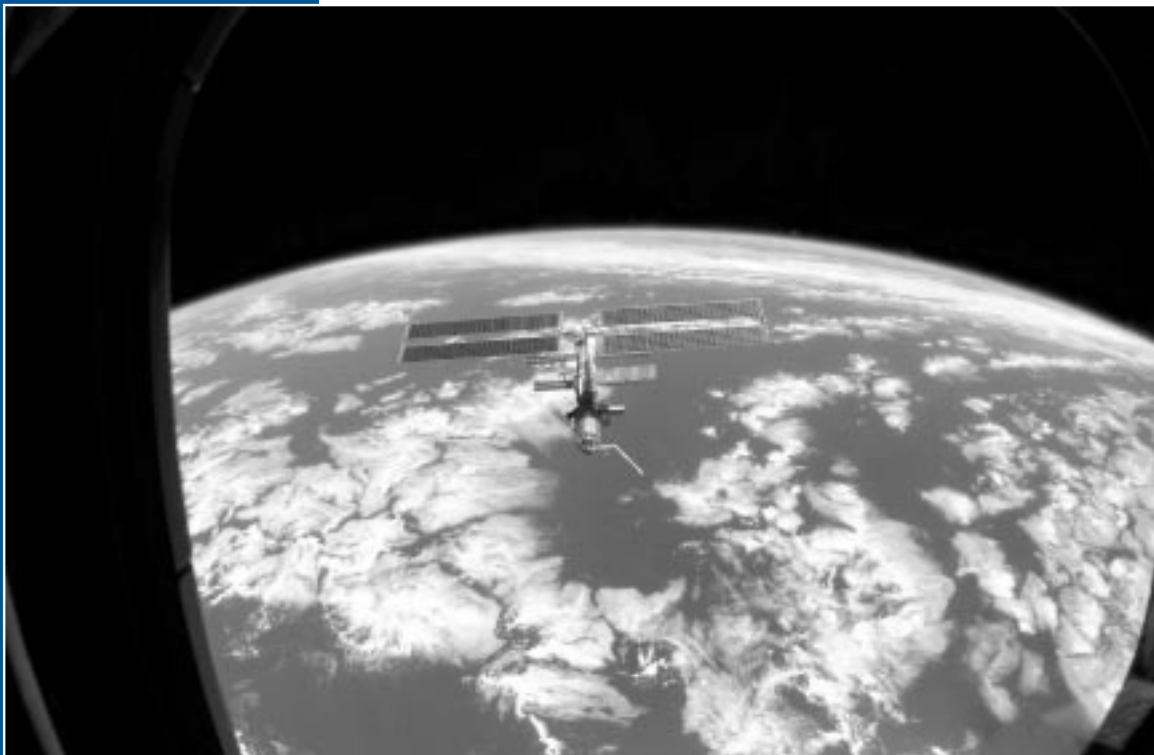


Pugwash

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Ensuring Security in Space

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Pugwash

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To the Pugwash Community

The Iraq Conflict and Nuclear Weapons

As of mid-June, the war in Iraq has been over for more than two months, far longer than the 21 days needed for American and British troops to cross the border from Kuwait and occupy Baghdad. Yet political stability and hopes for a democratic Iraq remain elusive. Saddam Hussein and many of his top advisors remain at large, constant guerrilla and terror attacks claim the lives of Iraqi civilians and American and British soldiers, and the search for evidence of nuclear, biological and chemical weapons continues, with little success thus far.

International opposition to the American-led military operation against Saddam's regime has not been quieted by the quick victory on the battlefield. Indeed, the real battle, for stability in post-war Iraq and demonstrable progress towards Middle East peace, still hangs in the balance. Without marked improvement in Iraqi domestic stability, the Bush administration will be hard put to justify the human and economic cost of going to war. Such justification will be even more difficult if no evidence is found that Saddam Hussein posed a credible, imminent threat to his neighbors and the world with weapons of mass destruction, one of the primary rationales used by President Bush for launching the attack. While no one would dispute Saddam's desire for such weapons, and his willingness to use them, the evidence as of now would suggest that the post-1991 UN inspection and sanctions regime had been effective in curtailing an operationally-viable Iraqi WMD program.

As articulated in the statement by the Pugwash Executive Committee on the following pages, unilateral measures to halt the spread of nuclear weapons and begin the process of eliminating the nuclear threat must give way to concerted multilateral action by the international community. The need for a broad international coalition to deal with WMD proliferation challenges, in whatever

region of the world, has been amply demonstrated by the failings of US military action against Iraq.

Pugwash Workshops

A major focus of Pugwash activity in the past six months has been that of continued tensions in South Asia, with workshops held in Lahore and Geneva that brought together senior Pakistani and Indian figures to discuss ways of strengthening political dialogue between the two countries and minimizing the risks of conflict and the use of nuclear weapons. The next workshop in the series will be held in Goa, India in November 2003.

In the Middle East, the workshop in Amman, Jordan in early June brought together participants from several Arab countries, including Saudi Arabia, and Israel to explore ways of reinvigorating the Middle East peace process. Secretary General Paolo Cotta-Ramusino also visited the region in January 2003, meeting with various Israeli and Palestinian officials, including Palestinian Authority President Yasir Arafat. Pugwash will expand its involvement in the search for Middle East stability with a first-ever workshop in Iran, scheduled for Tehran in September 2003.

In May 2003, Pugwash initiated a new program area dealing with security in outer space and the need to ensure continued international cooperation in utilizing the many benefits provided by space assets for all countries. The initial Pugwash workshop held in May in Castellón de la Plana, Spain (see report on page 33) will be followed by working group sessions at the 53rd Pugwash Conference being held in Halifax (see below) and a follow-on workshop in 2004. Pugwash will be working with a wide range of other non-governmental organizations, national governments, and international organizations to devise strategies that maximize the wide range of economic, communications, educational, and other benefits of civilian space activities, while minimizing the risk that space in the near

future might become an arena for heightened military competition.

The 53rd Pugwash Conference

From 17–21 July 2003, some 200 participants from around the world will convene in Halifax, Nova Scotia for the 53rd Pugwash Conference: *Advancing Human Security: The Role of Technology and Politics*. Hosted by the Canadian Pugwash Group, and with substantial support being provided by Canada's Department of Foreign Affairs and International Trade and the Canadian International Development Agency, the conference will also include a one-day excursion to the birthplace of Pugwash, Cyrus Eaton's Thinkers' Lodge in Pugwash, Nova Scotia. Highlights of the conference will also include a keynote address by the Honorable Susan Whelan, Minister of International Cooperation for the Canadian government, and the Dorothy Hodgkin Memorial Lecture, given by Jayantha Dhanapala, until recently the Under Secretary General for Disarmament Affairs at the United Nations. A full report on the 53rd Pugwash Conference will appear in the December 2003 issue of the *Pugwash Newsletter*.

As part of the planning process for the Halifax conference, Paolo Cotta-Ramusino and Jeffrey Boutwell traveled to Ottawa in March for meetings with Foreign Minister Bill Graham and other officials at the Department of For-



Secretary General Paolo Cotta-Ramusino meets with Canadian Foreign Minister the Hon. Bill Graham (March 2003).

eign Affairs, with Minister Susan Whelan, and with Douglas Roche, Adele Buckley and other members of the Canadian Pugwash Group.

Acknowledgments

Pugwash is grateful to the following organizations for their continued support of the *Pugwash Newsletter*, as well as other Pugwash publications and the Pugwash website: the German Research Society, the Italian National Research Council, the Cyrus Eaton Foundation, and the John D. and Catherine T. MacArthur Foundation.

The Editor

Statement of the Pugwash Executive Committee

20 March 2003

The War on Iraq

Despite the lack of a mandate from the UN Security Council, the US and the UK have decided to proceed independently to attack Iraq. The Pugwash Executive Committee deeply regrets this act of war and is very much concerned with its likely consequences.

Our first concern is with the human suffering that the war will cause. The civilian population of Iraq will be directly exposed to the consequences of the war and will likely suffer the most. The destruction of the civilian infrastructure could well be devastating and require expensive rebuilding over many years.

Our second concern is with the weakening role of international institutions in general and the United Nations in particular. If some Permanent Members of the Security Council decide that, despite rules already giving them a right to veto, the opinion of the majority of the Security Council need not be respected, then the role and the authority of the Security Council and of the UN itself becomes dubious and uncertain. The present disagreement inside the UNSC, moreover, induces pessimism about the concrete possibilities of an improvement in the architecture of international institutions. This may well foreshadow a higher occurrence of unilateral initiatives in the future, with uncertain consequences.

The war on Iraq has been presented to the Security Council as necessary for disarming Iraq and enforcing Resolution 1441. But the inspectors' work has shown its

effectiveness in finding weapons and in prompting their destruction. More time was needed to assess the net result of the inspectors' work, as Hans Blix and Mohamed ElBaradei repeated often. An Iraq subject to a possibly much larger number of inspectors would have been a country unable to keep, produce and stock weapons of mass destruction.

The war on Iraq has also been presented to US and international public opinion as a preventive war aimed at stopping terrorism, particularly with weapons of mass destruction. The attack on Iraq has thus been presented as an issue of US national security, with the implication that an international consensus on the war itself was useful but

ultimately not necessary. In reality, there is a general consensus that only fragmentary evidence exists of a connection between international terrorism and the Iraqi regime. So the war on Iraq, as part of a war against terrorism, becomes a preventive war to deny terrorist groups possible future connections with a state. In this way, the war on terrorism is transformed into an open-ended framework

encompassing a wide range of possible military actions. Accordingly, we are deeply concerned about what this open-ended framework will produce in the future.

Finally, the war on Iraq has been presented to international public opinion as a war aimed at regime change, namely, at eliminating the dictatorship of Saddam Hussein. But regime change has not been discussed per se



U.S. troops in Iraq.
Department of Defense photo

at the UNSC. There is no doubt that Saddam Hussein's removal would be a positive event. But the questions we must ask are: which institution should be responsible for promoting regime change in specific countries; what are the criteria for promoting regime change; and how should these criteria be decided? Finally how should an international consensus about regime change be expressed? Failure to answer these basic questions opens the prospect of a world dominated more by force and anarchy than by international law.

On a general political level, we must also emphasize that the war on Iraq is widely perceived as an act of Western hostility towards the Islamic world. We are very much concerned about this perception and are worried about the relevant consequences that may dramatically strengthen the wall of antagonism and resentment between the West and Arab countries and more generally the Islamic world. This resentment may become the source of a further deterioration in the international climate, of the strengthening

of radical movements and groups that may degrade the level of democracy in many countries, as well as a renewed source of international terrorism.

During the Cold War, Pugwash dealt with East-West antagonism by seeking to contribute to dialogue, disarmament and cooperation. In the same spirit, Pugwash is working, and is prepared to work more, on improving dialogue, cooperation and understanding between the Western and Islamic worlds, as well as on continuing to promote disarmament. It is for all these reasons that we very much regret recent developments resulting in the war on Iraq.

Pugwash Executive Committee

Prof. Paolo Cotta-Ramusino (Chair), Secretary General

Prof. M.S. Swaminathan, President

Prof. Marie Muller, Chair, Pugwash Council

Dr. Jeffrey Boutwell, Executive Director

Prof. Saideh Lotfian, Member, Pugwash Council

Gen. (ret.) Pan Zhenqiang, Member, Pugwash Council



Written by Nobel-prizewinner and former nuclear physicist Joseph Rotblat, and peace advocate and scholar Robert Hinde, *War No More* provides unrivalled expert insight into the nature of modern warfare — including 'weapons of mass destruction'. If war is ever to be eliminated, the pair argue that the United Nations — as well as non-governmental organizations, religious groups, and grassroots movements — all have an important part to play!

Pluto Press

August 2003 / 240pp

Pugwash Workshop on Avoiding an India-Pakistan Nuclear Confrontation

Lahore, Pakistan, 11–12 March 2003

Report

by *Samina Ahmed*

The workshop's primary objective was to assess the threat of an India-Pakistan nuclear confrontation and to identify ways of preventing such a conflict. The workshop's deliberations and discussions reflected a range of mainly Pakistani perceptions on the potential of an India-Pakistan conventional conflict and possible nuclear escalation. India and Pakistan's nuclear doctrines and directions were analyzed with the objective of identifying ways of minimizing nuclear risks. Finally, the workshop examined options of resuming a dialogue between the two nuclear-armed neighbors.

The workshop was attended by 32 participants from five countries. Pugwash expresses its thanks to the Pakistan Pugwash Group for hosting the meeting, and to Ambassador Aziz Ahmad Khan of the Foreign Ministry of Pakistan for facilitating many of the logistics of the meeting.

Avoiding a Pakistan-India nuclear confrontation

From December 2001 until July 2002, Indian and Pakistani forces confronted each other across the international border and along the Line of Control. Concerned about the potential for a conventional conflict that could escalate to the nuclear

level, the United States played a proactive role in walking both states back from the brink of war. Although the withdrawal of troops from offensive positions has reduced the prospects of imminent conflict, India and Pakistan's cold war continues unabated. India refuses to resume a dialogue with Pakistan until it takes decisive steps to end all "cross border infiltration" into Indian Kashmir. Insisting on the centrality of the Kashmir dispute for the resolution of India-Pakistan tensions, Pakistan continues to support the anti-Indian insurgency in Kashmir. In the absence of high-level and institutionalized contacts between India and Pakistan, the risk of a conventional conflict remains high. While the potential for conflict escalation to the nuclear level might appear low, the very fact that it cannot be ruled out underscores the importance of minimizing nuclear risks. Clearly, the resumption of an India-Pakistan dialogue is the first step towards crisis de-escalation.

Nuclear doctrines and deterrence stability

There was near unanimity among participants that tensions between India and Pakistan are at their highest since their last war in 1971. However, many believed that the current diplomatic standoff, defined by one participant as a mutually assured deadlock, would not result in armed conflict. This confidence was based

on the belief that a stable nuclear deterrence is already in place. The discussion on deterrence stability focused on India and Pakistan's nuclear doctrines and controls, covering, among other issues, the advantages of doctrinal transparency versus opacity and first use over no-first use postures.

Nuclear optimists supported opacity on the grounds that declared thresholds and redlines undermine operational flexibility and increase nuclear risks during crises. Proponents of opacity also argued that transparency only works in the absence of conflict and with at least a semblance of communications between nuclear adversaries. Absent these preconditions, as in the case of India and Pakistan, transparency can be counterproductive. In any case, nuclear doctrines are often misleading and at variance with operational plans. By keeping deterrence vague and by avoiding explication of red lines, Pakistan can also avoid a nuclear arms race with India and keep its weapons un-deployed. This nuclear restraint, reflected in Pakistan's policy of minimum nuclear deterrence, has helped to buttress nuclear crisis stability in South Asia.

However, the impact of bilateral tensions and suspicions on India and Pakistan's nuclear directions were evident in the discussion on nuclear and conventional force structures. While one participant pointed out the

links between India's conventional spending and Pakistan's nuclear directions, others believed that a nuclear triad in India would force Pakistan to follow suit. Disputing the argument made by a participant that economic constraints would prevent Pakistani arms racing, others stressed that a nuclear arms race already exists. The Chinese factor would also make it near impossible for India and Pakistan to reach an agreement on what would constitute a minimum nuclear deterrent.

In fact, Pakistan's emphasis on opacity and its rejection of a no-first use doctrine reflects its concerns about conventional inferiority vis-à-vis India. Nuclear opacity and nuclear weapons capability are regarded as means of deterring conventional war. Senior officials have implied that Pakistan could resort to nuclear use in the event of an Indian attack, conventional or nuclear, on its territory. However, Pakistan refuses to officially define its nuclear threshold even as it rejects nuclear first use. While a nuclear no-first-use policy was a luxury for Pakistan, a participant pointed out, India would likely reverse its no-first-use posture during a military conflict. In any case, India has already revised that policy to cover other unconventional attacks by weapons of mass destruction on Indian troops within or outside Indian territory.

Critics of opacity warned that deterrence stability would elude South Asia in the absence of greater doctrinal transparency and clarity. A participant stressed that transparency is an important element of predictability. It is therefore an inherent element of policy if the primary objective of nuclear weapons capability is to deter conflict. Pakistan shunned a

declared nuclear doctrine, implied one participant, since Pakistan military circles believed that nuclear weapons were indeed instruments of war fighting, to be used against high value targets during the course of conflict. A nuclear proponent who made the argument that Pakistan's nuclear doctrine did not rule out pre-emption in the event of even a conventional attack on its territory inadvertently supported this thesis.

Conventional confrontation and possible nuclear escalation

Since India and Pakistan's cold peace threatens to deteriorate into a hot war, it is important to assess the potential of a conventional conflict escalating to the nuclear level. Four major crises have occurred since India and Pakistan acquired nuclear weapons capability. These recurrent crises show, said one participant, that the assumptions on which nuclear deterrence is based in South Asia lack substance; that both sides have repeatedly resorted to irresponsible nuclear brinkmanship; and, depending on external actors, mainly the United States to pull them back from the nuclear brink, Indian and Pakistani leaders have been desensitized by these multiple crises to the dangers of future conflict. Moreover, in Pakistan's case, the utility of nuclear weapons goes further than deterrence since nuclear weapons capability is used to advance Pakistan's strategic goals in Kashmir.

Countering these arguments, other participants argued that the manner in which earlier crises were successfully contained is proof of the relative stability of nuclear deterrence in South Asia. The 1990 crisis, for instance, was resolved because Pakistan conveyed and India accepted as

credible the threat of nuclear use. In 2002, war was prevented and India forced to withdraw its troops from offensive positions along the international border and the Line of Control in Kashmir because of Pakistan's coercive nuclear diplomacy. Another participant added that the 2002 crisis, the most severe between the two states since the 1971 war, was prevented because of four factors: Pakistan's nuclear weapons capability; international pressure on both India and Pakistan; Pakistani restraint; and India's successful coercive diplomacy that forced President Musharraf to ban a number of militant groups operating across the Line of Control. Dismissing the proposition that Pakistan's nuclear deterrent had prevented India from escalating the 2002 crisis, and linking crisis de-escalation instead to Indian restraint, another participant warned that enhanced Indian legitimacy in Jammu and Kashmir following the 2002 state elections, a buoyant economy, and the BJP government's aggressive mindset could collectively tempt India to up the ante for Pakistan.

Concerns were also voiced that the post-11 September international environment has adversely affected nuclear deterrence in South Asia, both in terms of the evolution of terrorism and the ways in which India reacts and mobilizes its forces. Regardless of divergent assessments of nuclear deterrence stability, there was consensus that India-Pakistan crises could keep on recurring because of the linkage between political disputes and military strategies. Divergent Indian and Pakistani policies towards Kashmir and attempts to challenge the status quo increase the risk of war. Nuclear capability is here to stay in South Asia, said a

participant, but it is embedded in and must be detached from India and Pakistan's political relationship. If Pakistan continues with its efforts to compel India to negotiate on Kashmir through sub-conventional warfare, increasing costs might compel India to respond militarily. Indian and Pakistani attitudes towards nuclear weapons are maturing, noted another, but they don't have the luxury of a long maturation process to ensure that nuclear weapons are never used. A more optimistic participant believed that nuclear weapons capabilities might have made conflict resolution more difficult, but nuclear deterrence has facilitated conflict prevention.

