't obscure the fact that it will be unacceptable to consent to anything less than a total commitment to declaring nuclear weapons illegal and immoral and eliminating these weapons completely. This goal needs to be realized as expeditiously as possible because, as the Pugwash Hiroshima Declaration in 2005 noted, as long as nuclear weapons exist, they will be used one day.

In the many years that they worked together, Holden and Rotblat talked and wrote often of the desirability and feasibility of moving toward a nuclear-weapon-free world. Somewhere, Rotblat is smiling, delighted in the position that Holdren holds and confident that his lifelong optimism about the innate goodness and wisdom of humanity can ultimately be realized in the goal he worked for unrelentingly – the complete abolition and elimination of nuclear weapons.

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PUGWASH MEETINGS IN WASHINGTON, DC



Jayantha Dhanapala and Paolo Cotta-Ramusino with Science Advisor John Holdren.



Jayantha Dhanapala and Assistant Secretary of State Rose Gottemoeller.



Jon Wolfsthal of Vice-President Biden's Office with Jayantha Dhanapala and Paolo Cotta-Ramusino.



Paolo Cotta-Ramusino and White House WMD Coordinator Gary Samore.

Pugwash at the NPT PrepCom New York May 2009

NGO Activities at the NPT PrepCom at the United Nations in New York, 4-8 May 2009, including a special screening of the documentary film, *The Strangest Dream*, about Pugwash and Joseph Rotblat, on Monday, May 4, with Director Eric Bednarski and Producer Kent Martin.



(left to right) Jonathan Granoff, Michael Douglas, Sergio Duarte, Jayantha Dhanapala, and Nobuyasu Abe.



Sergio Duarte and Jayantha Dhanapala.



Eric Bednarski, Michael Cassandra and Kent Martin.



The NPT PrepCom in session.



Carol Naughton and Bob van der Zwaan.



Jayantha Dhanapala, Sergio Duarte and Tom Perlmutter.



(left to right): Christie Brinkley, Gareth Evans, Henrik Salander, Hideo Hiraoka, and Alyn Ware.



Frank von Hippel, Zia Mian, and Hal Feiveson.

SPECIAL

THE PUGWASH HISTORY PROJECT

The Pugwash Council, at its meeting in The Hague in April 2009, once again reiterated its support for efforts to increase awareness of the organization's history. The Pugwash History Project continues to explore Pugwash's contributions, especially to lay the groundwork for the current growing consensus for a nuclear weapons free world through Track II dialogue. This is accomplished through research, interviews, disseminating information to researchers and students, public speaking, and some shorter publications, with the goal of a book-length history. We currently are actively seeking funding for this research.



Pugwash President Jayantha Dhanapala with Dr Patricia Lindop, former Assistant Secretary General of Pugwash.

The Strangest Dream

In the past year, our main outreach has been to support screenings around the world of *The Strangest Dream*, Eric Bednarski's critically acclaimed film by the National Film Board of Canada. The film's European premiere took place in London on 9 December 2008 as part of the Pugwash celebrations of the centenary of Joseph Rotblat's birth (co-sponsored by British Pugwash), at the prestigious British Academy of Film and Television Arts. It has been screened at the United Nations (co-sponsored by Amb. Sergio Duarte) and at the European Parliament. From Russia to Australia, from Canada to Italy, from Japan to Scotland, senior Pugwashites and national Pugwash groups have hosted screenings of the film in academies of science, universities, war museums and at NGO events (to order the film please go to: <http://films.nfb.ca/strangest-dream/>).

As consultant on the film, I took great heart that people who had never met Rotblat and who knew nothing about nuclear weapons were able to capture his message so well. I believe he would have been quite pleased by the fact that it was directed by a young and talented Nova Scotian. On a somber note, I am sorry to report that Halina Sand, Jo Rotblat's niece and a British Pugwash member who is featured so poignantly in this film, died in July 2009.



Sandy Butcher, Eric Bednarski, Director of *The Strangest Dream*, BAFTA Theatre, London 9 December 2008.

