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## EDITOR'S NOTE

Since the unlimited extension of the NPT in 1995, the disarmament and non-proliferation regimes have been confronted by numerous challenges. Concerns about non-compliance, the tests in South Asia, political roadblocks in both the United States Senate and the Russian Duma all mean that the NPT Review Conference to be held in May will be set in very different circumstances than the 1995 Review.

For this issue of *Disarmament Forum* we examine questions related to the future of the NPT — how did we get to this precarious situation, is further nuclear disarmament likely, could the NPT collapse — as well as suggesting some constructive approaches to the 2000 Review Conference. We hope that these articles provoke thought and reflection as the Conference approaches.

Issue 2, 2000 of *Disarmament Forum* will take a closer look at many of the recent national and international initiatives to control small arms. It has become more broadly accepted that the global proliferation and illicit use of small arms is a central issue in the evolution of human security. The multiple dimensions of the problem range beyond the confines of arms control and disarmament in the traditional state-to-state sense. They are illustrated by the variety of initiatives undertaken in the last few years, ranging from the local and national levels to regional, inter-governmental and non-governmental organizations; and from the disarmament of former combatants and related developmental activities to the fight against transnational organized crime. This issue of *Disarmament Forum* will provide an overview of where such activities stand and what are the prospects for controlling small arms. It will discuss what approaches are needed and how to operationalize them, for example in the context of the international conference scheduled for 2001.

UNIDIR, in cooperation with Monterey Institute of International Studies and Peace Research Institute Frankfurt, has launched a research project on the urgent issue of tactical nuclear weapons (TNWs). There are growing concerns over the deployment and possible future development of TNWs. Outside the scope of existing formal nuclear arms control agreements, TNWs have so far only been addressed by informal arrangements and unilateral commitments, notably by the United States and the Russian Federation. There are no current initiatives seeking to fill this gap. On the contrary, there has been a revival of interest in TNWs. Left unaddressed, TNWs could become a serious stumbling block on the — already fraught — path to nuclear arms control and disarmament.

The project will address such topics as the definition of TNWs, numbers, the roles of TNWs in various military and political doctrines, and future measures to address the TNW problem. The project will be carried out over a period of nine months at UNIDIR. The Institute will commission papers from experts and coordinate the research and related research meetings. The main findings of the study would be ready for discussion prior to the NPT Review Conference in May. The project will

result in the publication of a Research Report in the UNIDIR series and a “UNIDIR Brief” setting out the main findings of the study in a succinct form for broad distribution.

The time has come to say goodbye to Susan Wright, a visiting researcher we have hosted for the past year and a half at the Institute. With the end of her project, Forming a North-South Alliance to Address Current Problems of Biological Warfare and Disarmament, Susan has returned to the University of Michigan where she is a professor of the history of sciences. It is always a pleasure to welcome visiting researchers to the Institute and we look forward to further expanding this sort of fruitful collaboration.

In the last issue of *Disarmament Forum*, an error was introduced into the text of Steffen Kongstad. On page 58 in the first paragraph of the section entitled “Transformation” the third sentence should begin “In order for this unambiguous and strong convention ...”. We apologise for any confusion this has caused.

On a final note, we are working to increase the transparency of our activities and finances. From 1999 forward, we will be producing an annual report, detailing the various projects, accomplishments and finances of the previous year, and which will be available on our website. The 1997–1998 biennium report is now available. The report for 1999 will be online in the coming weeks.

***Kerstin Hoffman***

## SPECIAL COMMENT

Must it get worse before it gets better?

The prospects for nuclear disarmament, which looked promising only a few years ago, seem to be declining today. The START process is almost standing still. India and Pakistan have rejected the strong international norm against nuclear testing. The Conference on Disarmament is deadlocked. The Fissile Material Cut-off Treaty negotiations have not started. The fate of the Comprehensive Test-Ban Treaty is unclear after the surprisingly short-sighted decision of the United States Senate. The serious disagreement between the United States and the Russian Federation on the Anti-Ballistic Missile Treaty also adds an element of risk and uncertainty.

These and other recent developments make the outlook for the approaching Review Conference of the NPT very bad. Many states feel that the agreements made at the 1995 Review and Extension Conference, in order to secure the indefinite extension of the NPT, have to a large part not been honoured.