Nuclear risks and risk reduction

Indian and Pakistani officials have repeatedly assured the international community that their nuclear assets are not threatened because of secure command and control systems and foolproof safeguards of fissile materials and warheads. While many participants expressed concerns about accidental or inadvertent use, they also believed that existing nuclear safeguards and Material Protection Control and Accounting (MPC and A) could adequately protect India and Pakistan's nuclear assets. Hence, they resisted suggestions that Pakistan and India adopt a broader, cooperative approach to threat reduction. Apart from cooperation in best practices, these suggestions included a bilateral India-Pakistan dialogue on nuclear risk reduction; utilizing IAEA practices in civilian facilities under full-scope safeguards and transferring that knowledge to military installations; learning from precedents, particularly in the Russian-US context; and benefiting

from non-intrusive measures such as transfers of security technologies through turn-key kits, as in the case of the US-Russian relationship. US supplied kits are installed by Russia, eliminating the need for physical intrusion by the US government, companies and experts. Some exchanges of best safeguard practices are already underway with the US. These include track two activities such as visits to US facilities like the Cooperative Monitoring Center at Sandia National Laboratories.

Given Pakistan and India's opaque nuclear weapons programs and their status as non-nuclear weapons states within the NPT regime, not surprisingly the discussion on cooperative approaches to threat reduction included concerns about US intentions as well as opposition to physical intrusion. The US-Russian loose nukes initiative aims at securing Russia's nuclear assets, said a participant. Pakistan is not recognized as a nuclear weapons state and would therefore oppose such intrusive US involvement. Other participants pointed out that Pakistani stockpiles of enriched fissile material were too small to warrant such cooperation with the US, which was thus far limited to best practices. Insider threats and the diversion of nuclear materials were also discounted on the grounds of adequate safeguards and security. Participants were reminded that insider threats must be taken seriously by all nuclear-capable states. The value of lessons learnt from outside one's own experience and the benefits of cooperation in safeguarding stockpiles and warheads were also reiterated. Defense officials, said a participant, don't always have all the answers and hence the importance of high-level political and military

exchanges to understand the gravity of these issues.

Some participants defended the robustness of Pakistani command and control. Since a National Command and Control authority was well in place, they argued, the dangers of accidental, unauthorized, or inadvertent use were minimal. However, even nuclear optimists admitted that false warning and panic launchings could pose a threat, particularly at time of crises. Deterrence stability will be ensured, said a participant, if both sides are reasonably sure that their nuclear assets are survivable; if they do not use them as instruments of coercion; and if they do not panic in case of a false alarm. The importance of non-deployment, knowledge of mutual capabilities and effective signaling of intentions, particularly during crises, were added to this list of nuclear 'dos'. Others, however, warned that poor intelligence and weak, insecure command and control structures and centralized command increased pressures for dispersal and delegation to commanders in the field, and hence heightened risks of unauthorized or inadvertent use. While there was unanimity about the importance of good intelligence to prevent war by miscalculation, a participant advocated a technical dialogue between India and Pakistan warning about the poor quality of intelligence.

Linkages between nuclear risks and informed nuclear decisionmaking were also explored. It is intellectual arrogance, said a participant, to assume that military and intelligence services fully comprehend the dynamics of crisis escalation. Nuclear adventurism would be forestalled if the political leadership and the public fully comprehended the implications of nuclear war. In both India and

Pakistan, the public is poorly informed and political leaders are ill advised by the bureaucracies that control the nuclear weapons establishment. Apart from the need of greater public understanding of nuclear risks, governments must refrain from using the nuclear card to gain domestic legitimacy and to justify defense and foreign policy directions. Leaders must understand the importance of preventing misunderstandings that could result in nuclear escalation during crises and ensure that avenues of communication are kept open. There is also a need for a rigorous policy debate between the civil and military leadership on means of bolstering crisis stability. In Pakistan, said a participant, civilian leaders have thus far, despite official claims, been largely excluded from nuclear decision making by a military establishment that controls the country's nuclear assets. Above all, Indian and Pakistani officials must rethink the premise that there is little risk of crisis escalation since past conventional crises have been effectively contained. In the absence of doctrinal transparency, it would take just one misunderstanding for a future crisis to spin irrevocably out of control.

India and Pakistan were warned that their nuclear weapons do not ensure security since they have little grounds for confidence in their first strike capability; they were reminded of the nuclear risks that the United States and the Soviet Union confronted during the height of the Cold War, and that the US and Russia still face such risks despite technologically superior nuclear risk reduction mechanisms and procedures. The importance of pursuing the goal of nuclear disarmament through Article VI of the NPT was also emphasized in

response to a comment that a South Asian nuclear rollback was not in the cards. An alternative proposal to the NPT regime was presented. Under the aegis of the UN Security Council, all nuclear weapons states would commit themselves to a time-bound



India-Pakistan border ceremony.

process of nuclear disarmament; non-nuclear states would not be permitted to acquire nuclear weapons; failure to comply would result in inspections; and a failure to comply would be countered by UN Security Council authorized use of force.

Resuming an India-Pakistan dialogue

The rapidly deteriorating relationship between India and Pakistan underscores the importance of a resumed dialogue but neither state appears willing to compromise. Pakistan continues to insist on the centrality of the Kashmir dispute for the resolution of India-Pakistan tensions and is equally adamant in its support for anti-Indian Kashmiri groups, although it insists that its support is limited to political and diplomatic measures. Equally insistent that Kashmir's inclusion in the Indian Union is legitimate, and amply demonstrated by Kashmiri participation in Jammu and Kashmir's 2002 state elections, India accuses Pakistan of supporting cross-border terrorism in the disputed territory. While India refuses to resume a

dialogue with Pakistan until all Pakistani-sponsored cross-border militancy ceases, Pakistan rejects Indian allegations as cynical attempts to exploit international concerns about terrorism in the post-11 September international environment.

The extent to which the bilateral relationship is marred by mutual mistrust, suspicion, and hostility is evident in the ways in which some participants viewed Indian policies towards Pakistan. Reading India's refusal to resume a diplomatic dialogue as the continuation of conflict through political and psychological means, a participant said that the BJP government's objectives were to undermine the Pakistani economy; to force Pakistan to accept Indian hegemony; and to gain and consolidate its control over Kashmir. Other participants believed that India had already successfully pressured Pakistan to make concessions, referring to President Musharraf's ban on several extremist organizations, as a result of military coercion and diplomatic pressure. The dangers of an Indian pre-emptive strike against Pakistan were also raised (author's note: soon after the Iraq war began on 19 March 2003, India's Foreign Minister Yashwant Sinha said that India had a better case to initiate a pre-emptive strike against Pakistan than the United States had against Iraq).

Although most participants agreed that India and Pakistan would stand to gain from a resumed dialogue, not least because it would minimize the risks of conflict, the Kashmir issue was perceived as the most serious challenge to the normalization of relations. The issue, said a participant, was not one of initiating a dialogue but of strategic change, which India translates into an end to

militancy within Kashmir and Pakistan construes as Indian willingness to enter into negotiations on the Kashmir dispute. If only procedural talks were held, then the process would prove as unproductive as prior dialogues such as Lahore (1999) and Agra (2001). While some participants believed that India was exploiting the issue of cross border terrorism to avoid negotiations, others warned of the political, diplomatic, and military costs for Pakistan if it failed to rethink its priorities in Kashmir. India, said a participant, was not only more optimistic about containing the militancy within Kashmir through political and military means but was also the beneficiary of international support, while Pakistan was increasingly isolated. The international community, warned another participant, will not countenance militants who target civilians. Pakistan should thus restrict its support to Kashmiri political forces, best placed to mobilize the Kashmiri people and to assert political pressure on India.

The change in government in Islamabad was seen as both a constraint and an opportunity to the resumption of an India-Pakistan dialogue: a hindrance because of Indian aversion to continued military dominance in Pakistan and an opportunity because it was at the very least a political opening. Despite some skepticism about the utility of an official as opposed to a people-to-people approach, a number of concrete measures and mechanisms were identified to facilitate conditions for the resumption of official talks and to ensure their success. Three 'don'ts' were identified: don't wait for the ideal time to engage since that would only benefit spoilers; don't set pre-conditions for negotiations; don't

accuse each other or else negotiations are bound to fail; and a possible fourth don't: don't leave negotiations to military or civil bureaucrats. Highlighting the role of spoilers, another participant warned that the military-industrial complex in both India and Pakistan had a vested interest in conflict and would thus oppose the normalization of relations.

Concluding thoughts

While differences were voiced over an agenda that would reflect the Lahore or the Agra processes, there was general agreement on the need for quiet, low profile official talks and for sufficient groundwork to precede a high level summit. However, a dissenting voice warned that only summit level talks between the political leadership would neutralize spoilers who, given the opportunity, would try to derail the process. There was also consensus that multi-tiered processes would prove most constructive, including track two activities, a government-to-government dialogue and the use of multi-lateral regional forums such as the South Asian Association of Regional Cooperation (SAARC). A number of participants believed that influential international actors, in particular the United States but also Russia and China, could play a meaningful role, not necessarily as mediators but as facilitators.

A wish list of useful initiatives included the following:

- Restoration of normal diplomatic links at the level of High Commissioner;
- Resumed communications links, including rail, road and air links;
- Implementation of existing Confidence Building Measures;

- Revival of trade and commerce;
- Adoption of a composite agenda, based on the Lahore/and or Agra summits, that would include the Kashmir dispute and nuclear risk reduction measures;
- Resumption of political to political contacts;
- Ceasefire and monitoring of the Line of Control;
- Pakistan's adherence to its public pledges of providing only political support to Kashmiris and an end of support for militancy;
- Indian reduction of military forces and acceptance of human rights monitors within Kashmir.

As expected, the greatest divergence of views concerned measures and mechanisms regarding the Kashmir issue. There were differences on mechanisms for monitoring the Ceasefire Line (from Pakistan's international to India's bilateral approach) and of blame (India's emphasis on Pakistani-sponsored cross-border terrorism and Pakistan's on India's forcible occupation of Jammu and Kashmir). These are only some of the hurdles that hinder the resumption of an India-Pakistan dialogue and a sustainable peace. Advocating a middle path, some participants emphasized the need for reciprocity, asking Indian reciprocity for Pakistan's steps, no matter how limited, in curbing cross-border incursions, and Pakistani reciprocity to India's troop demobilization and removal of restrictions on the use of airspace. A failure to compromise, they warned, would only result in tactical gains but strategic losses for both states. Undoubtedly, the stakes will remain unbearably high so long as there is a risk of an armed conflict between the two nuclear-capable adversaries.

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19th Workshop of the Pugwash Study Group on the Implementation of the Chemical and Biological Weapons Conventions:

The First CWC Review Conference and Beyond

Oegstgeest, The Netherlands, 26–27 April 2003

Report

by Fiona Tregonning

This the nineteenth of the current Pugwash workshop series on chemical and biological warfare (CBW) was the tenth to be held in the Netherlands. The workshop was hosted by the Netherlands Pugwash Group, with support from the Netherlands government and from the German corporation Blücher GmbH, and was jointly convened by the Harvard Sussex Program on CBW Armament and Arms Limitation (HSP) and the international Pugwash Study Group on Implementation of the Chemical and Biological Weapons Conventions. Forty-six people attended the workshop, by invitation and in their personal capacities, from 20 countries: Australia, Belgium, Canada, Czech Republic, France, Georgia, Germany, India, Iran, Israel, Italy, the Netherlands, New Zealand, Poland, Republic of Korea, Russia, South Africa, Switzerland, the United Kingdom (UK), and the United States of America (US). This report of the workshop is the sole responsibility of its author, who was asked by the meeting to prepare a 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.

The meeting opened with a welcome from the Netherlands Pugwash Group and the observation that this workshop had attracted the largest number of papers yet (27, by the end of the weekend) for the workshop to consider. It was observed that, ten years after the Study Group had started meeting in the Netherlands, the work of the Group continues to be highly relevant – its focus is on the *implementation* of the CBW Conventions, and as such is open-ended, with a continuing need for the attention and interest of the Study Group.

This was the third time that the First Chemical Weapons Convention Review Conference (the Review Conference) had been the main item on an agenda for the Study Group, with the Review Conference due to open in The Hague on Monday 28 April, the day following the closing of the workshop. Under the main heading of *The First CWC Review Conference and Beyond*, the workshop received a report on recent developments at the OPCW and a short update on international criminalization, with the group unfortunately not able because of the unexpected absence of a participant to receive a report on the aftermath of the Fifth BWC Review Conference. In reviewing the first five years of the Chemical Weapons Convention (the CWC), the main items for discussion at the

workshop were emergent threats to the CWC, including unscheduled chemicals, ‘non-lethal warfare’ and allegations of non-compliance, as well as key basic elements of the CWC and their implementation, namely the general purpose criterion (GPC) and domestic penal legislation. In looking at the way ahead for the CWC, the workshop discussed topics relating to industry and trade, states not yet parties and the problem of ‘law enforcement’.

CWC: Recent developments in the OPCW, including the First CWC Review

Given the proximity of the Review Conference, the primary matter on which the workshop was updated in relation to the OPCW was the status of preparations for the Review Conference and the work that had been carried out at the OPCW by the Open-Ended Working Group for the Preparations for the Review Conference (the Working Group). Other items touched upon included: the impact of the new Director-General of the OPCW; the tenure policy of the OPCW; the status of chemical weapons destruction; the role of the OPCW in combating chemical terrorism; the work of the Scientific Advisory Board (SAB); and the new fifth possessor state party.

In respect of preparations for the

Review Conference, the Open-Ended Working Group established in September 2001 initially addressed organisational issues, including: whether the review of the CWC should take an article-by-article or thematic/cluster approach; the identity of the officers of the Review Conference; and the need for a drafting committee. Only in late October 2002 did the Working Group address substantive issues, using a cluster approach. The meetings resulted in the drafting of two Chairman's texts, beginning in January 2003, intended to be the base for discussions and drafting of Final Documents at the Review Conference. The first text was a draft Political Declaration, a short statement of commitment and purpose aimed at a non-specialist audience. The second 'Consolidated Text' was a longer paper reflecting on five years of experience and containing general, rather than specific, recommendations.

The workshop heard an outline of the major issues that arose in relation to items on the Provisional Agenda for the Review Conference and the Chairman's Consolidated Text. Those issues included: how to address the non-membership of certain countries of the OPCW; the need for universality and effective national implementation of the CWC; the comprehensiveness of the CWC prohibitions and the role of the Schedules to the CWC; optimization of verification activities; the timelines for destruction of chemical weapons and the need for support of destruction programmes; proposals for 'nil declarations'; the need for the OPCW to be prepared for a challenge inspection and concerns regarding 'abuse' of the challenge inspection mechanism; the need for a clear understand-

ing of the concept of Assistance and Protection; under Article XI, the Australia Group's impact on trade and the role, size, budget and evaluation of international co-operation and assistance programmes; the submission of declarations in electronic format; and the functioning of the policy-making organs of the OPCW, as well as the interaction with subsidiary bodies such as the SAB.

The fact that the Provisional Agenda was not adopted by the Executive Council until only a month before the Review Conference, and that the Director-General's reports were issued only shortly before the Review Conference, was deplored. This impacted negatively on the ability of NGOs and academics to contribute to the Review Conference, in the absence of such information. The Provisional Agenda had effectively been ready and available to states parties in December 2002, but agreement within the Executive Council was not forthcoming on the issues of the drafting committee and identity of the officers. While 2002 was pre-occupied with issues surrounding the replacement of the first Director-General and the 2003 budget, states parties had not truly engaged in substantive preparation for the Review Conference until January 2003, with only approximately 25 states parties actively being involved in the work of the Working Group. Less than 20 states parties were expected to be represented at the Review Conference at the level of Deputy Minister or higher. In essence, there seemed to be agreement amongst the workshop that there had not been sufficient substantive preparation for the Review Conference. One participant labelled the Review Conference a 'missed opportunity' already. On the

other hand, others viewed the Review Conference as having received comparatively little attention because, in contrast to the BWC for example, the CWC was seen as operating relatively well. A variation on this was the comment that arms control regimes in general were under considerable strain today (for example, the NPT and BWC), and that by contrast, what the CWC Review Conference could hope to achieve was not inconsequential.

On other matters relating to the OPCW, in the ten months since the last workshop in the Netherlands, a new Director-General of the OPCW, Rogelio Pflinter of Argentina, had been appointed (see the reports of the 17th and 18th workshops of this Study Group). His priority task has been to heal political wounds in relation to the manner of the Secretariat's interaction with member states.

The OPCW has seen an improvement in its financial situation for 2003, with the Organisation able to carry out its programme of work in full this year. However, it was estimated that at least a seven per cent increase would be needed in next year's budget to keep pace with costs. Such an increase may not be viable, and it was considered that it may be necessary to address the staffing structure of the OPCW.

At the last session of the Conference of the States Parties, a more constructive debate on Russian deadlines for destruction of chemical weapons was possible, as a result of evident progress in Russian destruction. At the Executive Council session in March this year, a new deadline of 31 May was set (the Conference having accepted extension in principle) for one per cent destruction. It was reported that this objective had

already been met at Russia's Gorny destruction facility. Another recent development in Russia is the replacement of Zinovy Pak by General Kholstov, Head of the Radiation, Chemical and Biological Defence Troops, as head of the Russian Munitions Agency.

On other issues related to possession of chemical weapons, with the recent addition of Albania to the list, there are now five declared chemical weapons possessor states. Discussions are, apparently, continuing regarding what, of the relatively small quantities of chemical weapons found by Albania, will need to be declared.

In respect of the role of the OPCW in combating chemical terrorism, while little occurred during most of 2002, a shift was reported to have occurred towards the end of the year. Recognising the need for international organisations dealing with weapons of mass destruction to play a role, the OPCW was invited to attend the first session of the United Nations (UN) Counter-Terrorism

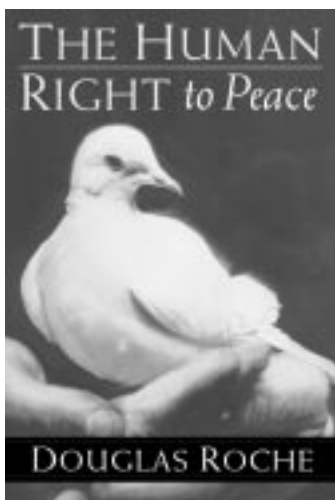
Committee in New York this year. A special meeting, devoted to discussions with the OPCW, IAEA, WCO, Interpol and others, was planned for mid-May. Internally, the OPCW's Open-Ended Working Group on Terrorism, established in December 2001, has been reactivated. In addition, in September 2002 the first OPCW exercise on the delivery of assistance (ASSISTEX I) took place in Croatia, based on a hypothetical terrorist chemical attack on an airport.

In addition to the more general reports on the OPCW, the workshop also received a paper on the SAB's report to the Review Conference, which had very recently been issued to States Parties. The report analyses relevant developments in the fields of science and technology and provides advice to the Review Conference, with the aim of improving the operation of the CWC. In addition to some new ideas, the SAB report also includes earlier observations and recommendations by the SAB on scheduled chemicals, production of chemical compounds, on-site analysis, and

destruction, amongst other things. It was observed that the strict dividing line between chemistry and biology had already disappeared, with the developments, for example, in biotechnology and changes in the chemical industry. Concerns were raised amongst the workshop regarding the presentation of SAB reports via notes from the Director-General – it was considered that this might at least create an impression that the SAB was subordinated to the Director-General, rather than an independent body. However, it was emphasised that the SAB was independent and carried out its work in good faith.

One of the areas of interest to the workshop was the advancement in technology relevant to verification of destruction, given the high percentage of OPCW funding absorbed by the verification programme. This is an issue currently under discussion, with a consultant having been hired by the Director-General to visit possessor states parties and formulate proposals in this area. The consensus seemed to be that, as will likely also be the case in relation to most other issues, the Review Conference would not take a specific substantive decision on this point but will instead highlight the issue and reiterate the need for resolution. Members of the workshop expressed the hope that the Review Conference might formulate a programme of work to look at various issues in coming years.