Codifying the Legacy

New scholarship will soon emerge about Joseph Rotblat and the Pugwash Conferences, as Rotblat's papers (some three tons of material) become available to researchers and scholars at the Churchill Archives at Cambridge University. Thinkers' Lodge in Pugwash, Nova Scotia, has now been designated a National Historic Site in Canada, and planned restoration work is underway. Please visit our new blog: www.pugwashhistory.blogspot.com, the first stage in our plans to upgrade the historical sections of the Pugwash website.

Sandy Butcher

International Student/Young Pugwash *Climbing to the Top of the Mountain*

Pugwash, Nova Scotia, Canada, July 11, 2009

Reporting on the Nuclear Freeze Movement in 1983, a young Columbia University undergraduate profiled two student-run disarmament organizations for the campus news magazine, *The Sundial*. In his assessment of their efforts he wrote “the narrow focus of the Freeze movement, as well as the academic discussions of first versus second strike capabilities, suit the military-industrial interests, as they continue adding to their billion dollar erector sets.” In the article titled *Breaking the War Mentality*, he stated that one “is forced to wonder whether disarmament or arms control issues, severed from economic and social issues, might be another instance of focusing on the symptoms of a problem instead of the disease itself.” The student, Barack Obama, then expanded on these thoughts in a term paper on nuclear disarmament.

In 1983 the nuclear arms race between the United States and the Soviet Union put the continued existence of the human race in doubt. Today the specter of the past remains: the detonation of just one of the thousands of remaining nuclear weapons in a city or population center would fundamentally change the world as we know it.

It is extraordinary to see the ideals of a young student translated into national and international policy a quarter of a century later. In Prague on April 5th, 2009, U.S. President Barack Obama stated America’s “commitment to seek the peace and security of a world without nuclear weapons.” Earlier that week President Obama joined with Russian President Dmitry Medvedev to pledge that their two countries would work together to achieve “a nuclear weapons free world.”

For more than 50 years the Pugwash Conferences on Science and World Affairs has worked towards this goal and applauds the revitalization of the nuclear disarmament movement. The statements by Presidents Obama and Medvedev follow the remarkable pronouncements on a world free of nuclear weapons articulated in 2007 and 2008 by U.S. statesmen Henry Kissinger, Sam Nunn, William Perry, and George Shultz. Their statements rein-

vigorated global discussion on a nuclear weapons free world presented in publications like *Abolishing Nuclear Weapons: A Debate*² and the 2009 *Global Zero Action Plan*³ that details concrete steps designed to rid the world of nuclear weapons by the year 2030.

The time is ripe to reaffirm the belief that young people can and must take responsibility for the roles they can play in creating a world free of nuclear weapons. In Prague U.S. President Obama said “this goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence.” Much work is left to be done. A new generation of scientists and policy makers is needed to carry this bold vision through to completion.

International Student/Young Pugwash (ISYP) is an international network of young scientists and scholars dedicated to the intersection of science, security, and social responsibility in the spirit of Sir Joseph Rotblat and the Pugwash Conferences on Science and World Affairs who were awarded the Nobel Peace Prize in 1995. ISYP has a mutually reinforcing relationship with the Pugwash Conferences that enables the two organizations to focus in parallel on both the causes and the symptoms of global insecurity. ISYP is focused on educating students and young people; promoting and facilitating dialogue and collaboration across state boundaries; and preparing members to reach crucial positions within the international policy community. It is this and other networks of nationally and internationally-linked young people — the engines of future scientific, technological, and policy innovation — who will form the core group of thinkers that will solve the problems and overcome the massive obstacles associated with “getting to zero.”

Total abolition of nuclear weapons integrated into a wider context of international cooperation and peace is the ultimate goal. In his 1983 article, Barack Obama was skeptical that a nuclear freeze would address the economic and social issues that are the root causes of insecurity in the world. Without addressing the causes of conflict and de-legitimizing violence as a means of conflict resolution,

any call for the abolition of nuclear weapons is merely symbolic and will not lead to an automatic outcome of peace and human security.

Today's economically interdependent world is one that makes the calculus of Cold War nuclear deterrence increasingly inappropriate and the use of nuclear weapons practically unimaginable. It is perhaps in the growing economic, social, and political interdependence of a globalizing world that a new generation of scientists and policy makers can re-affirm their belief in the wisdom of a world with zero nuclear weapons in the context of nonproliferation, total disarmament, and perpetual peace.