The fact that almost all states are party to the NPT means that they concluded that the best way to attain the goal of a nuclear-weapon-free world is to work within the NPT framework. But that conclusion is now being questioned in some capitals. Not much has been delivered since 1995, and the goal is not closer.

It is becoming increasingly clear that shoring up the authority of the non-proliferation regime will be very difficult unless there are steady and progressive reductions of nuclear arsenals. This is not surprising; it follows directly from the 1995 agreements. But it is also clear that in the short time available before the Review Conference, no fundamental change regarding such reductions can be expected.

Yet the seriousness of the situation might create conditions for a reversal. When states are actually staring at the possibility of a slow breakdown of the non-proliferation regime, that in itself might make room for bolder decisions, or even innovative thinking.

In the New Agenda Coalition, we do not pretend to be innovative. There is nothing really new in what we have proposed since our Joint Ministerial Declaration in June 1998, when foreign ministers from eight states (Brazil, Egypt, Ireland, Mexico, New Zealand, Slovenia, South Africa and Sweden) called for a new agenda to achieve a nuclear-weapon-free world.

The New Agenda Coalition has tried to move the nuclear disarmament debate towards middle ground. The New Agenda is a call for implementation of a number of measures, some of which can be taken immediately, and some of which can be taken in the near or medium-term future. It is a step-by-step approach, where the steps will reinforce one another. Our resolution contained no deadlines or time-bound frameworks, but proposals that are achievable. The 1999 General Assembly

vote confirmed that the support for those measures is strong — co-sponsorship grew sharply from the 1998 resolution and negative votes decreased.

The members of the New Agenda Coalition naturally respect that some governments may have doubts about one or more of the proposals contained in the New Agenda. We regret that a few governments — very few — believe that the New Agenda is unnecessary (because of the presumed “agreed agenda”), unrealistic, counterproductive, premature or even undermining the NPT.

But those who believe so are fewer than one year ago and it has been clearly demonstrated that there really is a need for a new agenda. It might not have to look exactly as in the General Assembly resolution — but it will not be unnecessary for the simple reason that the “agreed agenda” does not work.

The deadlock must be broken. The bad news is that this is difficult, of course, but the good news is that there are lots of good ideas floating around. Some start from the belief that the abolition of nuclear weapons is currently not a realistic goal. Others are more radical. All deserve close scrutiny.

*The Nuclear Turning Point*, an excellent publication from the Brookings Institution, puts forward a detailed political and technical blueprint for very deep nuclear reductions. Those reductions fall short of the complete elimination of nuclear weapons, but they would nevertheless reduce their dangers dramatically and constitute enormous steps in the right direction. The Committee on Nuclear Policy’s *Jump-START: Retaking the Initiative to Reduce Post-Cold War Nuclear Dangers*, published in early 1999, outlines clear and incremental steps to be taken to reduce nuclear dangers. From the 1996 Canberra Commission to the 1998/99 Tokyo Forum, experts from around the globe are actively thinking about how we can achieve a safer world.

There is a whole range of other and earlier studies — *Reducing Nuclear Danger* by then Admiral Crowe and others, and *The Future of U.S. Nuclear Weapons Policy* by the National Academy of Sciences are two pragmatic American examples that come to mind — that in various ways reflect sincerely upon how the process shall be started. The proposals are often modest, but in this journey the first step is the most important.

It seems almost inconceivable that nuclear weapons can be used — at least as a means of “rational” warfare. Their military value may be smaller than ever since it has been shown so clearly that they present no solution to the conflicts of today. But on the other hand, the actual risk of their use, by miscalculation, accident or desperation in a regional conflict, is probably greater today than in quite some time.

So we must take the first step now. And after that, the challenge is to reach the same political insight regarding nuclear weapons as the one we once reached regarding both chemical and biological weapons — namely that a world without such weapons is a more secure world.

### **Henrik Salander**

Ambassador for Disarmament

Permanent Mission of Sweden, Geneva

## 1995 – 2000: Progress Reviewed

Patricia LEWIS

The indefinite extension of the Non-Proliferation Treaty (NPT) in 1995 was far from unconditional. As many observers and participants have noted,<sup>1</sup> the decision documents (Principles and Objectives for Nuclear Non-proliferation and Disarmament, Strengthening the Review Process for the Treaty and the Resolution on the Middle East) were vital to both the extension decision itself and the fact that it was taken without a vote. If the contents of the Principles and Objectives document had not been agreed, then the 1995 conference would have had to proceed to a vote — for which there was no agreed procedure. Taking the extension decision without a vote was, at the time, considered to be absolutely necessary in order to avoid a hostile debate resulting in bitter divisions and perhaps in the end no real decision on extension.