The implementation of the OPCW's tenure policy was an issue provoking much discussion amongst workshop participants. In late March the Executive Council finally took a decision in respect of the effective starting date for the OPCW's seven year maximum length of service



Senator Douglas Roche of Canada, a member of the Pugwash Council, examines the requirements of peace in a post-September 11 world, arguing that the modern world possesses the creativity and political and legal tools to resolve conflict without war.

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tenure policy, some four years after the Conference delegated authority to the Council to set a date. The starting date set by the Council is 2 July 1999, the date of the Conference decision. The majority of the Secretariat staff's contracts started in May or June of 1997. A number of workshop participants expressed concern at the implementation of the tenure policy, which is due to take effect this calendar year. Amongst the concerns raised were: the ability to recruit experienced inspectors for what will be relatively short-term positions; a possible reduction in the independence of staff from their previous jobs or governments; the loss of institutional knowledge and inspector experience; a reduction in operational effectiveness; and the impact on morale at the Secretariat. The observation was made that, originally, bilateral inspection agreements had been contemplated for Article IV and V inspections, with the majority of inspectors having been expected to carry out Article VI inspections. Some members concluded from the tenure decisions taken that an effort would be made to gradually lower the number of approved posts within the Secretariat.

The CWC: The first five years ***Emergent Threats to the Convention***

A provocative presentation was given to the workshop, taking the point of view of a terrorist or agent of a rogue state and asking where that person would perceive weaknesses and opportunities for obtaining chemical agents. The hypothesis was that small, new and inexperienced chemical companies in financial difficulties, with a large amount of spare capacity, would be targeted. The likelihood

of detecting the production of Schedule 1 chemicals—assuming that Schedule 1 chemicals were being sought—by random inspection amongst thousands of DOC plants was doubted, and industry inspections were stated to be of mild deterrent effect. To increase confidence amongst states parties, the presentation concluded that it is necessary to increase confidence in the CWC, which should be achieved by ensuring that implementing legislation is complete, and that declarations are full and accurate. What should be considered is how to make challenge inspections more politically acceptable and useful tools. The possibility of having some form of 'non-accusatory' challenge inspection was considered, but is not ripe for discussion at a diplomatic level. The observation was made that the CWC was designed primarily for state versus state scenarios, whereas what is now being sought is to utilise the provisions of the CWC to help in the efforts to prevent terrorism.

Looking at other emergent threats to the Convention, the workshop received a presentation considering the comprehensiveness of the General Purpose criterion (GPC) and asking whether there were any inconsistencies in the Convention, the position of Riot Control Agents (RCA) being highlighted as a potential problem. One issue raised was the misunderstanding of the phrase 'toxic chemical', with differing meanings ascribed to this phrase in the CWC and within the scientific community. The issue of new toxic compounds as a result of scientific and technological development was also highlighted, with three principle lines of search identified as having been used in the past: for more efficient analogues and homo-

logues of already known toxic chemicals; more efficient toxic chemicals with different structures but similar kinds of toxic effects; and new toxic chemicals with quite new effects. The same lines of search are applicable today. The possibility of adding some toxic chemicals to the Schedules, or even amending the Convention in the future, was raised, with the caveat that states parties may be politically unwilling to do so, particularly given the threat of chemical terrorism.

A paper was also presented on scientific and industrial developments since 1992, when negotiation of the CWC was concluded, highlighting the great changes in industrial infrastructure since that time. The trends in the chemical industry were considered to pose major challenges to the implementation of the CWC, with a resulting need for flexibility within the OPCW and obvious implications for inspector training.

'Non-lethal warfare'

The topic which absorbed the workshop for much of its time was 'non-lethal' warfare, an issue which, together with the question of 'law enforcement' under the Convention (a topic also addressed separately by the workshop – see below), has become more controversial and high profile since the last meeting of the workshop in Geneva in November 2002, where it was also discussed. A large number of the papers received by the workshop addressed these issues, as well as the related issue of RCA, and the Moscow hostage crisis.

The workshop addressed the issue of 'new weapons' and methods of warfare, highlighting the legal scrutiny required of new weapons by Article 36 of Additional Protocol I to the Geneva Conventions. It was reit-

erated that, as shown by the Moscow hostage crisis, the effect of a calmanative or incapacitant agent depends on the means of delivery and the environment in which it is delivered, and to achieve military effectiveness, the dose required inevitably results in a proportion of the people exposed receiving a dangerous if not lethal dose. The use of a hypothetical 'perfect' non-lethal weapon (NLW) on a battlefield was then explored, with concerns raised regarding the ability of soldiers to recognise and respond appropriately to the enemy's incapacitation, resulting in a potentially increased mortality due to increased vulnerability. The position was taken that consideration in terms of international humanitarian law should be given to the deployment of new weapons and methods of warfare. Included in that is consideration of the effects on the victims, and the prohibition at customary international law of attack against civilians. On the other hand, discussion amongst the workshop also reflected that in a world with increasing terrorist threats, new risks may require new responses, and that doctrinal approaches may not always be helpful.

Another presentation delivered to the workshop highlighted that the number of fatalities (approximately 15 per cent) incurred during the Moscow hostage crisis was to be expected. The presentation concluded that it is incorrect to categorically distinguish between lethal and 'non-lethal' weapons. While there is disagreement as to whether there might be a truly NLW in the future (i.e., less than 0.5 per cent fatality rate), the presenter concluded that they might eventually be discovered. As touched on by many participants at the workshop, there are real concerns about

the implications for the CWC regime of the increasing governmental interest in NLW for 'law enforcement'. With particular reference to the US research into NLW, although not considered to be in violation of the CWC, it was thought to be close to the line. To the knowledge of the workshop, there are no defensive NLW projects underway in the US. The reasons for this are that the US is not yet at the development phase of NLW and that the chemicals being examined are established pharmaceuticals with known antidotes.

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***The presentation concluded
that it is incorrect to categorically
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and 'non-lethal' weapons.***
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The divide between the US position on RCA as not being toxic chemicals falling within the GPC, and that of the majority of other states which view RCA as falling within the scope of the GPC, was highlighted. The US Navy Judge Advocate General opinion differentiated between the definition in Article II of 'toxic chemical' and 'RCA'. One workshop participant stated that riot control was a *use* for chemicals, and referred back to the GPC, stressing that RCA were still toxic chemicals. This, however, is not the position taken by the US, which views the different wording of the two concepts as deliberate and meaningful.

One proposal raised within the workshop was to allow the use of NLW in certain UN-mandated operations, based on rules of engagement that would be drawn up by the UN. Those criteria would include: that the

effects would be truly temporary; that the safety ratio would be equal or better to that of CS; that the effects would be recognisable; that there would be prior announcement of the possible use; and that there would be known countermeasures. There are concerns, however, associated with any UN use of RCA, especially given that such agents would have to be stockpiled by a state party as the UN does not maintain an active force or weapons stockpile. In addition, the threat of force with conventional weapons (i.e., firing into the air) may be just as effective as the use of RCA – it should not be automatically assumed that there is a gap in the force continuum that needs to be filled by NLW.

The workshop also considered the position regarding potential use of RCA in Iraq, where there is a situation of effective control by US and UK forces. The workshop generally accepted that 'law enforcement' does not mean or include enforcement of international law. While it would not include military use, it could however include maintaining law and order in a peacekeeping context in an area under occupation. The opinion was expressed that RCA could be used should it be necessary to control a riot involving prisoners of war. On the other hand, it was noted that if RCA had been used by the US during military operations, and given that Iraq is not a state party to the CWC, Iraq might have viewed such use as justifying a response with any CW agent.

As a side issue, the question was raised whether a state party could argue that unfilled munitions were intended to be filled and used for law enforcement purposes, thus evading what might otherwise be a violation

of the Convention. However, there was no consensus that Article II, paragraph 1 of the CWC requires a judgement as to whether the ‘types and quantities’ are consistent with the purposes not prohibited – under the definition of ‘chemical weapons’ this applies to munitions and devices, as well as toxic chemicals.

Allegations of non-compliance

Six years after the CWC entered into force, there has still not been a challenge inspection. One of the explanations for this is the perception that, if a challenge inspection is carried out, something must be found, if not a ‘smoking gun’. It was reported that the United Kingdom (UK) is attempting to demystify the challenge inspection mechanism in order to show that they can be used (sparingly) without jeopardising industrial or government secrets. One of the purposes of challenge inspections, and the verification regime, is to reduce the corrosive effect of unfounded suspicions. However, as was pointed out to the workshop, challenge inspections have to exist in a climate where currently several states parties allege there are large stocks of chemical weapons in a certain state party but ongoing OPCW inspections have found nothing. Nevertheless, there is at least a prima facie inconsistency, and corrosive impact on the regime, between public statements alleging possession of chemical weapons and an absence of action to redress this through the mechanisms in the CWC. (This situation was subsequently highlighted at the Review Conference by the US statement on the first morning, which ‘named names’.)

In addition to the challenge inspection mechanism, there is also provision under Article IX of the

CWC for consultation between states parties to clarify and resolve ambiguous situations or concerns about possible non-compliance. A number of states parties do request information from others, primarily on a confidential and non-accusatory basis, which avoids unnecessarily elevating the issue. There is a question whether the Executive Council should be informed of bilateral discussions on such matters.

Compliance concerns also exist outside of the Article IX context. For example, a number of states parties have failed to meet their Article VII obligations to implement penal legislation, have legislation targeting only scheduled chemicals instead of incorporating the GPC, and fail to submit declarations.

Key basic elements of the CWC and their implementation

The General Purpose Criterion (GPC)

The workshop received two presentations on the GPC, outlining its origins during negotiations, drawing on the BWC purpose-based definition, and stressing the importance of its implementation. The GPC is clearly expressed in Article II, paragraph 1(a) and Article VI, paragraph 2 of the CWC. Some of the benefits of the GPC are its ability to anticipate technological change and to control dual use agents.

The first presentation highlighted three concerns expressed in recent years in relation to the CWC and GPC. The first is the belief that there are gaps in the range of weapons outlawed by the CWC. Second is the increased interest by states parties in so-called NLW. Third is the increasing attraction to terrorists of using toxic chemicals for hostile purposes.

All of these concerns can be allayed and remedied by proper implementation (and understanding) of the GPC. Such implementation is a positive and open-ended obligation by the CWC, in particular by the requirement in the ‘Molander chapeau’ in Article VI, paragraph 2 that states parties adopt the ‘necessary measures’. The presentation concluded with suggestions that the Review Conference should formally reaffirm the central importance of the GPC, and the definition in Article II, paragraph 2 of ‘toxic chemical’, as well as calling on all states parties to fulfil their Article VII undertakings.

Building on this, the workshop then examined implementation of the GPC. The challenge to the CWC from unscheduled agents, such as some of the novichoks, mid-spectrum materials such as bio-regulators, and calmatives was highlighted, although it was also stressed that such agents are indeed covered by the GPC. A number of international initiatives have been launched addressing potential risks to the environment and public health from chemicals, many of which originated with the United Nations Environment Programme. In implementing the GPC, National Authorities in states parties should take note of the national and international programmes addressing the safe management of chemicals, particularly as these programmes focus on those chemicals which pose the greatest threat to health and the environment. Again, the Review Conference was considered to be an occasion on which the importance of the GPC should be reaffirmed.

In discussion, the view was expressed that the GPC is still not fully understood by all those involved

with the CWC. To increase understanding, it was proposed that the GPC should be on the agenda of every Conference of the States Parties, to ensure co-operation to foster understanding. However, it was noted that so far, there had been no mention of the phrase 'GPC' in the preparations for the Review Conference and it was assumed that no such mention was likely in the final documents emerging from the Review Conference. Instead, the phrase 'comprehensive nature' of the CWC was used. Suggestions for the reasons lying behind this reluctance to officially use the term 'GPC' include that it is not used in the CWC, that some states parties do not accept the term, and that it is hard to translate into different languages. The very ambiguity of the term 'General Purpose Criterion' in English is quite useful. By comparison, reference to the 'comprehensive nature of the Convention obligations' was thought by some participants to be an inadequate equivalent to, or expression of, the GPC, which could be used by some states parties to avoid their obligations.

The method of implementation of the CWC, and GPC, is left up to each state party, with National Authorities primarily involved in a co-ordinating role. National legislation to incorporate the GPC (a topic which was touched upon later in the workshop in more depth) is clearly essential. In terms of verification activities, these are based on the Schedules, rather than the GPC – this is a topic which may require revisiting in future years.

The question of secrecy also exercised the workshop, particularly in relation to unscheduled chemicals and novel agents. Undue secrecy was thought to be counter-productive, as

knowledge of novel agents may be useful in keeping industry aware and up to date. The value of secrecy surrounding novel agents existed in the past, when there was a possibility of states using chemical weapons or retaliating with such agents. Given that there is no strictly limited number of toxic agents that could be used by terrorists, there is no need to ensure the absolute secrecy of formu-

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Undue secrecy was thought to be counter-productive, as knowledge of novel agents may be useful in keeping industry aware and up to date.
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lae today. The opinion was expressed that, instead, an aggressive policy of openness might be more advantageous. In particular, if the nature of the agent used in the Moscow hostage crisis had been known earlier, treatment might have improved. On the other hand, one participant noted that some people considered that some dangerous novel compounds escaped oversight under the current verification system, which was good reason for maintaining secrecy around such compounds.

In relation to new agents, the usefulness of international humanitarian law, and Article 36 of Additional Protocol I, should not be ignored – it is yet another body of law creating obligations on states parties, which could be used to draw attention to the issue. While this may not influence rogue states or terrorists, the CWC should not be viewed as the only possible solution to the problems.

On a divergent issue, the legality of a deliberate attack against a chem-

ical plant in a state party, thus releasing toxic chemicals (which had been stored or produced there for purposes not prohibited) into the environment, was discussed. During negotiations, while deliberate attacks against chemical facilities were discussed, there was no consensus and nothing was included in the CWC on this topic. Under Article X, paragraph 8 of the CWC, a state party can request assistance and protection if it considers that chemical weapons or RCA (as a method of warfare) have been used against it – there is no need for the actor to have been a state. However, the other limb of Article X, paragraph 8, is if 'it is threatened by actions or activities of any State that are prohibited for states parties...'. Thus, under this limb, which is the most applicable to the scenario of an attack against a chemical plant, it seems the actor must have been a state, not a terrorist acting alone. Nevertheless, there are always possibilities for consultation and co-operation, and for bilateral assistance.

Domestic penal legislation

The workshop received two presentations on the need for, and current disappointing lack of, domestic penal legislation under Article VII of the CWC. Not only have almost half of states parties failed to report implementing legislation to the OPCW, only 28 per cent of states parties have adequate ('all key areas') reported legislation.

The first paper on the topic of national implementing legislation argued that there are three areas in which the quality of national penal legislation can be less than comprehensive: in relation to chemicals; people; and activities. On the topic of chemicals, the primary question is

whether the legislation covers the GPC, and not simply the scheduled chemicals, as discussed above. With regard to people, it was noted that the UK legislation covers government officials, including defence scientists and members of the armed forces. Finally, the activities covered should be as co-extensive as the prohibitions in the CWC and, where possible, should use the language of the CWC.

Despite the present low rate of adequate legislation, the second presentation stated that there were positive developments in this area, with the perception of a new mobilisation by states parties to address the issue of national implementation. For example, the topic of implementing legislation is addressed in one way or another by many of the national papers for the Review Conference and it was expected that the Review Conference would result in a number of proposals for action in this field. The events of September 11 have increased the interest of states parties in an enforceable chemical weapons instrument. By contrast to the position at the time of entry into force, no longer is national implementation viewed simply as an internal matter for states parties. Within the OPCW a matrix of requests for OPCW implementation support and responses is now being created, which gives a global overview of the state of development of implementing legislation in each country, the assistance needs of states parties and information on assistance programmes being delivered. In addition, an expanded network of legal experts (building on that created in Latin America and the Caribbean) is being created, with a first meeting to take place in November 2003. OPCW participation in the work of the UN Counter-Terrorism

Committee may also result in increased political awareness about aspects of implementation and the need for assistance.

The workshop also discussed some aspects of individual states parties' implementing legislation, including that of South Africa, which has omnibus legislation, and the UK and Belgium. Attention was drawn to the availability of model implementing legislation on the OPCW website, with some concerns being expressed about the legislation of some states parties which contain derogations in respect of challenge inspections – it was thought that if this was used as a model by other states parties, it might result in the 'ratcheting down' of implementing legislation.

The CWC: The way ahead

Industry and Trade: maximizing the benefits

The Australia Group was the subject of some discussion by the workshop, which received a presentation outlining its role and impact as a non-proliferation regime, emphasising in particular the US experience. Having outlined the objectives, method of operation and criteria for membership of the Australia Group, some of its perceived limitations and challenges to it were also explored. One of those was stated to be the requirement of consensus when adopting decisions, though others within the workshop saw consensus as the only way to keep the Australia Group together. The presenter stated that, while it was necessary for intelligence to be shared on a classified level, the Australia Group was not 'secretive'. The Australia Group was also stated to be interested in outreach, with specific reference made to working with China, India

and Russia to try and ensure the implementation of export controls for technology mirroring those of the Australia Group. In subsequent discussion, it was noted that the Australia Group constraints had close parallels to those for drug precursors for illicit drug production. Questions were raised amongst the workshop participants as to the consistency of the Australia Group with Article XI of the CWC.

Under the heading of industry and trade, the workshop also discussed inspections of DOC/PSF plants under the Convention, with the conclusion made by one presenter that after some 450 Article VI inspections, the OPCW now had sufficient experience to warrant a review of the process of such inspections as indeed the First Review Conference is required to do under the CWC, and a redistribution of them to increase DOC/PSF inspections. In a second presentation, issues relating to the verification of OCPFs and the specificity of SITC codes, different types of access to the overall facility, and plant/plant site delineation were outlined.

In a discussion paper that was provided to the Review Conference, the International Council of Chemical Associations identified relevant key trends in technology and the market. A number of key positions were also elaborated. Amongst those were the distinct nature of routine and challenge inspections, with the need for a useable challenge inspection mechanism expressed, national implementing legislation, and concentration on core Treaty obligations. Other topics addressed included: the nature of the future Schedule 3 regime and, in particular, opposition to automatic translation of the

Schedule 2 ban on exports to states parties to Schedule 3 chemicals; technical and logistical challenges to sampling and analysis; safeguarding of confidential business information; and the impact of terrorist threats. The topic of a Schedule 3 export ban was one which provoked some debate, with some participants taking the view that a ban might become the only way in which to induce non states parties to join the CWC by making it much 'warmer' to be inside the CWC regime than outside it. Both incentives to join, and disincentives to be outside the regime, are needed. Given the increasing number of states parties, the amount of trade affected by a Schedule 3 ban would be much reduced, and a ban would be simpler to implement than to require, for example, undertakings. The counter-argument is that if Schedule 3 chemicals became unavailable, a non state party might decide to build a facility to produce them. In addition, non states parties of particular concern, such as Syria and North Korea, were stated not to generally purchase Schedule 3 chemicals from states parties, thus meaning that a Schedule 3 export ban would not have much of an impact on them. The impact of such a ban on Taiwan was also raised.