ENDNOTES

¹ We, the leaders of the International Student/Young Pugwash movement endorse this statement on behalf of the ISYP Executive Board. This statement is the result of a meeting on the occasion of the 30th anniversary of the establishment of the first Student Pugwash groups. The meeting: "A Strategy for Student/Young Pugwash: How Students and Young People can Influence the Peace Agenda in the Next Ten Years" was held in Pugwash, Nova Scotia, Canada where the transnational movement for nuclear disarmament was launched in 1957 and follows the 6th ISYP conference, "Core Dimensions of Nuclear Power and Nuclear Weapons at the Dawn of the Twenty-first Century" held in The Hague, The Netherlands from April 15 to 16, 2009.

² Publication available at: http://www.carnegieendowment.org/files/abolishing_nuclear_weapons_debate.pdf

³ Publication available at: http://www.globalzero.org/files/pdf/gzap_presentation.pdf



Robert McNamara (1916–2009)

Robert McNamara, former Secretary of Defense and President of the World Bank, died on 6 July, 2009, at the age of 93. He will be remembered by the Pugwash movement for his efforts for peace and a nuclear weapons free world during the final decades of his life.



Born in modest circumstances in San Francisco, McNamara was a brilliant student, receiving his MS at Berkeley, before attending Harvard Business School, where he received his MBA in 1939. Before taking office as Secretary of Defense in 1961, McNamara was president of Ford Motor Co. From 1968 to 1981, he worked as President of the World Bank. Whilst McNamara became primarily known as the architect of the Vietnam War, he also persuaded the West to increase foreign financial aid to the developing world and reduced racial discrimination in the US military.

His importance to the Pugwash movement began long before he himself was a “Pugwashite”. As Secretary of Defense, McNamara was responsible for convincing President Johnson to allow him to take personal charge of a secret Pugwash back channel to Ho Chi Minh that sought to end the Vietnam War. Codenamed PENNSYLVANIA, the initiative began at a June 1967 Pugwash meeting in Paris, attended by scientists from France, the US, the USSR, Joseph Rotblat, and Henry Kissinger, where a “formula to stop the escalation of the war” emerged. While the negotiations eventually failed due to the inability of the US to coordinate diplomatic and military actions, McNamara credited them with laying the groundwork for the San Antonio accords, “the foundation for the start of the negotiations between North Vietnam and the US in Paris.”

Between 1982 and 2004, McNamara participated in 24 Pugwash meetings, preferring the expert workshops rather than the larger annual international conferences. During this time, he participated in Pugwash meetings in Beijing, New Delhi, Lahore, and Arzamas-16, locales that showed his great interest in finding common ground on the central issues that challenge the nuclear disarmament regime. He took part in 15 of a special series of Geneva-based

Pugwash workshops on nuclear forces, and two of the Pugwash workshops in the early 1990s on the “Desirability and Feasibility of a Nuclear Weapons-Free-World.” These workshops and the resulting publications were the inspiration for the Canberra Commission, of which he was a member along with then-Pugwash President Joseph Rotblat and current Pugwash President

Jayantha Dhanapala. Indeed, it is not an exaggeration to say that much of the Pugwash work in which McNamara played a significant role laid the intellectual groundwork for today’s wider acceptance of the goal of a nuclear-weapons-free world.

Not only did McNamara play a very important role in establishment of the International Water Management Institute in Colombo, but he was also involved with another initiative especially dear to Joseph Rotblat: the launching of the WMD Awareness Programme. McNamara’s speech at the 2005 Hay Literary Festival was, according to John Finney, Chair of the WMD Awareness Programme and Pugwashite, “a stunning occasion” that “grabbed media attention for several days.” As a result of the success of this event, the annual Rotblat Lecture at Hay was instituted. In a book celebrating Joseph Rotblat’s 90th birthday, McNamara’s essay concluded with the following challenge to us all:

“[W]ith the end of the Cold War, if we act to establish a system of collective security, and if we take steps to return to a non-nuclear world, the twenty-first century, while certainly not a century of tranquility, need not witness the killing, by war, of another 160 (or even 300) million people. Surely that must be not only our hope, not only our dream, but our steadfast objective.”