Now, just before the first Review Conference since the indefinite extension of the NPT and following three Preparatory Committees (PrepComs), the question needs to be asked: Have the hopes contained within those documents that were the conditions for indefinite extension been fulfilled?

This paper, somewhat tongue-in-cheek and borrowing the idea from *The Economist*, marks progress against the Principles and Objectives out of ten so as to assist attempts to review the NPT since 1995.

### *Universality*

*Universal adherence to the Treaty on the Non-Proliferation of Nuclear Weapons is an urgent priority. All States not yet party to the Treaty are called upon to accede at the earliest date, particularly those States that operate unsafeguarded nuclear facilities.*

Since 1995 some progress has been made on universality. There are now 187 states party to the NPT. However, the three states of most concern (India, Israel and Pakistan) are still outside the Treaty and, worse, two of them have exploded nuclear weapons and proclaimed themselves fully fledged nuclear powers. Israel is now the only country in the Middle East not party to the Treaty. From this perspective, progress made on universality — although better in terms of numbers — has in reality become more difficult to achieve fully.

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Patricia Lewis is Director of UNIDIR.

## SCORE

- 10/10 to the states that have joined the Treaty since 1995 and to all those who encouraged them.
- 3/10 for the Treaty as a whole (shared mark) due to the increased entrenchment of India and Pakistan against joining the Treaty and no revision of attitudes towards the Treaty in Israel.

**Non-Proliferation**

*Every effort should be made to implement the Treaty in all its aspects to prevent the proliferation of nuclear weapons and other nuclear explosive devices, without hampering the peaceful uses of nuclear energy by States Parties to the Treaty.*

The efforts to prevent horizontal nuclear weapons proliferation have suffered a number of setbacks in recent years. The implementation of the Agreed Framework in North Korea has had its problems and the 1998 missile test by North Korea over Japan has served to further increase tensions in North-East Asia. The lack of UNSCOM on-site inspections in Iraq since mid-1998 has caused erosion of international confidence in the belief that Iraq is not pursuing a nuclear weapons capability. Perhaps the most immediate blow to the sanguine belief that non-proliferation efforts were working was the 1998 nuclear weapons testing by India and Pakistan. The tests may be causing a number of countries to reassess their approach to nuclear weapons, to nuclear disarmament and to non-proliferation efforts.

## SCORE

- 0/10 to India and Pakistan for coming out of their nuclear closet and setting back the prospects for a nuclear-weapon-free world.
- 2/10 to the states on the Security Council for failing to resolve the issue of UNSCOM.
- 0/10 to Iraq for failing to comply with its obligations under UNSCOM.
- 6/10 for the partners of KEDO for continuing to attempt to solve the impasse over North Korea's nuclear activities.
- 0/10 to North Korea for its missile tests and violating its safeguards agreement.

**Nuclear Disarmament**

*Nuclear disarmament is substantially facilitated by the easing of international tension and the strengthening of trust between States which have prevailed following the end of the Cold War. The undertakings with regard to nuclear disarmament as set out in the Treaty on the Non-Proliferation of Nuclear Weapons should thus be fulfilled with determination. In this regard the nuclear-weapon States reaffirm their commitment, as stated in article VI, to pursue in good faith negotiations on effective measures relating to nuclear disarmament.*

Since 1995, when hopes were still high following the end of the Cold War, relationships have deteriorated rapidly between the United States and both the Russian Federation and China. Although there is certainly no new Cold War, it is not unrealistic to worry about increased military spending, the possible collapse of the ABM Treaty and a difficult period within these very important relationships.

Both the United Kingdom and France have worked hard to carry out genuine disarmament measures, and the United Kingdom has gone further with transparency measures on fissile materials. The Russian Federation's failure to ratify START II has certainly set back the bilateral process but the recent attempts by the United States deserve credit for trying to overcome this obstacle.

However, in terms of renewing their commitment to pursue in good faith negotiations on effective measures relating to nuclear disarmament, an increasing number of non-nuclear-weapon states (NNWS) are sceptical. There has been increased tension between the United States and the Russian Federation over a host of issues such as NATO expansion, missile defences, nuclear technology transfer, Kosovo and Chechnya. Between the United States and China accusations of nuclear espionage, missile defences, Taiwan and Kosovo have formed part of a backdrop to an increasingly competitive relationship. China has continued on its path of nuclear modernization, increasing its nuclear weapons capability — at a time perhaps when regional instabilities would otherwise suggest caution — although it is still the only nuclear-weapon state (NWS) to espouse a no use (against NNWS) and a no first use (against NWS) policy.