States not yet parties

The workshop received an in-depth paper on chemical weapons in relation to the Middle East, focussing in particular on the deadlocked positions of Syria, Egypt and Israel towards the CWC. Due to the Arab 'linkage' approach between chemical and nuclear disarmament, and Israel's reliance on its (officially undeclared) nuclear arsenal as the ultimate guarantor of its survival, to

date efforts to induce these three states to become states parties to the CWC have failed. Working on the assumption that Israel possesses chemical weapons, the presentation analysed the political, economic and strategic setting in relation to the three states. It was stressed that there were three misperceptions by the Arab states regarding Israel's CW capacity, the value of CW to Israel and the likelihood of Israel foregoing its nuclear option within the perceivable future. The paper concluded that regional adherence to the CWC would not destabilize the Israeli-Arab balance and might even be a positive step towards a common security regime in the Middle East.

In subsequent discussion, the strategic uselessness of chemical weapons in the Middle East, given the current international environment, was discussed, and the domestic propaganda value extracted from this issue highlighted. The international political gains that Israel might make from taking a first step in this arena were thought to outweigh any perceived increase in vulnerability.

Law Enforcement

The workshop addressed the problem of 'law enforcement including domestic riot control purposes' under the CWC – although a separate agenda item, this issue had also come up during the workshop when discussing NLW. It was observed that the note from the Director-General to the Review Conference flagged the issue but merely stated that states parties might wish to address these issues.

One presentation to the workshop set out the differences between the approach taken by the US and the UK

to 'law enforcement'; in its simplest form, the US views domestic riot control as a subset of 'law enforcement', while the UK, emphasising interpretation in light of the 'object and purpose' of the CWC in accordance with Article 31 of the 1969 Vienna Convention on the Law of Treaties (the 'Vienna Convention'), views law enforcement as a subset of domestic riot control. To understand the background to the current ambiguity in the language of the CWC, it is necessary to review the relevant negotiating history, the prohibition on RCA as a method of warfare, the declaration requirements in Article III, paragraph 1(e) which are limited only to RCA, and state practice since negotiation of the CWC, particularly with respect to the Moscow theatre events and increasing interest in NLW. The presentation concluded that there are increasing pressures to ignore constraining interpretations of the CWC in regard to disabling chemicals, a situation which required serious attention. To address this, amendment of the Convention was suggested, to require declarations of the identity of all chemicals held for law enforcement purposes, not simply RCA. It was recognised that it might be premature to address law enforcement at the forthcoming Review Conference, but some multilateral interim measures were suggested, including affirmation that only chemicals meeting the definition of RCA be used for law enforcement purposes, affirmation of the understanding of 'law enforcement' as covering action taken within the scope of a state party's jurisdiction to enforce its laws, and tasking the SAB to report on the meaning of the word 'toxic'.

The second presentation to the workshop also focussed on the docu-

mentary history relating to the law enforcement controversy, and the Vienna Convention, to inform current interpretation. The context (both within the CWC and in regard to the Geneva Protocol), ordinary meaning, and the official language versions of the provisions were also stressed. The conclusion reached was that 'law enforcement' in Article II, paragraph 9(d) could not be interpreted to exempt from prohibition any agent that is not an RCA as defined in Article II, paragraph 7. A number of suggestions for further action were made, including the reaffirmation that the prohibitions of the CWC cover all chemicals regardless of origin or method of production.

The workshop also received information outlining the attractions of NLW for a range of groups, including ordinary criminals, despots, terrorists and the military. The 'non-lethal' nature of such weapons, both now and in the future when more truly non-lethal agents might be developed, was also explored, as was the fact that NLW are often used as an adjunct to, rather than replacement for, lethal force. Pursuit of chemical incapacitants was seen as the likely first step towards the exploitation of pharmacology and biotechnology for hostile purposes, a step unlikely to be restricted simply to domestic law enforcement. To prevent a new chemical arms race, the possibility of a new international treaty to prohibit the hostile manipulation of human physiology was explored. Despite the length of time negotiation would take and the political challenges, rather than trying to make existing treaty regimes adapt to new challenges, perhaps a new solution is required. On the other hand, there is a danger that

a new Convention might detract from the existing treaty regimes.

There was extensive discussion on this topic amongst the participants of the workshop. One point raised was that the overall objective of the CWC is to save multitudes (see the preamble to the CWC - 'for the sake of all mankind'), not simply several hundred people, a goal best achieved by total prohibition. Furthermore, to let violations of the comprehensive prohibition contained within the CWC appear to be legitimate would cause existing international law, built up over many years by state practice and *opinio juris*, to suffer. The danger of linking the law enforcement issue to that of NLW, as 'law enforcement' relates to toxic chemicals, both of the 'lethal' and 'non-lethal' kind, was also stressed. The role that the death penalty played in the negotiating history was emphasised, given the established practice in a number of states of lethal injections to carry out capital punishment (portrayed in some countries as 'law enforcement'), with concerns expressed by some participants as to how far this issue has been extrapolated.

The topic of international criminalization, although on the agenda, was only briefly discussed, with a short outline provided on universal jurisdiction (for a fuller account, see the report of the 18th workshop of the Study Group).

Future work

The workshop closed on the Sunday evening with a sense that discussion on a number of the topics touched on over the weekend was far from exhausted. The next workshop of the Study Group, concentrating on BWC issues, is likely to be held in Geneva, in November 2003.

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Working Papers

Jiri Matousek: Brief Information on the Report of the OPCW Scientific Advisory Board for the First CWC Review Conference

Jiri Matousek: Emergent Threats to the Chemical Weapons Convention

RG Sutherland: Industrial Inspections of DOC/PSF Plants and the Chemical Weapons Convention

3B. Slides

RG Sutherland: Scientific and Technological Developments, Industrial Change and the Chemical Weapons Convention

Matthew Meselson/Julian Robinson: A Draft Convention to Prohibit Biological and Chemical Weapons Under International Criminal Law

Richard Burgess: A Short Note on Industry Issues during Inspections

Robin M. Coupland: "Calmatives" and "Incapacitants": Questions for international humanitarian law brought by new means and methods of warfare with new effects?

Mark Wheelis: "Non-Lethal" Chemical Weapons—A Faustian Bargain (in press), *Issues in Science and Technology*, Spring 2003, 74-78

Lynn Klotz, Martin Furmanski, Mark Wheelis: Beware the Siren's Song: Why "Non-Lethal" Incapacitating Chemical Agents are Lethal

Chayes, Meselson, Smith: Proposed Guidelines on the Status of Riot Control Agents and Other Toxic Chemicals under the Chemical Weapons Convention

Malcolm Dando: First CWC Review Conference Paper No. 4: The Danger to the Chemical Weapons Convention from Incapacitating Chemicals, March 2003 (Series Editors: Graham S. Pearson and Malcolm R. Dando, Dept. of Peace Studies, University of Bradford)

Nicholas A Sims: Implementing the Chemical Weapons Convention in Full: Some Issues of Comprehensiveness in National Penal Legislation under Article VII

Peter Plant: Capability

Walter Krutzsch: Non-lethal Chemicals for Law Enforcement? (Paper + Appendix)

Walter Krutzsch: How to Respond to the Non-lethal Weapons' Challenge

Lisa Tabassi: National Implementing Legislation for the Chemical Weapons Convention: Status Six Years after Entry into Force (Part 1: Paper—Part 2: Annexes)

James Seevaratnam: The Australia Group. Its Role and Impact as a Nonproliferation Regime

Eitan Barak: Implementation of the Chemical Weapons Convention in the Middle East after the Saddam Era: Is There a Way Out of the Deadlock?

Julian Robinson: The General Purpose Criterion and the Importance of Its Implementation

Graham Pearson: First CWC Review Conference Paper No. 3: Implementation of the General Purpose Criterion of the Chemical Weapons Convention, January 2003 (Series Editors: Graham S. Pearson and Malcolm R. Dando, Dept. of Peace Studies, University of Bradford)

Julian Robinson: Solving the Problem of "Law Enforcement"

Wim Möller : Quo Vadis ? Weapons of Mass Destruction, Chemical in Particular

OPCW Conference of State Parties : Note by the Director General to the First Review Conference (RC-1/DG.1, 17 April 2003)

OPCW Conference of State Parties : Note by the Director-General. Report of the Scientific Advisory Board on Developments in Science and Technology (RC-1/DG.2, 23 April 2003)

International Council of Chemical Associations : 2003 Chemical Weapons Convention Review Conference Discussion Paper (presented by **Detlef Maennig**)

Mohammad Khodadadi : Importance of Some Articles of the CWC

Jean Pascal Zanders : Peacekeeping operations, law enforcement, and the use of RCAs : Two examples

2nd Pugwash Workshop on South Asian Security

Geneva, Switzerland, 16–18 May 2003

Report

by Samina Ahmed

The workshop's primary objective was to assess the prospects for reopening a dialogue between India and Pakistan and continued cooperation to minimize confrontation between the two traditional South Asian adversaries. The workshop included 37 participants from India, Pakistan, Italy, Switzerland, and the United States, and was organized jointly with the Geneva International Peace Research Institute (GIPRI). Both organizations gratefully acknowledge support from the Arbeitsgruppe Gute Dienst und internationale Friedenssicherung (AGDIF) of the Swiss Ministry of Foreign Affairs and the Swiss Ministry of Defense.

This workshop, a continuation of the series of India-Pakistan dialogues held in Geneva (November 2002) and Lahore (March 2003), occurred in the context of initial steps taken by India and Pakistan in late April 2003 to normalize relations, ending the diplomatic and military standoff that had followed the December 2001 terrorist attack on the Indian parliament. Focusing on ways to strengthen the budding normalization process, the

workshop's discussions examined ways of minimizing the nuclear threat and discussed immediate steps and long-term goals towards addressing the Kashmir conflict, including Kashmiri participation in any peace process, cross-border infiltration and the management of the Line of Control. Identifying opportunities and constraints to a resumed dialogue, the workshop examined agendas and processes that would best sustain a durable peace between India and Pakistan.

Breaking the stalemate

On 18 April 2003, Indian Prime Minister Atal Bihari Vajpayee offered a "hand of friendship" to Pakistan, ending a diplomatic and military impasse that had, just months before, brought the two nuclear-armed states to the brink of war. Pakistan's President Pervez Musharraf and Prime

Minister Zafarullah Khan Jamali welcomed Vapayee's initiative, pledging to constructively engage with India in resolving their many differences.. However, a future dialogue between India and Pakistan hinges on their political will and capability to sustain the normalization process and to move in the direction of peace.

Danger signals are already present. Even as the risk of a hot war recedes in South Asia, India's political and Pakistan's military leadership continues to wage a war of words. With general elections due in 2004, New Delhi is understandably cautious, making any progress towards normalization, let alone the resumption of a high-level dialogue, contingent on decisive Pakistani steps to end the infiltration of militants across the Line of Control in Kashmir. Denying Indian accusations of armed support to militants operating in Indian Kashmir, Islamabad also insists on the centrality of the Kashmir dispute if any future dialogue process is to yield substantive results. Clearly, the two sides still lack the political will and flexibility needed for a solution to a conflict that has resulted in several wars and near-war crises in the past.

The significance of recent developments admittedly lies in the easing of tensions and hence a reduction of imminent armed



conflict. The workshop's objective was to examine feasible and concrete near, immediate and long-term steps that could be taken by both sides in a future dialogue by discussing an array of solutions and options that might prove mutually acceptable. While there was little disagreement on the framing of an agenda and on the manner in which a future dialogue should proceed, the workshop's deliberations also revealed the absence of compromise and rethinking on the most contentious of issues, Kashmir and cross-border infiltration. These and other differences, rooted in a long history of war, remain a threat to the budding normalization process and its transformation into a sustained dialogue for peace between India and Pakistan.

Initial overtures

Although the participants differed on the causes and consequences of India-Pakistan differences, they unanimously supported the current normalization process, calling it an important turning point in the relationship. The decision to exchange High Commissioners was welcomed, as was the decision to resume transportation links. Participants pointed out that the initiative had the blessing of all major political parties in India and Pakistan and that the international environment was also conducive to an India-Pakistan détente. However, this optimistic response was tempered by caution. The political environment, said a participant, was one of angst and anger. Reviving trust would not be an easy task. While initial overtures and concessions were promising, said another participant, the objective thus far was modest: to take India and Pakistan back to their December 2001 rela-

tionship by removing some of the curbs imposed on communication and diplomatic ties. These modest measures at conflict containment would set the stage for a future dialogue process only if the momentum was sustained. Incentives for all concerned parties were also needed if India and Pakistan were to succeed in their search for viable and sustainable solutions of their many differences. This challenge was more than evident in the discussion of the Kashmir conflict.

The Kashmir conundrum

If the purpose of the workshop was to recommend ways in which the Kashmir issue could be addressed within a future dialogue, including the identification of a roadmap of sorts, that would include immediate steps and long-term goals, the discussions revealed the complexity of the problem and the many stumbling blocs to conflict management, let alone conflict resolution. There were some important points of agreement. Participants agreed, for instance, that any future dialogue between India and Pakistan would have to address the Kashmir conflict. They also believed that fifty-five years of conflict, including three wars and several near-war crises, proved that an over-reliance on coercion had only undermined the security of Indians, Pakistanis and Kashmiris. This realisation that peaceful negotiations alone can resolve the Kashmir conflict is certainly a step forward. However, India and Pakistan have yet to even agree upon a common definition of the conflict, let alone its causes and potential solutions. Participants, for instance, agreed that Kashmir should be a core issue in any future dialogue since it poses a major hurdle

in the normalisation of bilateral relations, but there was a wide divergence in Indian and Pakistani views on why it was so important.

India insists that Jammu and Kashmir (J&K) is an integral part of the Indian Union. If there is a dispute at all, it only involves the one-third of Kashmiri territory occupied by Pakistan. Militancy in Kashmir undermines Kashmiri and hence Indian security. In Indian perceptions, despite President Musharraf's pledge, Pakistan has yet to abandon its reliance on a proxy war, conducted through sub-state actors, across the Line of Control in Kashmir. There is, however, a shift in Indian policy from placing all blame for unrest in J&K on Pakistani intervention to an emphasis on internal reconciliation. While India is concerned about Kashmiri alienation, it believes it can be addressed through internal, democratic means, such as elections and other participatory mechanisms. Stressing that the 2002 state elections in J&K have helped in promoting the process of internal reconciliation, a participant called upon Pakistan to end its support for "cross-border terrorism" and to respect the sanctity of the Line of Control in the interests of peace within Kashmir and between India and Pakistan.

Pakistan insists that the Kashmir conflict is both a territorial dispute and a humanitarian issue. Its roots lie in India's forcible occupation of two-thirds of Jammu and Kashmir and its refusal to honour its pledge to implement UN resolutions on self-determination for the Kashmiri people. Denied that right, Kashmiris have been forced to conduct a political and armed struggle for self-determination. India's resort to "state-sponsored violence" has only

strengthened the Kashmiri resolve to oppose Indian control. Refuting Indian accusations of Pakistan support for the cross-border infiltration militants in Kashmir, Pakistan insists that the militancy is indigenous, the outcome of Kashmiri alienation, fuelled by India's refusal to accept the Kashmiri right of self-determination and the use of indiscriminate force to suppress Kashmiri political aspirations. However, as a result of international, mainly U.S. pressure to end all support for cross-border militancy, there is a subtle shift in the Pakistani stand. Insisting that the government is taking steps to curb such activities, Pakistan has asked for international and Indian understanding of its domestic constraints. Acknowledging that cross-border infiltration is a very serious issue and that Pakistani denials lack credulity, one participant, for instance, stressed that popular pressures placed limitations on governments changing policies overnight; stressed that the massive Indian troops presence in Jammu and Kashmir had also failed to prevent all infiltration by sub-state actors; and added that Kashmiris, an integral party to the dispute, rejected the sanctity of the LOC.

Given these differing interpretations of the causes and potential solutions of the Kashmir conflict, it is unlikely that the two states will agree to a mutually accepted mechanism on monitoring the LOC. India continues to insist on a bilateral mechanism that would provide, in the words of a participant, evidence of operational changes in Pakistan's policy, stressing that such evidence would help to create the right environment for a productive bilateral dialogue. If infiltration continues, however, and there is yet another major attack, it would

jeopardise any progress made thus far. Attributing a recent decline in infiltration to Pakistani concerns about diminishing returns as the result of U.S. pressure, a participant pointed out that, given the political will, the two sides could easily agree upon a simple but workable bilateral mechanism. It is easy, said a participant, to infiltrate the LOC because of its geography. It can only be stopped if Pakistan demonstrates the political will to stop all infiltration at source by ending all assistance, including recruitment, training and infiltration. Responding to these suggestions, a participant pointed out that the issue of a covert war could not be dealt with in bilateral negotiations unless there was also an understanding of the context of the conflict. Another pointed out that there were two central aspects to the Kashmir problem, the problem of cross-border infiltration and state-sponsored violence. Any mechanism to monitor cross-border infiltration would have to be accompanied by mechanisms to monitor Indian security forces in Kashmir. In any case, Pakistan denies any operational support for cross-border militancy, insisting on international monitoring of the LOC. Hence it would be near impossible to reach any mutually acceptable solution on monitoring the LOC in a future dialogue, unless both sides were willing to demonstrate an unprecedented considerable degree of give and take.

The mutual mistrust and rigidity that mark Indian and Pakistani policies towards Kashmir were amply reflected in the discussion of the workshop. When a participant stressed that the reality of the Kashmiri struggle for self-determination and human suffering cannot be denied, another participant dismissed

Pakistan's focus on human rights abuses by Indian security forces in Kashmir as a ploy to gain their withdrawal to advance its objective of annexing Kashmir. India and Pakistan had almost reached an agreement on Kashmir in the past, a participant pointed out, only to be undermined by the Pakistan army. Other participants emphasised that India hoped to exploit international concerns about terrorism to undermine Pakistan's standing and stakes as an equal party to the Kashmir dispute. If militancy in Kashmir was minimised, said a participant, Pakistan was concerned that India would assume that the problem was manageable and hence there was no need to negotiate the dispute with Pakistan.

The gap between the Indian and Pakistani positions on Kashmiri participation in any future dialogue is equally wide. Pakistan has repeatedly supported Kashmiri participation in any India-Pakistan dialogue, and has even implied that it would accede to a Kashmiri demand for independence. But India refuses to renegotiate Jammu and Kashmir's inclusion in the Indian Union, insisting that mechanisms such as internal elections would address Kashmiri grievances and demands. Pakistan too still insists on a plebiscite, according to UN resolutions, to ascertain the accession of the Kashmiri people to either India or Pakistan. Rejecting the territorial status quo in Kashmir, moreover, Pakistan is unwilling to accept the LOC in its current form. In the words of a participant, the LOC is itself a problem and not a solution. In Indian perceptions, however, the solution of the Kashmir conundrum could well lie in the transformation of the LOC into

the international boundary. A number of norms have been strengthened in the 11 September environment, said a participant, including the sanctity of existing borders, which cannot be challenged by any movement for self-determination. Another emphasized that the transformation of the LOC into an international border is the only viable solution, alongside soft borders and mechanisms for managing the LOC. The participant, however, admitted that this solution might be unrealistic in the present state of relations between India and Pakistan. Others warned that there were only two ways of modifying the LOC, through an agreement between India and Pakistan or through war.

The roadmap for Kashmir advocated by the Kashmir Study Group (KSG) calls for a dialogue between India, Pakistan and the Kashmiri people to meet the legitimate concerns of all parties to the dispute. Among potential options for resolving the dispute, the KSG has

proposed the reconstitution of an entity (or entities) from the former princely state of Jammu and Kashmir: a sovereign entity (or entities) without an international personality, with secular democratic constitution(s), legislature(s) and control over all subjects except defence and foreign affairs, which would be jointly controlled by India and Pakistan. The KSG has also recommended access of the Kashmir region to and from India and Pakistan for the free flow of people, goods and services and continued Indian and Pakistani economic support for Kashmir.