“McNamara can only be described as a wonderful person, who became a particularly strong advocate of a nuclear peril free world. His passing away is a loss to the Pugwash Community.”—M.S. Swaminathan, Pugwash Secretary General 2002-2007

Sandra Butcher

Herbert York (1921–2009)

Herbert York, a prominent physicist, arms-control advocate and long-time member of the Pugwash community, died after a long illness on May 19, 2009, at the age of 87. York was a leading member of the Manhattan Project, who later worked to stop the spread of nuclear weapons, and he became the founding chancellor of the University of California at San Diego.



A mentor to students and an advisor to U.S. presidents, Herb York's academic and government roles intertwined in a career spanning more than 60 years. After receiving his BS and MS from the University of Rochester in 1943, York joined the staff of the University of California Radiation Laboratory (UCRL) at Berkeley. Under the auspices of the UCRL, York was dispatched to work on the Manhattan Project. In his memoir, York wrote that the work was both challenging and noble: "Not only did we complete the project, but we ended the war."

After gaining his doctorate from Berkeley, he was appointed director of Lawrence Livermore Laboratory from 1952 to 1958, overseeing research programs that included development of the hydrogen bomb and other classified programs under the sponsorship of the Atomic Energy Commission. At the same time, he also became the first chief scientist of the Advanced Research Projects Agency of the Office of the Secretary of Defense in the Pentagon, and in December of 1958, President Eisenhower appointed him the first director of Defense Research and Engineering, serving as civilian supervisor of missile and space research.

It was during these duties in the 1950s that York became an arms control advocate and supported a nuclear test ban. As the Cold War intensified and the threat of a nuclear exchange loomed, York became increasingly

opposed to the spread of nuclear weapons. Over the next six decades, he held a series of high-level scientific, academic and governmental posts, and served as an advisor to six presidents on matters of arms control.

Herb's first Pugwash meeting was the 19th Pugwash Conference held in Sochi, USSR in October 1969. From then until 2002, he attended

16 Pugwash conferences and workshops, bringing to them his delightful combination of incisive intelligence, an incredible array of knowledge, a playful sense of humor, and warmth and decency. Herb was especially instrumental, along with Ruth Adams and Murph Goldberger, in making possible the convening of the 52nd Pugwash Conference at the UC San Diego campus in July 2002. He was also a steadfast supporter of Student Pugwash USA, likewise helping with the hosting of SPUSA events in San Diego.

In addition to being the founding chancellor of UC San Diego, York founded in 1983 the UC Institute on Global Conflict and Cooperation (IGCC), which conducts research and seminars on conflict resolution and promotes international efforts to avoid war.

Richard Atkinson, president emeritus of the University of California and former UC San Diego Chancellor, said of York, "Herb played a key role in the development of nuclear weapons and more importantly, in defining the nation's policy on such weapons." Through his long and invaluable participation in Pugwash, Herb York also brought his intellect and passion to bear on the international dimensions of the threat posed by nuclear weapons. Herb York very much embodied the humanity and goals of Pugwash, and touched the lives of many along the way.

Credit: Pugwash and UC San Diego Media Center

Prof. Maciej Nałęcz (1922–2009)

Professor Maciej Nałęcz, the eminent Polish physician, scholar, and moral authority, died on 6 February, 2009, in Warsaw at the age of 86. Nałęcz devoted his life to the Polish Academy of Sciences and with remarkable passion pursued the goals of Pugwash in the international arena.



Nałęcz was born on 27 April 1922 in Warsaw. After spending his childhood in the US, his family returned to Poland in 1930. Whilst studying at the National College of Technology, he was drafted into the Polish army from 1944 to 1947, where he became a sergeant-major. The following year he worked on his Master's Thesis on the effects of electromagnetic fields on plant growth whilst taking part in a three-month session at MIT. Nałęcz gained his professorship in 1962, from which time he became involved in research on automation, biocybernetics, and biomedical engineering. His research contributed, amongst others, to the creation of the artificial kidney and pancreas.