Overall, despite attempts to revive the START process and the unilateral reductions by the United Kingdom and France, the commitment by the NWS to nuclear disarmament looks very shaky. Testimony to that observation includes statements by the NWS in the Conference on Disarmament (CD), in the First Committee and to their national audiences on the need for continuing strong nuclear "deterrent" capabilities and responses to proposed deployment of missile defences.

## SCORE

- 3/10 to the NWS overall for clinging on to the thinking that nuclear weapons are necessary for defence and thus sending the wrong signals to potential proliferators and also thus increasing scepticism among the NNWS supporters of the NPT.
- 3/10 to NATO NNWS and other allies for failing to seize the opportunity to let go of Cold War doctrines of nuclear reliance.
- 8/10 to the United Kingdom and France for taking courageous and hard-to-reverse steps in nuclear weapons reductions, transparency measures and closure of some nuclear facilities.
- 9/10 to the New Agenda Coalition states and supporters for attempting to push nuclear disarmament along.

*The achievement of the following measures is important in the full realization and effective implementation of article VI, including the programme of action as reflected below:*

*(a) The completing by the Conference on Disarmament of the negotiations on a universal and internationally and effectively verifiable Comprehensive Test-Ban Treaty no later than 1996. Pending the entry into force of a Comprehensive Test-Ban Treaty, the nuclear-weapon States should exercise utmost restraint;*

Hours following the 1995 extension decision for the NPT and the agreement that the NWS should exercise utmost restraint, China conducted another nuclear explosion. Months later France broke its moratorium to conduct a series of nuclear tests. Despite the CD completing negotiations for the Comprehensive Test-Ban Treaty (CTBT) in 1996, the entry into force of the Treaty has been jinxed from its beginning. Because of the requirement for all nuclear-capable states to ratify the Treaty before it could enter into force, India felt enabled to exercise its veto in the CD in an attempt to block its passage to the General Assembly. The Treaty was laid before the General Assembly by “friends of the Comprehensive Test-Ban Treaty” but over three years later, despite ratification by France and the United Kingdom and a significant number of NNWS, the Treaty has yet to enter into force. Even worse, just following a special conference to discuss the lack of ratifications, the United States Senate voted not to ratify. The damage that this decision will cause has yet to be assessed but it certainly will not strengthen the case for signature and ratification in wavering states.

The 1998 tests by India and Pakistan have been a severe blow to an embryonic yet deeply supported regime. Just when nuclear weapons were beginning to lose their hold over military planners (if not over politicians) in the NWS, India and Pakistan demonstrated that countries outside a regime can severely weaken it. Ironically, India was the very first proponent of a CTBT and trust in India’s disarmament credentials has almost entirely died out within governmental and non-governmental arenas. Any disarmament proposal now put forward by India sounds with a hollow ring.

#### SCORE

- 0/10 to India and Pakistan for failing to support both the principle and the practice of banning nuclear tests for all time.
- 10/10 to France and the United Kingdom and all the other ratifying states for early ratification of the CTBT.
- 0/10 to the United States for failing to obtain the Senate ratification vote.
- 5/10 to China and the Russian Federation — although they have not yet achieved ratification, they have stated that they will be still attempting to ratify despite the United States Senate vote.

*(b) The immediate commencement and early conclusion of negotiations on a non-discriminatory and universally applicable convention banning the production of fissile material for nuclear weapons or other nuclear explosive devices, in accordance with the statement of the Special Coordinator of the Conference on Disarmament and the mandate contained therein;*

Since the end of the CTBT negotiations, there have been numerous attempts to begin serious negotiations in the CD on halting the production of fissile materials for weapons purposes. Despite obtaining consensus to begin the negotiations in August 1998, those negotiations had not started by the end of 1999. Perhaps in 2000 the deadlock in the CD will be broken and serious discussions on the scope and technicalities of the treaty could begin. The United Kingdom and the United States have made serious attempts to increase transparency in the amount of fissile materials each possesses for military purposes. The United States and the Russian Federation have cooperated in improved accountancy and control of fissile materials.