One participant thought the KSG's suggestions were unrealistic, calling instead for an approach based on the reality 'on the ground', in other words, the division of Jammu and Kashmir along the present LOC. Others warned that the KSG's contentious proposals could pose more of a hurdle than a starting point in a future India-Pakistan dialogue. Argu-

ing against a roadmap for a complex issue like Kashmir, a number of participants stressed that there was need first to initiate a dialogue, to find some common ground and then to explore feasible areas of agreement, given the high stakes and limited political will in both states. If a solution were to emerge, it would be through a prolonged process of discussions and negotiations, in which the Kashmiris could be factored in. However, the problems of this approach are also evident. If issues such as the acceptance or modification of the LOC and the degree of autonomy for Kashmir are not even discussed in a future dialogue, the two sides could simply restate well-known positions. Left to fester, the conflict could, as in the past, destabilise India-Pakistan relations.

Conscious that India and Pakistan's differences over Kashmir and cross-border infiltration could derail the normalization process, a number of participants strongly supported an unconditional dialogue. While LOC infiltration was important, said one participant, progress on this issue should not be made a condition for either a dialogue process or cooperation in other, less sensitive areas. Despite the differences of approach and analysis with regards to the Kashmir conflict, there was also general agreement that the conflict in Siachen served no purpose and much support for a cease-fire as a prelude to an agreement. A resolution of this senseless war, as characterized by one participant, would serve Indian and Pakistani interests in more ways than one, since it would also open the way for progress on other mutually beneficial areas of cooperation. There was also agreement that the best way of

Recommendations for India-Pakistan Dialogue

Among the various recommendations to come out of the workshop were the following:

- 1 A step-by-step process and a composite dialogue
- 2 An all-inclusive agenda with multiple tracks
- 3 No hostile rhetoric to lower tensions and to improve the climate for negotiations
- 4 No preconditions
- 5 Sustained process
- 6 Create five working groups to discuss:
 - Kashmir issues
 - Terrorism issues
 - Nuclear issues
 - Trade and economic issues
 - Group on all other issues including CBMs.
 - Each group may determine its working procedure.
 - Progress in each group may not be conditioned by the status of other groups.

addressing contentious issues such as Kashmir and cross-border infiltration would be through a step-by-step approach. Restoring the peace on the LOC and normalizing bilateral relations would create the right environment for a sustained and meaningful dialogue for the resolution of disputes, including the Kashmir conflict.

Minimizing nuclear risks

There was a considerable degree of consensus on the inclusion of nuclear risk reduction measures in a future dialogue process, not surprising since most participants accepted the inevitability of nuclear weapons in South Asia but were also concerned about nuclear dangers in a volatile environment. The greatest threat to regional peace, said a participant, lay in nuclear miscalculation and inadvertent nuclear use and even deliberate nuclear escalation. Since nuclear disarmament might be desirable, said another participant, but was not possible, the two states should focus their attention on stability measures in a future dialogue. While a participant strongly supported a cap on India and Pakistan's nuclear capabilities to minimize nuclear risk, others were far less sanguine about India and Pakistan's ability or will to resist a nuclear arms race. India and Pakistan's nuclear capabilities were determined by an action/reaction syndrome said a participant, stressing that Pakistan would inevitably follow India's example if the latter opted for a nuclear triad. Another participant recommended that India and Pakistan should reexamine nuclear risk reduction measures included in the 1999 Lahore declaration, and identify new ones. Other suggestions included a bilateral agreement on non-offensive use and unilateral measures

such as strengthening custodial measures.

Some participants, however, had grave doubts regarding nuclear crisis stability, given that India and Pakistan were willing to resort to conventional force. Did nuclear deterrence hold in 2001-2002, queried a participant, was it nuclear deterrence or U.S. diplomacy that prevented war? Others doubted the efficacy of CBMs, including nuclear confidence building measures, in the India-Pakistan context. While a participant asserted that CBMs, including hotlines between Foreign Secretaries, Directors-General of Military Operations and Prime Ministers were effectively implemented until the Kargil conflict, others believed that most CBMs were implemented in a tactical and not a strategic sense. During the 2001-2002 crisis, for instance, the hotline between the DGMOs had proved ineffective. The effectiveness of CBMs, said a participant, was undermined by mutual suspicions and hostility and compounded by the uneven implementation of CBMs such as prior notification of missile tests. CBMs, noted others, only build confidence when there is a basic level of trust, which is missing in the India-Pakistan context.

This importance of trust was also stressed in the discussion on the role of external powers in promoting a dialogue between India and Pakistan. Advocating a pro-active US role, some participants pointed out that India and Pakistan had failed to solve their differences through bilateral means in the past fifty-five years. Some participant noted that because of the US presence, there is now pressure on Pakistan and India to talk. If there is genuine interest in peace,

then the international community must play a role. Bilaterally India and Pakistan might agree to a solution, but left to ourselves, they might never get around to a process of dialogue. Others, however, disagreed. According to one participant, the United States had not played an honest broker's role in the past in its relations with India and Pakistan. The only change that had occurred now was that the broker's regional interests had changed.

Reopening an India-Pakistan dialogue

Despite divergent views on Kashmir, cross-border infiltration and an imperfect record in implementing past agreements, the participants agreed that India and Pakistan could only resolve their differences through negotiations, not through the threat or use of force. There was also general agreement on an incremental step-by-step process that builds on a foundation of trust. There was little disagreement on an agenda for future talks between India and Pakistan. Most participants agreed that the agenda should cover all issues discussed in previous official meetings and identified in past communiqués and declarations, including the joint statements of the Indian and Foreign Secretaries of 1997 and 1998. The 1997 meeting had, for instance, resulted in agreement on a composite, multi-tracked dialogue. In a future dialogue, issues could be prioritized, recommended a participant, but they should not prevent parallel discussions along various threads. A parallel process along multiple axis and directions would pay dividends, said another participant. Agenda items such as Siachen, expansion of trade ties, joint projects such as

pipelines, disputes over river waters, cross-border and cross-LOC flows of people, goods, and services, could thus raised be in tandem alongside other more problematic issues, such as Kashmir and cross-border infiltration. However, a participant warned that the absence of progress on core issues might, as in the past, inhibit the finalization or implementation of other agreements, such as an expansion of trade relations. Most participants believed that preconditions would prove counterproductive. Some, however, warned that any catastrophic event, such as a future terrorist strike, could lead to the resumption of hostilities.

There were some disagreements about the sequence of the talks, reflecting India and Pakistan's differences. India favors a gradual approach, partly due to its past experiences at counterproductive summits such as Lahore and Agra and also due to its desire to link the pace of negotiations with Pakistani progress in curbing cross-border infiltration. On the other hand, Pakistan would prefer a high-level summit, hoping to regain some of the international credibility it has lost as a result of the militancy in Kashmir. At the workshop, some participants advocated a bottom up approach, with discussion held first at the level of senior middle ranking officials, culminating in a summit level meeting only after concrete agreements had been reached. Such a process, they said, would prevent domestic spoilers from derailing the talks. Others warned that former dialogue processes had made little progress when they were left to officials such as Foreign Secretaries, adding that a summit meeting would provide the political push needed to attain concrete results.

There were also differences on the importance of public participation and the role of public representatives in a future dialogue process. Warning against the destructive pressures of public opinion, a participant believed that legislators would only play an obstructionist role because of a propensity to exploit issues for electoral gains. Others, however, believed that parliamentarians and people-to-people contacts had a constructive role to play in broadening peace constituencies, crediting the recent visits of parliamentarians, under the auspices of the India-Pakistan People's Forum for Peace and Democracy, for their positive impact on media and public opinion. Advocating public education and access to information, a participant also pointed to the reservoir of goodwill among Indians, Pakistanis and Kashmiris.

There was, however, complete agreement on the need to create the right environment for any future dialogue process by toning down hostile rhetoric and then negotiating in earnest on all issues, including Kashmir. There was general agreement that a dialogue process would best succeed if it were preceded by the normalization of relations, the stabilization of the security environment, particularly along the LOC, followed by negotiations to identify and to assess areas of potential agreement as well as sustained talks on remaining issues of discord. A premature blueprint or roadmap would prove counterproductive. Solutions to longstanding problems could only emerge out of a sustained process of negotiations. Unless talks continued and momentum was maintained, a future dialogue process could once again stumble, bringing the two states back to square one.

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Working Papers

J.N. Dixit, “Synopsis of Presentation on South Asian Security”

Lt. Gen. (ret.) Asad Durrani, “Kashmir: Confrontation to Cooperation”

Jozef Goldblat, “Confidence Building Measures in South Asia”

Pervez Hoodbhoy, “Rethinking Kashmir”

Farooq Kathwari, “Kashmir: A road map to peace”

Salman Khurshid, “The Milestone beyond War and Words – Some Crucial Questions about the Indo-Pak Conflict”

Lt. Gen. (ret.) Talat Masood, “Strategy of Waging Peace”

R. Rajaraman, “Towards De-Nuclearisation of South Asia”

Abdul Sattar, “Pugwash Dialogue”

Waheguru Pal Sidhu, “Terrible Tuesday and Terrorism in South Asia”

Pugwash Workshop on *Preserving the Non-Weaponisation of Space*

Castellón de la Plana, Spain, 22–24 May 2003

Report

by Robert Schingler,
Will Marshall, George Whitesides
and Bojan Pecnik

This first in a planned series of Pugwash workshops on space weapons was hosted by the Bancaixa fundació Caixa Castelló at the Centro Internacional Bancaja para la Paz y el Desarrollo in Castellón de la Plana, Spain. Particular thanks are due to Prof. Federico García-Moliner and the Spanish Pugwash Group for their assistance and hospitality in organizing the meeting.

Thirty one people (including a large number of International Student/Young Pugwash participants) from 17 countries attended the workshop, by invitation and in their personal capacity. This report of the workshop is the sole responsibility of the rapporteurs, and while it reflects the broad array of issues discussed, does not necessarily represent consensus on all points.

Abstract

The workshop focused on understanding the current legal, technical and geopolitical issues surrounding the prospects of space weaponisation. The motivation of these discussions is to ensure space security: that is, to enable space to

have secure and equitable access and use, and for space to be secure from threats. As the meeting progressed, the participants discussed policy initiatives that could increase the visibility and international debate on space weapons. The meeting closed with discussion of ways forward toward the goal of maintaining the non-weaponisation of space, including increasing the knowledge base on the topic, and greater international collaboration on the issue, including the potential role of Pugwash in that process.

A window of opportunity

The workshop was held during a period when there is a near-term prospect of deploying weapons in space for the very first time. As part of its National Missile Defense (NMD) program, the US administration has stated its intent to launch a

space-based interceptor test bed by 2008. Participants were concerned that this test bed would set a dangerous precedent and open the door to further testing, development and deployment of space weapons. This potential link between missile defense and space weapons – with NMD serving as the justification for space weapons deployment — was raised repeatedly during the workshop.

The United States and former Soviet Union spent many billions of dollars seeking to develop space weapons over the past four decades. Other nations with access to space, including India and China, have the capability to deploy limited but effective space weapons as well. Multiple potential systems were discussed, including space-deployed kinetic weapons, earth- and space-based anti-satellite (ASAT) systems, and Earth- and space-deployed laser



weapons. From the discussions, it was clear that certain types of basic space weapons could be deployed in the near-term.

Legal regimes governing space were discussed, including the Outer Space Treaty, the ABM treaty, and the Treaty on Conventional Weapons in Europe. With the UN Conference of Disarmament deadlocked on the issue of space weapons, the participants felt an urgency to approach this issue from many different angles and involving many different constituencies, including industry, NGOs, the scientific community, the military, the general public and governments. Creative approaches to the legal issues involving space activities will be called for, and are discussed below.

Many participants remarked on the unique situation that space weaponisation presents to organizations like Pugwash. Unlike previous nuclear arms control efforts, the challenge (and opportunity) of space weapons is to prevent them from being deployed in the first place and to maintain the non-weaponised status of space. This is important both because of the short term ramifications of weaponising space, and because once such weapons are deployed, it will be difficult if not impossible to return space to a zone free of weapons deployment. The uniqueness of this situation (the only comparable analogue is the Antarctic) calls for considered dialogue among all the parties utilizing space on the full ramifications of deploying space weapons.

US Congress and space weapons

In order to allow sufficient time for fully analyzing the ramifications of deploying space weapons, a critical task will be to slow the funding for

space weapons programs. Citing the adage, "follow the money," participants noted the importance of US Congressional oversight of budgets relating to space weapons development, particularly as it relates to Bush administration plans for deploying national missile defense.

While NMD plans project the deployment of a space interceptor test bed by 2008, current funding for this program is relatively small. Congress can strongly influence the pace

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Congress can strongly influence the pace at which space weapons are developed over the next several years.
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at which space weapons are developed over the next several years. Workshop participants felt that informed dialogue with members of Congress and their staff will be critical for developing a more informed knowledge base on the issue and for coordinating efforts to fully evaluate the military, political and economic ramifications of deploying space weapons.

Building a knowledge base and consensus-building

Increasing the knowledge base on how space weapons could impact current and future uses of space was seen as an immediate next step by workshop participants. Recent and forthcoming analyses from the RAND Corporation, the Stimson Center, the Council on Foreign Relations, and the Monterey Institute/ Mountbatten Centre for International Studies will need to be augmented by additional informed analysis covering a broad array of

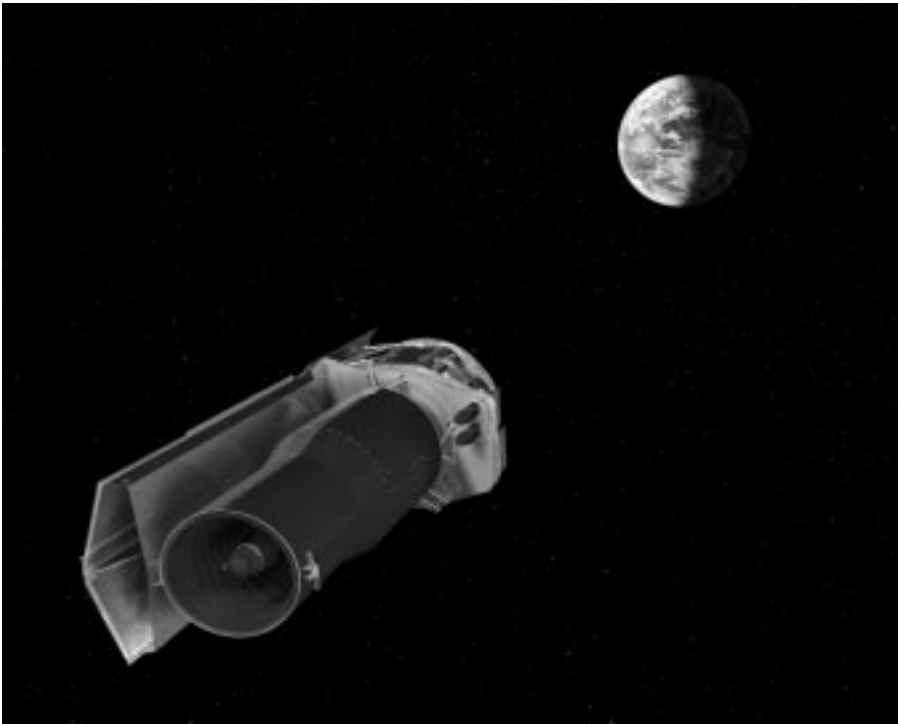
scientific, economic, military, commercial, and governmental perspectives from the entire international community which has become so dependent on space activities.

While the technical feasibility of kinetic energy and other types of space weapons is very likely within the reach of many space-faring nations, a more important question is their utility when compared with earth or air-based alternatives. As an example, space-based kinetic weapons would take longer to destroy their intended earth-based targets than would strategically-located earth-based missile alternatives, with no significant additional energy or destructive power.

Moreover, there are divisions within the US military on issues such as weapons utility and cost-effectiveness, particularly as counter-measures against space weapons will be cheaper and technically simpler than the weapons they are designed to destroy. Detailed analyses of several different types of space weapons and counter-measures are available in the workshop papers.

Finally, however, the primary argument against the deployment of space weapons remains that of their potential for igniting a destabilizing arms race in space. To that end, several participants proposed that space-capable nations adopt a 'no first deployment' pledge regarding space weapons.

In the discussion of how to move the debate forward, particularly with national governments, it was noted that a key early step in the Ottawa Process (the campaign to ban landmines) was one of NGOs doing much of the research and information gathering. In that vein, participants discussed ways compiling and sharing



Space Infrared Telescope Facility (SIRTF) points its high-gain antenna towards the Earth (artist's conception). NASA photo

documents, for use by both the expert community and the general public, through websites, listservs, and other means.

Once this information is compiled, and a mechanism is in place to collect new information, the creation of documents needs to be aimed at specific target audiences to raise awareness, promote dialogue and improve the knowledge base. Various documents and analyses will not only have differing levels of technical arguments, but will cover different arguments and motivations important to the debate over weaponising space. Especially important will be studies on the critical importance of civilian space assets to many countries and regions, especially in the developing world, in the areas of resource management, education, telecommunication, agricultural production, climate/disaster forecasting, etc., and how these could be affected

by the destabilizing consequences of deploying space weapons.

Legal options

Workshop participants engaged in extended discussion of potential legal avenues for a treaty covering all non-nuclear space weapons (the Outer Space Treaty of 1967 already prohibits any space deployment of weapons of mass destruction, and also prohibits all other weapons from being deployed on the Moon and other celestial bodies). Intermediate steps were discussed which could build confidence between nations while creating the context for a common viewpoint on space weapons.

One topic of vigorous debate was whether the UN Conference on Disarmament (CD) was a potential venue for such a treaty. The US has blocked discussion of such an agreement for several years, and has yet to indicate any public willingness to

change its position. Many workshop participants felt that the CD would not be helpful in this context, while others felt attempts should be made. Overall, the following options were raised:

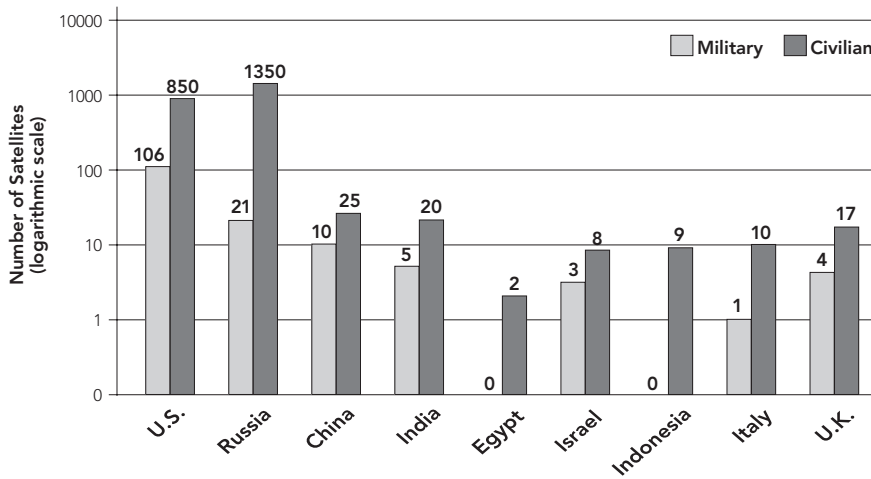
General Assembly Resolution: One avenue through which to gain international support and momentum – while not a formal treaty – would be the UN General Assembly. A non-binding UNGA resolution endorsing a non-interference policy with all satellites currently in space could logically be followed later by a UNGA resolution prohibiting ASAT testing.