Due to his outstanding professional accomplishments, Nałęcz became director of the International Centre of Biocybernetics of the Polish Academy of Sciences in Warsaw, and a member of the Polish Academy of Sciences (1967) and International Academy for Medical and Biological Engineering (1997). He additionally served as foreign member of the Russian (1976) and Georgian (1996) Academies of Sciences; and as the Chairman of the Polish National Group.

A great friend of Jo Rotblat, Nałęcz guided the work of Pugwash Conferences for over four decades. He attended a total of 64 meetings, the first being the 22nd Conference in Oxford, UK in 1972 to the 53rd Conference in Halifax,

Canada in 2003. During his time as Chairman of the Pugwash Council from 1974 to 1997, he was greatly admired for his skill to avoid unnecessary conflicts and his ability to foster compromise agreements whenever needed. As his successor, this has been crucial for the survival and success of Pugwash. It was a hard task for me to try and live up to his standard of useful wisdom when I followed him as Chair of the Pugwash Council for the Quinquennium 1997-2002.

Much of Nałęcz's attention was directed towards of "dual-use" issues. He foresaw that the risks connected with scientific progress would grow. Through his work with Pugwash Conferences and his personal authority, as Prof. Górski, Vice-President of the Polish Academy of Sciences states, "the world saw in him a statesman, as seen in the invitations he received from such personages as Eleanor Roosevelt, Indira Gandhi, Robert McNamara, Henry Kissinger, Zbigniew Brzezinski, and Bruno Kreisky, while he himself hosted, among others, Edward Kennedy, Egon Bahr, and many luminaries of Polish and world science at his home in the Mazuras."

Nałęcz lived a very successful life. He lived long enough to see the main goal of Pugwash – the elimination of nuclear weapons – finally recognized by top world leaders as central for future world governance and for the survival of civilization. Unfortunately, he died before he could see that goal realized. Our active commitment towards that complete elimination is the best way to honor his memory. He is survived by his wife Sophie.

Prof. Francesco Calogero

Toshiyuki Toyoda (1920–2009)

Toshiyuki Toyoda, a Japanese physicist, peace activist, and Pugwashite, died on 15 May, 2009, in Tokyo at the age of 89. He was an expert in the field of theoretical nuclear and elementary particle physics.

Toyoda was a valued and active member of the Pugwash community. He was a Council member from 1975 to 1987, and attended 26 Pugwash meetings from the 7th Conference held at Stowe, USA, in 1961 to the 45th Annual Conference held at Hiroshima, Japan, in 1995. A great coordinator, he helped Hideki Yukawa and Sin-itiro Tomonaga to organize the 25th Pugwash Symposium “A New Design towards Complete Nuclear Disarmament: The Social Function of Scientists and Engineers” in Kyoto, Japan, in 1975. In 1986, he organized the 56th Pugwash Symposium “Peace and Security in the Asia-Pacific Region” in Tokyo.

For many years, Toyoda was a member of the Board of Sponsors for Bulletin of the Atomic Scientists. He was Professor Emeritus of Nagoya University and served as

Director of the Peace Research Institute of Meiji Gakuin University, Tokyo.

A prolific writer, Toyoda published many articles and books on physics and on issues concerning nuclear weapons, including Criticism on Nuclear Strategy. In response to the Pugwash symposium in Kyoto in 1975, he co-edited with William Epstein *A New Design for Nuclear Disarmament*.



As a scientist and peace activist, Toyoda saw an important role for the scientists’ movement in Japan, including the responsibility of other leading Japanese Pugwashites. As he noted in his 1984 article: “The role of conscientious scientists in Japan is...becoming more important than ever.” His exceptional dedication to science, peace, and Pugwash will remain a true example to future generations.

*Michiji Konuma
Pugwash Japan*

Yuri Andreevich Osipyan (1931–2008)

Yuri Osipyan, Russian scientist and prominent public figure, died on 10 September, 2008, at the age of 77. Osipyan was a specialist in solid state physics, former Vice-President of the USSR Academy of Sciences, member of the USSR Parliament, and Chair of the Russian Academy of Sciences Center in Chernogolovka.