Moratorium: An additional legal option to explore would be national moratoria on space weapons. Under such a moratorium, states would pledge their intent not to be the first to deploy space weapons or to further test destructive anti-satellite weapons. Space-faring nations initiating this pledge could invite other states to join. Such states could then decide to formalize this intent into a treaty in the future.

Debris Management: Space debris management is a real concern to current and future space activities, and could be a means of encouraging cooperation on legal space issues with the US, which already provides substantial leadership in this area.

Protocol to the Outer Space Treaty: A protocol to the OST explicitly banning space weapons would be preferable to a treaty amendment, which would risk opening a ‘Pandora’s box’ of other treaty issues. It was also recommended that Pugwash and other NGOs seek to increase the number of signatories to the OST in order to universalize OST adherence. Mention

Estimates of Military and Civilian Spacecraft in Orbit For Selective Countries*



(*approximately 500 spacecraft are thought to be currently active)

Sources: UN Office of Outer Space Affairs Online Index of Objects Launched into Outer Space; Gunter's Space Page; Celestrak; Los Angeles Air Force Base Fact Sheets; Federation of American Scientists World Space Guide; "Russia's military satellites: Status and Prospects." ISS Strategic Comments, 7(6): July 2001; NASA Jet Propulsion Laboratory Mission and Spacecraft Library

was made as well of seeking to build on obligations not to interfere with national technical means of verification, as contained in agreements such as the Conventional Forces in Europe (CFE) Treaty, of which the US and 29 other countries are signatories.

Space Weapons Treaty: Most difficult in the current climate would be the drafting and adoption of a stand-alone treaty banning the development and deployment of space weapons. Major stumbling blocks identified were those of crafting effective compliance mechanisms and being able to update the Treaty in light of changing technologies. While the positive experience of the Chemical Weapons Convention was mentioned in both regards, participants acknowledged the difficulties involved, especially in terms of dual-use weapons systems (e.g., missile defense and anti-satellite).

It was emphasized that legal steps to ban space weapons should not be taken without the direct involvement

of particularly those nations, such as the US, able to deploy such weapons. Unlike the Ottawa landmines treaty, which served a useful purpose even though rejected by the US, any space weapons treaty not drafted with direct US involvement will be useless.

Prior to such efforts, it is essential now to increase international appreciation of the concept of space security that derives from the cooperative uses of space and not the deployment of space weapons. Other states must take the initiative and bring the US into discussions on these issues. As noted above, space debris is one avenue to instigate these discussions, as the United States has taken leadership in this area. Given that many industry players are also defense providers, the issue of space debris is a direct way to involve them as well. These discussions could evolve into other shared concerns in space, such as satellite crowding and collisions, and might lead to the establishment of more regulation beyond 'rules of

the road.' Efforts to identify shared concerns will be necessary if industry and the military are to be effectively brought into the debate on space weapons.

A timely, consolidated effort

The international community must be ready if and when the US becomes open for a discussion of a treaty on space weapons. This must start with a dissemination of appropriate information globally to make the international community well informed. Bringing together interested parties was thought to be one potential early role for Pugwash.

The international community also needs to be more vocal on this issue, but they must take a practical approach to be heard. It was thought particularly important for the European Union to develop its own position on this important subject. While there is some interest about space weaponisation within the European Parliament, the European Commission has yet to state its position. The current EU Green Paper on "European space policy", now undergoing public consultation prior to its finalization before the end of 2003, represents an ideal opportunity to address this gap.

The international scientific community also has a key role to play in exploring the effects of space weapons on space science, exploration, and research. Finally, the general public could be an important resource for the overall process at the appropriate time. As the experience of the Ottawa Process demonstrated, a well-known international spokesperson on the dangers of space weaponisation could help galvanize public opinion and inspire grassroots action on these issues.

The role of Pugwash

There was a general consensus that Pugwash can play a valuable role in the process leading to guaranteeing 'space security', in particular in improving the knowledge base through timely, well researched reports given to the right authorities, and through meetings and discussions engaging policy makers.

A draft strategy for the steps that Pugwash and the wider community might take on this issue was drafted at the workshop and is attached as an appendix. There is much work to be done in the next year, starting with expanding and disseminating timely information about the current status of space weapons development and the implications of space weapons deployment on current and future international uses of space. National governments, in addition to the US Congress and administration, need to be involved in debating the pros and cons of space weaponisation.

As for Pugwash, there will be a working group on the Weaponisation of Space and Missile Defense during the 53rd Pugwash Conference in Halifax, Nova Scotia in July 2003, with further plans for workshops and perhaps the convening of an international space summit on how the prospect of space weapons would unalterably change the character of the space environment for the global community.

Appendix A: The Way Forward for Pugwash

- 1 Engage the US Congress in dialogue to reduce spending on space weapons development prior to a critical debate.
- 2 Build analytic knowledge base on space weapons
 - Utility of space weapons
 - ASAT-DSAT and countermeasures
 - Effect of space weapons, pro and con, on US conventional military missions
 - Effect of space weapons on civil uses of space (debris management, orbital slots, liability, etc.)
- 3 Increase attention of public/media/policymakers
 - Use existing reports and increase their visibility
 - Describe nature of problem and possible solutions for assuring space security for all space users
 - High-profile spokesperson for public attention
 - International space security summit
- 4 Target Audiences
 - US Military, Congress and the Bush administration
 - International space/scientific community
 - National Governments and the European Union
 - NGOs
 - Space Providers (telecom industry)
 - Space consumers (those dependent on space for agriculture, resource management, education, environmental protection, mapping, GPS)
 - General Public

A timeline for political/legal initiatives

- On-going work on CBMs (debris management, compliance issues, etc.)
- Track II initiatives
- Increase number of states parties (universal adherence) to the OST
- UNGA resolution on non-interference with space assets, building on provisions currently in the CFE Treaty
- UNGA Resolution prohibiting ASAT testing and deployment
- Negotiate OST protocol prohibiting space weapons

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Working Papers

Li Bin (China), "The Consequences of a Space War"

Philip Coyle (US) and **John Rhineland** (US), "Weapons in Space: The Urgent Need for Arms Control – Three Reasons Why We Can't Wait"

Richard Garwin (US), "Space Weapons: Not Yet"

Theresa Hitchens (US), "Making Progress: Opportunities for Improving Space Security"

Rebecca Johnson (UK), "Missile Defense to Space Weaponization: Implications for NATO Allies"

Robert Lawson (Canada), "Space Weapons: A Canadian Perspective" (oral presentation)

William Marshall (UK), **George Whitesides** (US), **Robert Schingler** (US), and **Andre Nilsen** (Norway), "Space Weapons: The Urgent Debate"

Götz Neuneck (Germany), "Technical Issues in Restraining Space Weapons"

Xavier Pasco (France), "Le *Space Control*: Un Enjeu de Puissance entre Les Etats-Unis et L'Europe ?" (oral presentation)

U.R. Rao (India), "Benefits of Space Security"

Ivan Safranchuk (Russia), "Rationale for Space Weapons"

Andrey Vinnik (Russia), "Russia's Approaches to Strengthening the International Legal Regime Prohibiting the Weaponization of Outer Space"

Mikhail Vinogradov (Russia), "Space Without Arms"

9th Pugwash Workshop on the Middle East: *The Arab (Saudi) Plan and the Third Party Role in the Israeli-Palestinian Peace Process*

Amman, Jordan, 30 May–1 June 2003

Report

by Isabel Kershner with
Juliett Abu Iyun and
Paolo Cotta-Ramusino

The 9th Pugwash Workshop on the Middle East convened in Amman, Jordan, from 30 May–1 June 2003. The main agenda was to discuss the Arab (Saudi) proposal for a comprehensive Middle East peace, the Road Map for a permanent settlement of the Israeli-Palestinian conflict, and ways of connecting the two. Some thirty participants from around the Middle East and several European Pugwash members gathered in the Jordanian capital at what proved — by luck as much as design — to be a most opportune moment. Delayed from its original date of April 2003 because of the war in Iraq, the Pugwash meeting finally took place during a period of renewed expectations for change in the dynamics of the Middle East, and just days before U.S. President George Bush arrived in the region for the June 3rd Sharm el-Sheikh summit and the June 4th Aqaba Summit. In Aqaba, in the presence of President Bush and his host, Jordan's King Abdullah, the Israeli Prime Minister Ariel Sharon and Palestinian Prime Minister Mahmoud Abbas pledged

their commitment to the internationally-sponsored Road Map.

The Saudi Initiative / Arab Plan

In February 2002, *New York Times* columnist Tom Friedman published an article revealing an initiative by Saudi Arabia's Crown Prince Abdullah, offering full Arab normalization with Israel in exchange for full Israeli withdrawal from all the territories occupied in 1967. In late March, at an Arab League summit in Beirut, all 22 member states of the Arab League endorsed the initiative — now to be known as the Arab Proposal. The Arab Proposal elaborated somewhat on the original simplicity of the Saudi formula, among other things including a clause on the need to find a just and agreed solution to the Palestinian refugee problem based on U.N. Resolution 194. (Passed in 1948, 194 stipulates that refugees wishing to return to their homes and live in peace should be permitted to do so at the earliest opportunity.)

There was little doubt among the participants that the Arab plan represents an historical breakthrough. Simply the idea of bringing 22 Arab countries together with the prospect of offering a final peace settlement in the Middle East, where Arab Countries could live together with Israel, is a radical departure from the past. It

was also pointed out that the Arab plan's lack of details represents at the same time a weakness, since its implementation has yet to be defined, and a strength, since, as a general idea, it may survive setbacks and dark periods.

In the words of the participant who first presented the initiative at the Amman workshop, it essentially means “the Arabs abandoning their claims of 1948”, and offers Israel peace, security, full recognition and normalization. Yet it has been noted by several participants that despite the historic value of the Arab Proposal, it was somehow met with indifference and possibly rejection on the Israeli side, even in the peace camp and at the unofficial academic level. Participants expressed their surprise and disappointment at what they saw as a confounding Israeli reaction, or non-reaction. It was also noted that the US did not pay particular attention to the Arab plan, and did not make serious efforts to include it effectively in the Road Map.

Other participants noted that the Saudi initiative had actually garnered wide support in Israeli public opinion polls, but that the Beirut Summit and Arab Proposal had simply been overwhelmed by events. The Beirut summit coincided with the Park Hotel

Passover Eve suicide bombing in Netanya, which killed 29 and served as the catalyst for Israel's Operation Defensive Shield, a military reinvansion of the Palestinian cities of the West Bank.

Some participants pointed to the general Israeli skepticism about peace plans at the time. The Israeli peace camp, the "wounded soldiers of peace" in one participant's words, had been on the defensive since the collapse of the Camp David process in 2000. One participant pointed to Saudi and Arab reluctance to launch the plan with a grand gesture. One participant said that if Arab leaders had emulated Anwar Sadat, and presented the plan in the Israeli parliament, this might have led to a stronger psychological breakthrough on the Israeli side, but that "staying in Riyadh" won't do. Others noted that when public Arab diplomacy was most needed, during the Camp David summit of 2000, it wasn't forthcoming, and when it came it was not so needed. Furthermore, the reference to the refugee issue and U.N. Resolution 194 signals to most Israelis, rightly or wrongly, the demand for 4 million Palestinian refugees to have the right to return to Israel, effectively threatening the Jewish nature of the state in the future and canceling out the point of a two-state solution. (One participant noted that a subsequent resolution at the Beirut summit reaffirmed the refugees' right of return which is rejected almost across the board in Israel). Moreover, it was noted that the violence of the past two and a half years had not only weakened the peace camp in Israel, by reinforcing the Sharon government line, but had brought Israel back to dealing with existential questions and questions

about its legitimacy.

Other participants stressed that, for the first time, the Arab Proposal, endorsed by all 22 Arab League states, had called for an "agreed" solution to the refugee question, meaning agreed by Israel too. This, they said, was a tremendously significant change signaling a pragmatic approach to solving the problem. Others posited that while the right of return issue is currently exploited by interested parties, it is possible to reach an agreed solution to the refugee issue that can satisfy both sides. It was also pointed out that no counteroffer to the Arab plan has yet been made by Israel; Israel has not made an effort so far to address the Arab world.

There was a feeling that the historic significance of the Arab Proposal, and of all 22 Arab states "opening the door", had been, for the time being, missed, but there was a general consensus that a positive future evolution was not at all to be ruled out. One participant stressed the importance of the fact that despite all the difficulties of the past year, not one Arab state had asked to have its signature withdrawn from the proposal.

Some participants noted that after years of Israelis and Palestinians getting bogged down in process, and not reaching peace, the Arab Proposal offers the advantage of laying out the end game, giving an incentive for both sides to take whatever steps necessary. There is of course a distinct benefit in the idea of jumping straight to the end state, and telescoping the interim stages or eliminating them



Secretary General Paolo Cotta-Ramusino (4th from left) and Gabriel Baramki (fifth from left) meet with Palestinian Authority President Yasir Arafat (January 2003).

altogether. It was also pointed out, however, that the process is important: the Arab Proposal leaves the process of getting to the end state unexplained. There is a need to connect the Arab plan more effectively with the ongoing peace process, so as to maximise the Arab countries contributions to the process.

Asked how the Saudi initiative was received by Saudi public opinion, a participant responded that the Arab public is as untrusting of Israel's intentions as Israel is of Arab intentions. "People want to know what they will get in return for recognizing Israel," he said. He noted, however, that the people would support a just, comprehensive settlement. Nobody now speaks about eliminating Israel, he said, but about the need for a Palestinian state.

The workshop participants were asked to propose ways of re-launching and presenting the Arab Proposal to public opinion in an effective way. Perhaps, with the war in Iraq over, there could be an opportunity to breathe new energy into it. There were suggestions to use the media and one participant proposed that perhaps others might consider Israel attending some events at the Arab League as observers if not participants.

One participant stressed that it is not only Israeli public opinion that

matters, and that the daily killing of Palestinians broadcast on Arab TV screens only heightens the anti-Israel sentiment in Arab countries. Others cited the occupation itself, the building of settlements in the 1967 territory, and the lack of freedom of movement for Palestinians, as factors that underline these sentiments and undermine the possibility of making further gestures to Israel. Under these circumstances, one noted, it is hard to get Arab civil society to engage.

One participant warned that given the demographics in the region — by 2010, according to demographers' projections, the Palestinian population will equal the Jewish population in the area of Mandatory Palestine — and given the proliferation of Israeli settlement building in the 1967 territories, the “clock is ticking” on the two-state solution.

As for what to do to move beyond statements against settlement expansion and the occupation, one participant suggested enlarging the Israeli-Palestinian Peace Coalition, a local initiative that issues joint statements and advertisements in the Israeli and Palestinian press. It was suggested that like-minded people from the Arab states could be brought into the coalition. One participant agreed in principle but noted that the current circumstances could make extending the peace coalition “a little premature.”

On the other side there was a large consensus in the group on the need for extending dialogue to all countries in the region, and for enlarging the network, particularly on security issues. The idea of providing a regional forum where people from all countries could participate and discuss security problems and ways to improve the perspectives of peaceful

coexistence is very much an idea to which Pugwash could contribute.

It was generally clear that in order to terminate what one participant called the “war process”, namely to end the occupation and the hostilities of various extremist groups, better communication between the Arab and Israeli governments and public is needed. An emphasis was put on the need to tone down the harsh rhetoric and the general tone of hostility in the media as well as in public statements.

The Road Map

The Road Map toward a Permanent Two-State Solution to the Israeli-Palestinian Conflict, sponsored by the “Quartet” of the U.S, the U.N., the E.U. and Russia, was drafted in 2002 but only presented to the Israeli and Palestinian sides more recently. It was formally launched in Aqaba on June 4, 2003. The Road Map envisages a three-phased process that can be summed up as follows. In the first phase, there would be a Palestinian declaration and measures taken for a cessation of violence and the two sides would take steps to keep calm on the ground and get back to the situation prior to the outbreak of the Intifada in September 2000. The Palestinians would carry out internal reforms, while Israel would desist from actions that might undermine the stabilization process, remove illegal settlement outposts in the West Bank and implement a settlement freeze. An international monitoring mechanism would be set up to observe implementation. The second interim phase envisages a provisional

Palestinian state within temporary borders, and the third phase envisages a final negotiated settlement ending with a permanent Pales-

tinian state and resolving all the outstanding issues, including the Palestinian refugee problem, by 2005. The Saudi-Arab Proposal is cited as one of the bases, along with U.N. Resolutions 242, 338 and 1397, of the plan.

Participants listed some new conditions that might bode well for the Road Map. Among them, the new environment in the region after the war in Iraq, and the fact that the U.S. is becoming “part” of the Middle East (one participant noted that there are as many U.S. soldiers in the region as there are people in Qatar); the need for the U.S. to close the “legitimacy gap” with the U.N. Security Council in the wake of the war; and also the now-proven ability of the Egyptian and Jordanian peace treaties with Israel to survive even in adverse circumstances.

Others underlined the fragility of the process and the ever-present threat of it being derailed by even one particularly deadly terror attack. If the security situation cannot be stabilized on the ground, according to Phase One of the map, then there will be no Phase Two or Three, it was noted. It was also noted that the Road Map document is full of contradictory points and at times ambiguous statements, leaving open the possibility of both confusion and flexibility.

One of the innovations — and perhaps the main innovation of the first phase of the Road Map — is the inclusion of an international monitoring mechanism. It was noted, however, that this crucial aspect is left vague, with only a brief mention in the Road Map document, and needs to be clarified urgently.

A discussion about monitoring followed, where ideas were discussed concerning joint Israeli-Palestinian and third-party monitoring. A possi-

ble role of Arab countries in the monitoring process has been mentioned; but the concerns from all sides were somehow stronger than the motivations to support such an idea.

A debate ensued about the disadvantages and possible advantages of the interim Phase Two of the map. There is clearly a danger that the process will get bogged down in a long set of negotiations for a temporary state in only some 42-52 percent of the West Bank and in the Gaza Strip, and a danger that it will never move beyond the interim phase. Some participants argued in favor of trying to eliminate Phase Two, while others argued that it is only this interim phase, which apparently dovetails with Israeli Prime Minister Sharon's presumed territorial vision, that has allowed the present Israeli government to accept and adopt the Road Map.

Among the ideas of how to avoid the Road Map ending in Phase Two was a suggestion that most of Phase Three should be negotiated by the time of Phase Two's implementation. It was noted that the Arab world could play a major role in the context of an international conference, also stipulated in the Road Map, to minimize the "dangers" of Phase Two, and there could be "interlock" — U.S. memorandums by Phase Two relating to the next stage ahead. As one participant noted, if there is no Phase Two, there is no Sharon; and if no Phase Three, no Palestinians. Therefore, participants argued, there is a need to provide sufficient incentives and sanctions to ensure that the scope of Phase Two will be limited in time, if it can't be eliminated altogether.

Risks to the process come in the form of the possibly limited window

of opportunity regarding U.S. engagement, with the U.S. election campaign due to start in a few months time; the "war process" of extremists on both sides; and the need to prevent a quick Israeli reaction to possible terror attacks.

Keys to success come in the form of the degree to which Mahmoud Abbas's government manages to stabilize the security situation on the Palestinian side; of capacity building and unifying the Palestinian security forces under one central command; and of Israel allowing the Palestinian

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if the Palestinian Authority has to take the responsibility of ending violence on the Palestinian side, it should possess the instruments to enforce the law.

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side "space for mistakes" even if Mahmoud Abbas manages to reach a ceasefire with the Hamas opposition and other radical groups.

A participant stated that there is a need to define violence; that for Israelis, it means suicide bombings, while for Palestinians, the occupation, settlement building and Israel's construction of a separation wall are equally violent acts.

The issue of Israel's unilateral planning and construction of a separation wall between the West Bank and Israel was raised, even though it is not referred to in the Road Map. The wall, or fence, was first proposed, and gained great popularity in Israel, as an answer to keeping out suicide bombers. It is vehemently opposed by the Palestinians who fear being fenced into enclaves under Israeli control. But what was first

designed by Israeli strategists as a security measure has since been "hijacked by the right" in Israel, according to one participant, and now seems designed to mark political borders along the lines of 42 percent of the West Bank envisioned in Sharon's supposed map. Ideas were raised to try to incorporate the wall issue into the Road Map and create some kind of linkage between the building of the wall and an improvement in security, according to a formula of no bombers, no wall. One participant said there should be a fence, but that the fence should be built along the 1967 lines, rather than inside the West Bank; another suggested that if the parties proceed along the Road Map, the wall might become redundant.

The need to end violence was stressed many times during the meeting. A point was made that if the Palestinian Authority has to take the responsibility of ending violence on the Palestinian side, it should possess the instruments to enforce the law. It was stressed that during the last two and half years the structure and the equipment of the Palestinian law enforcement institutions have been de facto disbanded.

The role of the U.S. and other parties

It was agreed that it is crucial to keep the U.S. engaged in the Road Map process if it is to have any chance of success. There were suggestions to hold the next Pugwash meeting in Washington. Washington, participants said, needs to hear more from the peace camp in the Middle East. The suggestion, though, has been considered impractical for a number of reasons (financial, organizational, visa problems).

The importance of the European role, as a facilitator in Track Two and back-channel talks, was also noted. But it was also pointed out that the U.S. role in the Road map tends to be dominant, putting the other three partners in a more shady region.

Questions were raised about reform in the Arab world, and what effect U.S. policies in the region and the Middle East peace process might have on Arab reform movements. One participant noted that while internal pressures lead to real domestic reform in the region, outside pressure leads to cosmetic reform only. Internal reform is subject to different factors in different countries. "To say that Turkey, Israel and Djibouti are the same is a mistake," stated one participant. As for whether Israeli-Palestinian peace would help reform and reduce radicalism in the Arab world, it was noted that the Israeli-Palestinian conflict is one important factor encouraging radicalization but that the factors vary from country to country. In the case of Egypt, one participant noted, "Did it become more democratic after peace with Israel than before, when it was engaged in an existential conflict? Yes, in terms of political parties, an independent judiciary, the press and so on. Did it become democratic in a Western sense? No."

A participant suggested that the Arab League should become more open to working with civil society and NGOs, to allow them to interact with Arab governments. There were also suggestions that the Arab League could become more of a forum for inter-Arab dialogue, or Arab-U.S. and Arab-European dialogue, on broad issues such as the clash of civilizations. It was suggested that the Arab League should consider holding

parallel unofficial NGO summits, like the one at Durban that was deemed by many participants to have been more effective than the official U.N. conference. It was noted that reform is already underway in the Arab League, and that it will certainly allow for more interaction with civil society in the future.

The question was posed whether U.S. intervention in the region helps de-radicalization or has the opposite effect. Some participants noted that the U.S. is viewed as using military intervention and caring less about what happens next. It was posited that Afghanistan has not seen freedom or democracy since the U.S. campaign there, and is arguably worse off now than it was under the Taliban. "The U.S. is good at intervening militarily but not at managing conflict," one participant concluded.

Another gave a detailed overview of Iraq since the war, arguing among other things that U.S. strategy is to bring down the price of oil, thereby cutting billions of dollars from the U.S. state budget. Participants noted that the recent decision to disband the 400,000 members of the Iraqi army, and to fire the staff of numerous ministries in Iraq, will only add to local resentment against the Americans. While the U.S. invaded Iraq under the banner of combating terrorism, one noted, it could have just the opposite effect.

A Nuclear Free Zone in the Middle East?

One participant suggested that if the subject at hand is comprehensive peace, there should be room to talk about a nuclear free zone in the Middle East, especially in the aftermath of the war in Iraq and the changed strategic environment for Israel.

It was noted that Israel's official policy since 1983 has been that the parties will work towards a Nuclear-Free Zone in the Middle East, the end game being full peace including mutual verification. Several participants noted that what appears to be a selective approach to WMD by the United States is a cause of resentment in the Middle East. They said they would prefer to see a regional approach.

Others stated that Israel still has a high threat perception, and that its fears and existential concerns about a nuclear Iran, Al-Qaeda and North Korea as an exporter should be considered. One participant asserted that this is not the right time to deal with the issue. "Just when Israel is being asked to take risks in the peace process, you can't ask it at the same time to give up what it considers to be its insurance policy," he said. Those who are interested in Israel becoming nuclear-free, said another, should support the U.S. in its campaigns against "rogue states."

One participant responded that he found what he was hearing "not comforting" and that he was perplexed by "Israeli exceptionalism" as a country that has both superpower guarantees and a secret stock of WMD. Several participants pointed out that Iraq had been invaded by the United States on the mere suspicion of possessing WMD, as opposed to other countries, such as Israel, that are known to possess WMD. Regarding the renewed U.S. attentions directed at Iran and its nuclear program, it was stated that U.S. pressure on Iran might push the reformists and the conservatives there together in a "national preservation effort." Iran, participants stressed, is not Iraq, but is a much larger and more complex country with a much higher

degree of democracy and debate, and with its own internal dynamics and debate on national policies.

Environmental cooperation

One participant gave a presentation based on the negative results of the U.N. Environmental Project: Occupied Palestinian Territories and the need for cooperation in rehabilitating the Palestinian infrastructure. Some environmental issues, such as water and wastewater, require a high level of cooperation. There is an initiative underway to set up joint expert teams to deal urgently with these issues.

Workshop recommendations

In summing up the workshop, participants supported the idea of creating a network of people around the region interested in security affairs in the Middle East. It was suggested that Pugwash could serve as an incubator to enlarge the Israeli-Palestinian peace coalition; to exchange information; and to host dialogue that may clarify what can, and cannot, be realistically done in various countries to promote peace, and to lay out honestly, behind closed doors, what the limitations are. It has been pointed out that Pugwash activities can help not only in the development of the Palestinian - Israeli dialogue or the Arab - Israeli dialogue, but also in the area of inter-Arab dialogue and communication.

It will be important to work also in the direction of crisis prevention and to suggest ways of establishing multinational teams to deal with the risk of insurgency and ways to wind it down before it reaches a critical stage. Some participants suggested for the next meeting a more detailed and organized agenda. More frequent meetings were also recommended.

Participants

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PUGWASH MEETING NO. 284

Regional Pugwash Workshop***Workshop on Economic and Social Inequities in Latin America***

Bariloche, Argentina, 29 May–2 June 2003

Report*by Darío D'Atri and Walter Scheuer*

The First Regional Workshop held within the programme of the Pugwash Study Group named 'Towards the Solution of Economic Inequities in Latin America and of their Social Consequences', met in the outskirts of San Carlos de Bariloche, Northern Patagonia, Argentina, from May 29 to June 2, 2003. It was hosted by the 'Bariloche Group for Science and World Affairs' (BACyAM Group) and made possible by the generous support of Pugwash Conferences on Science and World Affairs, Pugwash Netherlands, as well as of the following Bariloche based entities: Balseiro Foundation, Bariloche Atomic Centre (Argentine Atomic Energy Commission), City Council, Hayland Travel, and Southern Winds Airlines. One Spanish participant specialized on Latin American issues joined 11 Argentines covering different socio-economic areas, plus some observers from the hosting group.

The search of ways for solving the many problems associated with the alarming present socio-economic situation in most of the Latin American countries has emerged on the regional scene as one of the issues of highest priority. Think tanks of different fields, leaders of industrial and financial corporations as well as of labor unions, some up-dated political parties, and leading NGOs, all over the region, are considering or starting to consider matters related to these problematic issues. It was thus considered that the activities of the Study Group should join this trend and, therefore, begin as soon as possible. One consequence of this determination was that the participation was – as said – mainly Argentine and that a large part of the debates and presentations examined the Argentine crisis and its effects on the steady rise in poverty and inequity. Great effort will be devoted to having a

highly diversified Latin American, as well as non Latin American, participation in the follow-ups.

The Workshop focused its analysis and discussions along two main lines:

- 1) The deterioration of the macroeconomy and productive systems in Latin American countries as a result of over a decade of neoliberal economic policies, including accelerated programs for privatization of state-owned enterprises, the withdrawal of the State from its directing role in Latin American economies, deep commercial aperture, and the liberalization of economic relations within each country.
- 2) The public policies and juridical framework which allowed a steady rise in poverty and social and economic inequity.

In addition, within the macroeconomic issue, the effects (conditionings) produced by Latin American countries' huge foreign debts, as well as the impact of globalization, on the region were analyzed with special attention.

In what follows, a first view of the matters dealt with has been grouped into four sections. The text is the sole responsibility of the authors. Extended information on the Workshop, the Study Group, and the 'Bariloche Group for Science and World Affairs', as well as the text of the papers submitted, are available in www.forobariloche.com.ar

I. Macroeconomic Situation and Analysis of Productive Systems

Of all the regions in the world, Latin America is the one which, since the late '80s, most thoroughly applied policies of economic liberalization, privatization of state-owned enterprises, fast trade liberalization, and withdrawal of the State. At the same time, from 1980 to 2000, the number of poor people in Latin America rose by 75 million to over 200 million. Of the new poor, almost 95% are urban poor. The economic liberalization

programs were largely inspired in the so-called Washington Consensus (a set of political and economic guidelines which, from the late '80s, became the main defining force behind the doctrine promoted by the central countries and multilateral credit organizations towards Third World countries). Not only did these programs create large numbers of poor and indigent people, but they also produced a spectacular rise of economic and social inequity and increased unemployment rates to over 15%. Furthermore, by promoting the withdrawal of the State from its directing role of previous decades, they caused a rise in illiteracy and school dropout rates as a result of lack of funding for public education and unprecedented deterioration in the public health systems on which much of the population of Latin America relies.

At the same time, during the 90s there was an extremely high rate of financial and productive capital inflow to Latin America. Together with the privatization process, in most countries this brought about a huge leap in the rate of investment in infrastructure for telecommunications, ports, roads and services in general. Added to the effect of trade liberalization, greater investment led to rapid progress in the overall condition of services and infrastructure and an ensuing positive impact on the production standards of Latin American enterprises.

According to what was put forward at this meeting, the combination of trade liberalization, privatizations and the considerable increase in foreign investment brought about a microeconomic phenomenon that was characterized by the following features:

- 1) The ownership of the main local enterprises and industries passed into foreign hands.
- 2) The incorporation of technology and process re-engineering had a major impact on the efficiency of enterprises and industries.
- 3) There was an increase in the relative importance of services in the overall economy.
- 4) A noticeable difference became apparent between some companies that survived competition from imported products by making major changes in their production methods and matching their production costs and quality to international standards, and, on the other hand, the large proportion of companies and industries that were unable to withstand foreign competition and were forced to close down.
- 5) Although the main cause of the rise in unemployment was the closure of companies due to the impact of foreign competition caused by trade liberalization, unem-

ployment was also produced by microeconomic phenomena like the generational turnover related to the incorporation of technology or process re-engineering and rationalization.

Throughout the discussions on the economic context of inequity in Latin America, there was heated debate about the impact of fixed, overvalued exchange rate policies – as happened in Argentina from 1991 to 2001 – on the loss of competitiveness and the destruction of national economies. Several members of the panel argued that this kind of exchange rate policy was adopted not merely as a result of mistaken political decisions, but rather as a response to the private interests of local and foreign finance and service groups, who were highly privileged by those policies. Another factor mentioned as causing growing instability in the region was the lack of rules controlling the inflow and outflow of financial capital. Thus, not only did the real economy of countries like Argentina suffer the impact of an overvalued currency causing a growing loss of competitiveness of local production, but also the total liberalization of capital flow produced a twofold deleterious effect. On the one hand, there was rapid inflow of financial capital, which made it possible to finance inconsistent fiscal policies and increase consumption with foreign savings. On the other hand, it created vulnerability to external shocks when there was a sudden interruption of international financing during times of crisis, as occurred during the Tequila crisis, South-East Asian crisis and Russian devaluation. All participants fully agreed on the need to apply rules for controlling capital, as Chile does.

It was also pointed out that the conversion from closed economies with high State participation to open economies with no State control produced negative consequences, which were enhanced by the lack of adequate compensation policies. The following lacks were mentioned:

- 1) Lack of a planned financial system focused on productive investment.
- 2) Lack of systems and institutions for generating innovation.
- 3) Lack of training to create skilled human resources.
- 4) Lack of international negotiation strategies.
- 5) Lack of promotion of cooperation and association among enterprises.
- 6) Lack of development of the production network in order to gain economies of scale and specialization.

The issue of poverty in Latin America was also

discussed from an ideologically broader point of view. One of the participants argued that one can either consider the issue of poverty from a “mitigation” standpoint, as suggested for example by international financial organizations, or otherwise, one should move towards a system of social relations where changes in public policies and cultural revaluation would enable structural changes to be made. He centered the need for structural change on what he considers to be the current situation of ‘structural productive overcapacity’, where the supply capacity is greater than real future demand. He identified this situation as the cause of many of the aforementioned mistaken public policies and negative effects of globalization. He highlighted the role of education and the media in achieving the major cultural changes he believes are needed in order to attain a more humanistic perception of society.

A small yet significant example of structural change was put forward. As the widespread closure of companies has had a major impact on the rise in unemployment, poverty and inequity, several members of the Study Group suggested seeking and promoting mechanisms to support the continuity of these companies, for example through cooperative systems or by placing the control of an affected company into the hands of its employees. Although Argentina was taken as a case in point, since during its crisis, there was a growing phenomenon of workers taking control of bankrupt companies, one of the participants mentioned a Spanish example, by which, during the mid-seventies, a law was passed to rule the labor stock companies (run by the employees).

Several participants discussed an ideologically deeper issue in the search for solutions to social and economic inequity, asking which should come first: the creation of methods to increase wealth or the creation of methods to improve the social distribution of existing wealth. Of similar relevance was the exchange of opinion on tax policies, with reference to deciding onto which area should taxation be centered: work, capital or profits.

Globalization and Inequity

Within the discussions on economy, one of the presentations dealt with the impact of globalization on the social and economic conditions in developing countries and its characterization in Latin America. The presenter did not agree that power has been transferred entirely to a transnational level, hindering or even preventing peripheral countries from establishing their own processes of development and leaving them with no choice but to

implement adaptive policies. He believes that to confront the problem of inequity, an alternative, realistic paradigm should be created, whereby each nation would assert its own identity, its own distinctive presence in the world, and, on that basis, generate its own potential for development. He outlined the main trends of globalization as follows:

1) Major increase and transformation of trade, with greater participation of goods and services having high added value. Within manufactured goods, a major increase in those having high added value connected to knowledge.

2) Internationalization of production due to the expansion of multinational companies. Over one third of international trade is within-company, and markets are shaped by the rapid growth of the subsidiaries.

3) Integration of financial markets and generalization of speculative capital flow, especially affecting emerging markets in spite of the fact that they receive no more than 10% of these financial flows.

4) Implementation, by developed countries of regulations that favor the interests of their own enterprises and governments and discriminate against developing countries. The same happens, of course, with access to knowledge.

The main presentation on this topic forwarded the following points in terms of alternative ways:

1) Although globalization is the space in which power is exercised within the aforementioned basic tendencies, there are still alternatives for trade policies and international insertion. As far as financial policies are concerned, a country may either enter globalization passively, without any rules to control financial flow, or it may do so after imposing certain rules. Similarly, as multinational companies expand, a country may either assume that all foreign investment should be welcome and, therefore, eliminate any kind of checks, rules and regulations, or it may establish rules and policies to create a framework for controlling national resources, directing investments towards the production of exportable goods, etc..

2) The process of access to knowledge must be made endogenous, because transplanted knowledge is only a partial process and does not contribute toward the transformation of the productive network.

3) The degree of injustice and inequality existing in a country depends on the way it reacts to the challenge of globalization. The way in which each country will become part of the international context lies in its own hands.

Each country shares globalization according to which policies it implements: either a dynamic one, of expansion of international trade and access to knowledge and innovation, or one of increasing inequality and loss of control over its own resources, as well as over financial flows.

4) The country's degree of social and economic inequality is a key factor. In countries that have entered globalization 'successfully', society is better integrated and inequality more moderate. In contrast, countries with huge social differences, high concentration of wealth, waste, extreme inequality and leaders who tend to be at the service of foreign interest, have not integrated well into globalization. In these countries, economic ideas remain trapped and they are unable to create alternatives to the univocal discourse produced by developed countries.

5) Violence, extremism and terrorism should be viewed as a natural, foreseeable consequence of the high degree of inequality and inequity created by globalization, threatening even the very interests of developed countries themselves. It is their duty to intensify the search for a more equitable, more balanced order.

6) The developing countries must accept that they will not solve their problems on the international scene, but rather through autonomous decisions on public policies. It is essential that they regain control of themselves, after having lost it largely through the conditioning of their foreign debt. There is no lack of resources. The problem is organizational, requiring the construction of a converging political system, where the majorities should be able to create a viable way of becoming integrated into the rest of the world.

During the ensuing discussion, two main ideas arose. On the one hand, the notion that a supra-national integration of Latin America is necessary (based on

MERCOSUR), in order to create a critical mass which could attain a certain degree of strategic invulnerability. On the other hand, it was pointed out that a strong MERCOSUR – as a driving force behind a better insertion in the world – would only be possible as a result of the integration of strong countries, as a successful supranational entity can only be achieved if it is based on a group of successful nations.

Two contrasting prospects were outlined: one foresaw the USA succeeding in its present aspirations for world domination and the establishment of a new hegemonic order; while the other foresaw a not too far off multipolar world, with a strong presence of USA, Europe, China and India.

III. Foreign Debt and Social and Economic Inequity

Two of the presentations and discussion sessions were given entirely to debate the impact of foreign debt on the economies of Latin American countries. Several members of the panel criticized the role of international financial organizations like the IMF, which have for decades imposed structural conditioning on the economies of Latin American countries, mainly in the form of budget adjustment plans tending to generate a tax surplus in order to enable the payment of the services of the foreign debt. It was stated that while most Latin American governments irresponsibly resorted to foreign financing in the face of local mismanagement of economy, international financial organizations also acted irresponsibly because, far from setting limits to the negative debt - tax adjustment circle, they consolidated a model of unpayable foreign debt.

Considering the problem of foreign debt and that countries like Argentina have been in default for over a year, some participants proposed the implementation of strong measures leading to the investigation of the origin of the debt and its successive renegotiations, as well as taking to court any government officials who participated in illegitimate dealings to obtain or refinance foreign debt. There were also proposals that Latin American countries should renegotiate their foreign debt according to criteria of the 'common good' of the people, in other words, that they should pay only the interest and capital of genuine debt after having satisfied the basic needs of the people.



As a tool to exert juridical pressure, though not as an actual solution to the problem of foreign debt, it was proposed that foreign debt should be brought before highly independent organisms such as the International Court of The Hague, in order to have it pronounced legitimate or illegitimate. Within this context, it was recalled that in Latin America, and particularly in Argentina, there is a longstanding tradition and international recognition for the successful legal treatment of Latin American foreign debt, which developed creditor countries had been demanding by means of strong pressure, even armed.

IV. Public Policies and Juridical Framework of Social and Economic Inequity

The final sessions of the Bariloche meeting analyzed the legal and institutional frameworks which have direct or indirect bearing on the creation of conditions that heighten and sustain social and economic inequity. One presentation and the ensuing debate focused on the need to consolidate independent judicial systems, as opposed to the present situation, where the Judicial Power in most Latin American countries depends on the political and economic powers.