Osipyan was an outstanding academic and researcher. Born in Moscow on February 15, 1931, he graduated from Moscow’s Institute of Steel and Alloys in 1955. For his work with Prof. Peter Hirsch on the interaction of electrons with extended defects in crystals and the discovery of the photophastic effect, he was awarded the M.V. Lomonosov Big Gold Medal from the Russian Academy of Sciences in 2005. His latest research focused on investigations of fullerenes and molecular crystals.

In 1962, he became co-founder and director of the Institute of Solid State Physics in Chernogolovka. He was elected full member of the Russian Academy of Sciences

at the age of 37, and served as Vice-President of the Academy from 1988 to 1991. He further acted as the President of the National Committee of Russian Crystallographers and was named Foreign Fellow of the National Academy of Sciences of Bulgaria, Hungary, Poland, the Czech Republic, and Fellow of the National Engineering Academy of the US. From 1989 to 2008, he was Chairman of the Committee of Scientists for Disarmament and Arms Control.

A prominent public figure, Osipyan joined Pugwash in 1986 and became a member of the Presidium of the Russian Pugwash Committee, as well as participant of the 38th Conference in Dagomys, USSR in 1988.

*Mikhail A. Lebedev
Russian Pugwash*

Jack Harris (1932–2009)

Jack Harris, prominent scientist, writer, and Pugwashite, died at home on February 3, 2009. A strong advocate of nuclear energy, he became concerned about the spread of nuclear weapons.

Trained as a metallurgist at Birmingham University, he was appointed in 1965 as group leader at Berkeley Nuclear Laboratories on research regarding the highly radioactive spent fuel rods from the nuclear reactors. His group, collaborating with the UKAEA, was largely responsible for extended the life of the fuel rods in first generation reactors well beyond their original design.

From his work on nuclear energy, he received many academic honours, including the Doctor of Science from Birmingham, Fellowships of the Royal Society and the Academy of Engineering, the Royal Society's Esso Gold Medal for energy conservation, and an MBE. He was also the editor of *Interdisciplinary Science Reviews*, and was responsible for articles on an immense diversity of topics.

Yet after retiring in 1990, Harris became concerned with the ethics of scientific research and the spread of nuclear weapons. Harris attended his first Pugwash Conference in Hiroshima in 1995, on the 50th anniversary of the dropping of the first atomic bomb, and subsequently became a leading figure in the Pugwash movement. While vice-chairman of British Pugwash from 2002 to 2008, he made an enormous contribution to discussions, arguing with a gentle but forceful manner, yet always defending nuclear energy.

As President of the Royal Society, Lord Rees of Ludlow wrote, "He was a fine example of the 'activist' and socially concerned scientist and we need more like him". We shall miss him not just as a scientific colleague, but also for his kindness and his dry humour. He is survived by his wife Ann, and his two sons and two daughters.

John Finney and Robert Hinde

Etienne Roth (1922–2009)

Etienne Roth, a leading chemist, nuclear engineer, and Pugwashite, died in Paris on March 19, 2009 at the age of 87.

Trained as a chemist, Roth began working as a nuclear engineer in the French Atomic Energy Commission in 1946. At the age of 25, he was sent to Canada where he learned to make a mass spectrometer in order to analyze heavy water. From then on, he made important contributions to nuclear civil engineering, in particular for the production of heavy water.

Furthermore, he became an expert in measuring traces of deuterium. This fundamentally impacted the research on the detection of climatic change witnessed by polar ice layers. He also formulated a model for the formation of hail stones which was later used by the NASA to analyze

samples collected on the moon, and developed an analysis of tritium which was used to eliminate tritium from high flux reactors.

Roth never worked on the development of nuclear weapons. However, his expertise on nuclear engineering made him a most valuable and appreciated advisor to the French Pugwash group, concerned with preventing proliferation and with the elimination of nuclear weapons. Roth became an active member of Pugwash Conferences in the early 1960s. From his first participation at the 17th Conference in Ronneby, Sweden in 1967 to the 1998 Pugwash Workshop in Paris, France, Roth was a valued member of the Pugwash movement.

Pugwash-France

Pugwash Council for the 2007–2012 Quinquennium

EX-OFFICIO MEMBERS

President

Amb. Jayantha Dhanapala is a former Under-Secretary-General for Disarmament Affairs at the United Nations (1998-2003), and former Ambassador of Sri Lanka to the US (1995-97) and to the UN Office in Geneva (1984-87). He is currently Chairman of the UN University Council, a member of the Governing Board of SIPRI, and several other advisory boards of international bodies. He also has been a member of both the Canberra Commission (1996) and the WMD Commission (2006).

Secretary-General

Prof. Paolo Cotta-Ramusino is Secretary General of the Pugwash Conferences (since August 2002) and Professor of Mathematical Physics at the University of Milan. He is the former Director of the Program on Science, Technology and International Security, Landau Network-Centro Volta, Como, and former Secretary General of the Union of Italian Scientists for Disarmament (USPID).

Executive Director

Dr. Jeffrey Boutwell is Executive Director of the Pugwash Conferences on Science and World Affairs, former Associate Executive Officer at the American Academy of Arts and Sciences in Cambridge, and former Staff Aide at the National Security Council in Washington, DC.

Former Secretary General

Prof. Francesco Calogero is Professor of Theoretical Physics at the University of Rome "La Sapienza". Formerly, he was Secretary General of Pugwash (1989-1997), Chair of the Pugwash Council (1997-2002), and a member of the Governing Board of SIPRI (1982-1992).

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Amb. (ret.) Ochieng Adala, of the Africa Peace Forum (APFO) in Nairobi, Kenya, is former Permanent Representative of Kenya to the United Nations in New York (1992-93), former Deputy Secretary/Director for Political Affairs, Ministry of Foreign Affairs and International Cooperation (1988-92), and

former Ambassador of Kenya to the Arab Republic of Egypt, the Kingdom of Morocco, Algeria and Tunisia.

Amb. Sergey Batsanov is Director of the Geneva Office of International Pugwash, member of the Pugwash CBW Steering Committee, and member of the International Advisory Board of the Geneva Centre for the Democratic Control of Armed Forces (DCAF). He is former Director of Special Projects at the Organization for the Prohibition of Chemical Weapons (OPCW) in The Hague, and former Representative of the USSR/Russian Federation to the Conference on Disarmament, Geneva (1989-93).

Dr. Adele Buckley is a physicist, engineer and environmental scientist, and past Chair of the Canadian Pugwash Group. She was formerly Vice President of Technology & Research at the Ontario Centre for Environmental Technology Advancement (OCETA) in Toronto, Ontario, Canada.

Dr. Lynn Eden is Associate Director for Research and Senior Research Scholar at the Center for International Security and Cooperation (CISAC), Freeman Spogli Institute for International Studies (FSI), Stanford University in California, and co-chair of the US Pugwash Committee.

Prof. John Finney is Professor of Physics in the Department of Physics and Astronomy at University College London, Deputy Chairman of the British Pugwash Group, and Chair of the WMD Awareness Programme. His former positions include: Professor of Crystallography at Birkbeck College in London; Chief Scientist at the ISIS Facility of the Rutherford Appleton Laboratory; and Science Coordinator for the European Spallation Source Project.

Prof. Galia Golan-Gild is Professor of Government at the Interdisciplinary Center (IDC) in Herzliya, Israel, and Professor Emerita in the Department of Political Science at The Hebrew University of Jerusalem, where she was also Darwin Professor of Soviet and East European Studies, and Chair of the Department of Political Science.

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Pugwash Council continued

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Calendar of Future Pugwash Meetings

2009

- 27 July 2009
London, UK
Pugwash Consultation on *Iran and Middle East Security*
- 12 October 2009*
New York, USA
Pugwash Consultation on *CTBT Entry into Force Issues*
- 20-21 November 2009
Beijing, China
Pugwash International Workshop on *Strengthening the International Nuclear Non-Proliferation Regime: Ensuring a Successful NPT Review Conference*
- 5-6 December 2009
Geneva, Switzerland
30th Pugwash CBW Workshop: *Preparing for the Seventh BWC Review Conference*

2010

- 10-17 January 2010
Andalo (TR), Italy
23rd Isodarco Winter Course: The Road to Nuclear Zero and Arms Control

* Tentative

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Dr. Mustafa Kibaroglu
Mr. Sverre Lodgaard

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