One participant argued that "Nowadays, people mistrust the judicial systems, and the weakest social sectors are the most skeptical about the ability of the courts of justice to satisfy their needs." In response to this, a first proposal was:

1) To increase the independence, impartiality and capacity of judges. Other constitutional powers should not interfere with the Councils of the Judiciary, which should work as autonomous bodies for the administration of justice, and be in charge of training judges, assigning posts and the system of discipline.

2) To increase the competence of the justices of the peace, who are so much involved with communities, enabling many judicial matters to be more swiftly resolved.

3) To recognize Inter-American jurisdiction, such as the San José Court on Human Rights, as more binding. Not only would this increase the jurisdictional guarantees of human rights, but it would also tend to make the work of national judges more rigorous, if their sentences could be appealed and revised before the Inter-American Court of Justice or other such courts which should urgently be created within the framework of regional bodies such as the Pacto Andino or the MERCOSUR.

With regard to this point, the negative aspect of the

1985 reforms to the World Bank and IDB charters on Latin American public policies was mentioned. These reforms enabled the banks to start financing projects involving institutional reform instead of attending to projects involving infrastructure, health, etc. Not only did this interfere with the institutional shaping of those countries, but also the shaping tended to enhance fiscal efficiency criteria rather than the real need for efficiency and judicial independence.

Finally, there was a presentation on independent government control entities, summarized by the following points:

1) Inverting the rule: instead of political power controlling society, there should be a new system whereby society controls political power.

2) Establishing a mechanism whereby governors would be required to account for their actions regularly, and a mechanism enabling them to be divested of power. This would prevent voting from becoming a mere formality whereby citizens periodically express their opinion only to have the ensuing governors doing whatever they please, even when it goes against their campaign promises. The mechanism should be efficient enough to prevent bureaucratic delays when it needs to be applied.

3) Establishing that one of the conditions to become a controller is not to have acted in bodies subject to control for the past ten years.

4) Creating bodies that really work (unlike current ones) to control public enterprises. Analyzing the feasibility of creating organizations formed by the consumers of these companies' services to carry out a twofold control: on the control bodies and on the companies. A simple mechanism should be implemented for cases of members of the control bodies neglecting their duties. In addition, analyzing the possibility of having the Judicial Power handle this kind of control. This, in many cases, would involve first solving the problem of the lack of a judicial police force depending directly on the judges, to enable the immediate application of their resolutions.

5) Creating a body to control Justice. In Argentina, the situation in the Council of the Judiciary is sufficient to show not only that a control body is necessary, but also that judicial control cannot be in the hands of members of the Judicial Power. This would entail creating new rules in most Latin American countries. For example, during the first four years of the Council of the Judiciary in Argentina, there were over 600 denunciations but only three minor sanctions. The judicial corporation is closed

and there is no way to control members effectively when the controllers are also members.

6) Creating systems to control the security forces, particularly the police force (control of the army was not considered). It is entirely unacceptable that the public should be unaware of any human rights violations that may occur at police stations, in spite of the fact that these violations may be serious, sometimes even leading to death. Police stations should be controlled, though not permanently. Systematic checking should be carried out, not by government officials but by agents designated by human rights associations or lawyers' associations.

The content of these proposals was broken down and reinforced in the ensuing discussion. The following topics were given special attention: (a) implementation of mechanisms to divest government officials of power as a key tool to empower society, (b) the importance of having bodies to defend competence, (c) the possibility of analyzing radio and television media as public services, since they act in spheres which are definitely not private, (d) the major rise in social awareness of consumer rights and duties towards public service enterprises (especially public conviction against these companies aspiring to the right of unlimited returns).

Participants

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Preparations for ISYP Halifax Conference – ISYP Organizing Committee and ISYP Symposium Plans

Report

by Gina van Schalkwyk

During the Pugwash Conference in La Jolla, USA, ISYP members approached Pugwash Conferences on Science and World Affairs and Pugwash Canada seeking their assistance in the organization of the ISYP Conference traditionally preceding Pugwash Conference. In the absence of an established Student Young Pugwash Group in Canada, ISYP alone had to become responsible for the planning of the 2-day conference. The guidance of Pugwash Canada has proven to be crucial at each organizational step.

The ISYP Halifax Organizing Committee was established and consists of: Magdalena Kropiwnicka (Italy, Co-chair) and Arthur Petersen (Netherlands, Co-chair), Juan Pablo Pardo Guerra (Mexico), Gina van Schalkwyk (South Africa), David Sandomierski (Canada) and Tom Borsen Hansen (Denmark).

In the months following La Jolla, the Committee worked closely with the Canadian Pugwash group in preparation of fundraising proposals, issuing call for nominations, selection of participants, drawing up of a conference programme and assisting with travel arrangements for twenty international and ten local Canadian Student/Young participants.

The committee received a suggestion from Juan Pablo Pardo (Mexico) and Tom Borsen Hansen (Denmark) to host a half-day symposium at the start of the ISYP Conference to discuss an issue that has gained in prominence recently: “The Future of the United Nations after Iraq”. In preparation for the symposium a number of background papers have been distributed and an online discussion forum has been opened (the group can be visited and joined via <http://groups.yahoo.com/group/isypsymposium2003>). Confirmed speakers for the Symposium include Prof. Joseph Rotblat (Poland/UK) and Senator Roche (Canada).

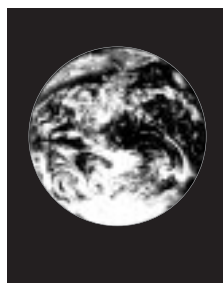
According to a decision by the ISYP Board and the conference organising committee, participation in the ISYP Conference is, for the first time, being made conditional upon submission of a paper. This measure was introduced to stimulate the quality of participation in the working group discussions at the ISYP conference and also aims to increase the participation of Student/Young Pugees in the senior conference working groups. Another spin-off from these paper contributions will be a pool of articles to feed into the *ISYP Journal on Science and World Affairs*. The response to the request for papers has been overwhelming and formatted papers can be viewed on the ISYP web site (www.student-pugwash.org).

During the annual ISYP Conference, students will convene in working groups similar to those in the senior conference where they will discuss working group themes and produce reports on their findings and recommendations. The conference also provides an opportunity for the ISYP General Assembly (consisting of representatives of National Groups present) to receive the ISYP Board’s report and to discuss ISYP’s agenda and work plan for the next year.

www.student-pugwash.org

This project, started during the last months of 2002 by the Information Technologies group of ISYP and launched just a few months ago, has been a crucial element in the daily operations of the young Pugees. Not only is it a source of crucial information about ISYP but it is also a dynamic collection of opinions, papers and reports that can be accessed by anyone on the Internet. In recent weeks it has also served as an obligated reference for the upcoming ISYP Conference since it contains both background papers as well as general information. It is expected that, once the conference has come to an end, the website will also display the reports from the Student/Young working groups, open to general access.

STUDENT



PUGWASH

The ISYP Journal on Science and World Affairs

One of the exciting new projects that will be launched by ISYP in the next few months is the interdisciplinary ISYP Journal on Science and World Affairs. The journal, which will be published bi-annually, aims to provide young and student Pugees with an opportunity to have their work reviewed by eminent senior Pugees and see it in electronic print.

The first issue of the journal would draw upon paper submissions of Student/Young participants to the annual ISYP Conference to be held in Halifax, Canada in July 2003. A collection of best papers will be selected by a panel of editors headed by Gina van Schalkwyk. The editorial team will then approach a number of guest editors from senior Pugwash to review and comment on articles. Reworked and improved articles will be published in an electronic format and will be distributed to Pugwash members and academic and research institutions around the world. It will also be available on the ISYP web site (www.student-pugwash.org). It is hoped that eventually ISYP will be able to attract funding to produce a print edition of the ISYP Journal and perhaps to provide grants to students to present approved papers to Pugwash conferences and workshops.

The symposium on “The Future of the United Nations after Iraq”, which will be held prior to the ISYP Conference in Halifax, Canada in July 2003, will provide the theme and background papers for the second issue of the ISYP Journal on Science and World Affairs. For this issue the editorial team and organisers of the Symposium will invite ISYP members and others to contribute further articles related to this theme. Articles will, once again, be peer-reviewed before being published.

ISYP intends to make the ISYP conference symposium an annual event to feed into each alternative issue of the Journal.

The ISYP Journal on Science and World Affairs will provide ISYP with an opportunity to distribute their views on matters related to a more peaceful world order, where the nexus between science and world affairs is critically investigated, to a broader audience. It will also provide young researchers with an opportunity to have their work read and reviewed by some of the top scientists, researchers and practitioners in their field.

We believe that this project will add value not only to the activities and the existence of ISYP, but to the Pugwash Movement in general, and we count on the support of the extensive network of Pugees to make it a success.

Prince Sadruddin Aga Khan

Prince Sadruddin Aga Khan died on 12 May at the age of 70 after a lengthy illness borne with great courage during which he continued to devote his efforts to peace, social justice and environmental concerns among numerous others.

He was long associated with United Nations work, first as Deputy High Commissioner for Refugees, and later, at age 33, as High Commissioner, a post he held for twelve years. During that time he dealt with the problems of millions of refugees from the Pakistan-Bangladesh conflict and from Vietnam, Uganda and Sudan.

Sadruddin was the son of Aga Khan III who, in 1932, represented India at the World Disarmament Congress, and in 1937 became President of the League of Nations.

Among the many foundations and commissions that Sadruddin directed – on human rights, refugees, Third World relief, and others – was the Groupe de Bellerive, of

which he asked me to be a member, and which dealt with environmental and nuclear problems. As his neighbour, I had an opportunity to become well acquainted with Sadruddin – or Sadri as he was known to friends – through numerous meetings and social functions.

Sadruddin was a strong supporter of Pugwash. He was a trustee of the Pugwash Foundation from its start in 1986 until his death. Although he did not attend Pugwash meetings, he often invited participants in Pugwash symposia and workshops held in Geneva to his palatial home on the lake for dinner and entertainment.

He was a man of elegance and charm – a prince – and a person of the highest aspirations and accomplishments, for humanity-at-large and especially for the less fortunate populations.

Dr. Martin M. Kaplan

Thomas Odhiambo

Prof. Thomas Odhiambo, a Kenyan scientist renowned for his work to improve African agriculture, died at the age of 72 in May 2003.

Educated at the University of Cambridge with a degree in entomology, Prof. Odhiambo founded the International Center of Insect Physiology and Ecology (ICIPE), in Nairobi, in 1972, where he served as director for 25 years. ICIPE focused on providing African farmers with low-cost solutions for pest control, especially those that did not rely on pesticides and synthetic chemicals. He also helped found the African Academy of Sciences in 1985 and was recipient of the Albert Einstein Medal in 1979.

Prof. Odhiambo attended his first Pugwash workshop, “What Can Scientists Do for Development,” in 1970 at

Stanford University. He remained an active supporter of Pugwash over the next two decades, attending his last Pugwash meeting, the 42nd Pugwash Conference, in Berlin in September 1992.

Working closely with long-time members of the Pugwash community such as Ruth Adams and Victor Rabinowitch to help train a new generation of scientists in Africa and other developing countries, Prof. Odhiambo symbolized the spirit of international scientific cooperation that transcends national boundaries and socio-political backgrounds for the welfare of all.

Academician Vsevolod S. Avduyevsky

Academician Vsevolod Avduyevsky, a famous Russian scientist in mechanics and space engineering, died in Moscow at the age of 82.

Academician Avduyevsky made outstanding contributions to space science through his work on temperature control and heat shielding for artificial satellites and manned spacecraft. He actively participated in the development of the famous Russian carrier rocket *Proton* and the spaceship for research on Venus.

From 1987 to the last day of his life he was a member of the Russian Pugwash Committee. He participated in international Pugwash meetings, including several annual

conferences. In the early 1990s Academician Avduyevsky was one of the initiators of the Pugwash project on a Nuclear-Weapons-Free World and Conversion of Military R&D. One of the results of this project was the publication in 1998 of a Pugwash Monograph, *Conversion of Military R&D After the Cold War*, which he co-edited with Judith Reppy.

Academician Avduyevsky was a key member of the Russian Pugwash community, as well as a respected member of the world scientific community.

Academician Yuri Ryzhov

ISODARCO

International School on Disarmament and Research on Conflicts

ITALIAN PUGWASH GROUP

17th ISODARCO Winter Course

Andalo (Trento) Italy, 11–18 January, 2004

Violence by Armed Non-State Groups and International Security

ISODARCO has been organizing residential courses on global security since 1966. The courses are intended for people already having a professional interest in the problems of international conflicts, or for those who would like to play a more active and technically competent role in this field. The courses have an interdisciplinary nature, and their subject matter extends from the technical and scientific side of the problems to their sociological and political implications. Lecturers at the 17th Winter Course include Alexei Arbatov, Nadia Arbatova, Gabriel Baramki, Martin Butcher, Paul Guinnessy, Catherine Kelleher, Steve Miller, Amos Nadan, and Judith Reppy.

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A Challenge to the World's Scientists

by Kofi Annan, Secretary-General of the United Nations

Science has contributed immensely to human progress and to the development of modern society. The application of scientific knowledge continues to furnish powerful means for solving many of the challenges facing humanity, from food security to diseases such as AIDS, from pollution to the proliferation of weapons. Recent advances in information technology, genetics, and biotechnology hold extraordinary prospects for individual well-being and that of humankind as a whole. At the same time, the way in which scientific endeavors are pursued around the world is marked by clear inequalities. Developing countries, for example, generally spend much less than 1 percent of their gross domestic product on scientific research, whereas rich countries devote between 2 and 3 percent. The number of scientists in proportion to population in the developing countries is 10 to 30 times smaller than in developed countries. Ninety-five percent of the new science in the world is created in the countries comprising only one-fifth of the world's population. And much of that science—in the realm of health, for example—neglects the problems that afflict most of the world's people.

This unbalanced distribution of scientific activity generates serious problems not only for the scientific community in the developing countries, but for development itself. It accelerates the disparity between advanced and developing countries, creating social and economic difficulties at both national and international levels. The idea of two worlds of science is anathema to the scientific spirit. It will require the commitment of scientists and scientific institutions throughout the world to change that portrait to bring the benefits of science to all.

But no bridge that science might build across the

gaps between rich and poor is strong enough to withstand the force of violence and war. If science is to reach its full potential and draw on the great minds from every country, we must do more to end and prevent conflict. Scientists themselves have a key role to play here, too. The Pugwash Conference movement, launched by the Russell-Einstein Manifesto of 1955, brought Russian and Western scientists together for more than 40 years to develop common understandings of the dangers of nuclear war and ways of reducing them, and in recent years has constructed a strong dialogue between North and South on the problems of development. "Lab-to-lab" cooperation also helped to lay the groundwork for cooperative nuclear disarmament and arms control between Russia and the United States after the Cold War. Peacemaking and peacebuilding should never be the exclusive preserve of diplomats and politicians.

There are deep similarities between the ethos of science and the project of international organization. Both are constructs of reason, as expressed, for example, in international agreements addressing global problems. Both are engaged in a struggle against forces of unreason that have, at times, used scientists and their research for destructive purposes. We share the experimental method; the United Nations, after all, is an experiment in human cooperation. And both strive to give expression to universal truths; for the United Nations, these include the dignity and worth of the human person and the understanding that even though the world is divided by many particulars, we are united as a single human community.

The scientific community's basic concern for human welfare makes it an indispensable partner of the United Nations. With your help, the world can

achieve the “blue revolution” it so urgently needs to deal with current and emerging water crises. Your research can enable Africa to move toward a “green revolution” that will boost agricultural productivity. Your solidarity can help developing countries build up their capacity to participate effectively in negotiations of international treaties and agreements involving science. And your advocacy can help bring about a breakthrough in access to scientific knowledge; for example, through the Health InterNetwork Access to Research Initiative, under which scientific journals

are provided to thousands of developing-country institutions, free of charge or at a steep discount.

The agenda is broad and the needs immense, but together we are equal to these challenges. The United Nations system and I personally very much look forward to working with scientists throughout the world to support your work and spread its blessings even further, even deeper, in the years to come.

Science, 7 March 2003
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BOOKS

Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Devastation

by Lynn Eden
Cornell Studies in Security Affairs
(forthcoming in December 2003)

Whole World on Fire focuses on a technical riddle wrapped in an organizational mystery: How and why, for more than half a century, did the U.S. government fail to predict nuclear fire damage as it drew up plans to fight strategic nuclear war?

U.S. bombing in World War II caused massive fire damage to Hiroshima and Nagasaki, but later war plans took account only of damage from blast; they completely ignored damage from atomic firestorms. Recently a small group of researchers has shown that for modern nuclear weapons the destructiveness and lethality of nuclear mass fire often and predictably greatly exceeds that of nuclear blast. This has major implications for defense policy: the U.S. government has underestimated the damage caused by nuclear weapons, Lynn Eden finds, and built far more warheads, and far more destructive warheads, than it needed for the Pentagon’s war-planning purposes.

How could this have happened? The answer lies in how organizations frame the problems they try to solve. In a narrative grounded in organization theory, science and technology studies, and primary historical sources (including declassified documents and interviews), Eden explains how the U.S. Air Force’s doctrine of precision bombing led to the development of very good predictions of nuclear blast—a significant achievement—but for many years to no develop-

ment of organizational knowledge about nuclear fire. Expert communities outside the military reinforced this disparity in organizational capability to predict blast damage but not fire damage. Yet some innovation occurred, and predictions of fire damage were nearly incorporated into nuclear war planning in the early 1990s. The author explains how such a dramatic change almost happened, and why it did not.

Whole World on Fire shows how well-funded and highly professional organizations, by focusing on what they do well and systematically excluding what they don’t do well, may build a poor representation of the world—a self-reinforcing fallacy that can have serious consequences. In a sweeping conclusion, Eden shows the implications of the analysis for understanding such things as the sinking of the Titanic, the collapse of the Tacoma Narrows Bridge, and the poor fire-proofing in the World Trade Center.

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Pugwash Council for the 2002–2007 Quinquennium

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Calendar of Future Pugwash Meetings

17–21 July 2003 Halifax and Pugwash, Nova Scotia, Canada	53rd Pugwash Conference on Science and World Affairs: Advancing Human Security: The Role of Technology and Politics
6–8 September 2003 Tehran, Iran	<i>Pugwash Meeting no. 288:</i> 10th Pugwash Workshop on the Middle East: <i>Middle East Security and Iran</i>
9–12 October 2003 Como, Italy	<i>Pugwash Meeting no. 289:</i> 2nd Pugwash Workshop on Terrorism: <i>Consequences of the War on Terrorism</i>
31 October–2 November 2003 Goa, India	<i>Pugwash Meeting no. 290:</i> 3rd Pugwash Workshop on South Asian Security
8–9 November 2003 Geneva, Switzerland	<i>Pugwash Meeting no. 291:</i> 20th Workshop of the Study Group on Chemical and Biological Weapons
10–12 December 2003 Havana, Cuba	<i>Pugwash Meeting no. 292:</i> Pugwash Workshop on International Scientific Cooperation
11–18 January 2004 Andalo (Trento), Italy	<i>ISODARCO Meeting no. 51 :</i> 17th Winter Course: Violence by Armed Non-state Groups and International Security
October 2004 Korea	54th Pugwash Conference on Science and World Affairs
*2005 Japan	Pugwash workshop in Japan (50th anniversary Russell/Einstein Manifesto and 60th anniversary of Hiroshima and Nagasaki)

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