## SCORE

- 0/10 to all those states within the CD that have sought to block the start of negotiations on fissile materials.
- 8/10 to the United Kingdom and the United States for the moves towards transparency in fissile materials.
- 7/10 to the United States and the Russian Federation for continuing efforts to improve accountancy and control of fissile materials.
- 8/10 to all those states that have made strenuous efforts to overcome the blocks and find common ground (they know who they are).

*(c) The determined pursuit by the nuclear-weapon States of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons, and by all States of general and complete disarmament under strict and effective international control.*

The continuing failure to obtain ratification by the Russian Duma has stymied the bilateral nuclear arms reduction process. However, in 1999 Presidents Clinton and Yeltsin agreed to begin discussions on a follow-on treaty, START III. The unilateral reductions by France and the United Kingdom have signalled an openness to joining multilateral nuclear disarmament negotiations, with the United Kingdom openly stating such a desire. China, however, is still undergoing a programme of modernizing and increasing its nuclear forces and the Russian Federation is considering redeploying withdrawn tactical nuclear weapons. There are still tens of thousands of nuclear weapons left and there seems to be little real attempt to reduce these numbers dramatically.

## SCORE

- 2/10 to the Russian Federation for not yet having ratified START II.
- 3/10 to the United States for lack of leadership and for pursuing a new ballistic missile defence strategy.
- 6/10 to the United Kingdom and France for unilateral reductions.
- 0/10 to China for continuing to modernize and not capping its arsenal.

***Nuclear-Weapon-Free Zones***

*The conviction that the establishment of internationally recognized nuclear-weapon-free zones, on the basis of arrangements freely arrived at among the States of the region concerned,*

*enhances global and regional peace and security is reaffirmed. The development of nuclear-weapon-free zones, especially in regions of tension, such as in the Middle East, as well as the establishment of zones free of weapons of mass destruction, should be encouraged as a matter of priority, taking into account the specific characteristics of each region. The establishment of additional nuclear-weapon-free zones by the time of the Review Conference in the year 2000 would be welcome. The cooperation of all the nuclear-weapon States and their respect and support for the relevant protocols is necessary for the maximum effectiveness of such nuclear-weapon-free zones and the relevant protocols.*

The 1995 South-East Asian nuclear-weapon-free zone (NWFZ) (Bangkok Treaty) and the 1996 African NWFZ (Pelindaba Treaty) have been milestones in the attempts to codify the status of zones without nuclear weapons. In place now is a network of NWFZs in the Southern Hemisphere and there are attempts to further consolidate this state of affairs and declare a nuclear-weapon-free Southern Hemisphere.

Five Central Asian states — Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan and Tajikistan — are negotiating a NWFZ agreement for their region. Negotiations have been in progress since 1997 and given the physical location of the region such a treaty would have significant meaning for regional security.

There has, however, been no real progress on a NWFZ or a zone free of weapons of mass destruction in the Middle East. This is primarily due to such little progress in the Middle East peace process over the last few years.

## SCORE

- 9/10 to the South-East Asian states for the Bangkok Treaty.
- 10/10 to those states that have ratified the Bangkok Treaty.
- 3/10 to the NWS for not yet adopting the Bangkok Treaty protocol but nonetheless still continuing discussions on how to achieve that goal.
- 10/10 to the African states for the Pelindaba Treaty.
- 10/10 to those states that have ratified the Pelindaba Treaty.
- 10/10 to France and China for ratifying the Pelindaba Treaty protocols.
- 6/10 to the United States, the Russian Federation, the United Kingdom and Spain for signing but not yet ratifying the Pelindaba Treaty protocols.
- 10/10 to the Central Asian states for the continuing negotiations on a Central Asian NWFZ.

## *Security Assurances*

*... further steps should be considered to assure non-nuclear-weapon States party to the Treaty against the use or threat of use of nuclear weapons. These steps could take the form of an internationally legally binding instrument.*

Although there have been a number of proposals (most notably from South Africa and from China) on security assurances and no first use and although Germany and Canada made thwarted attempts to open up the issue of no first use in NATO, there has been no real progress on security assurances within the context of the NPT since 1995.

#### SCORE

0/10 for progress.

7/10 for efforts by South Africa, Canada, Germany and China.

### **Safeguards**

*... International Atomic Energy Agency safeguards should be regularly assessed and evaluated. Decisions adopted by its Board of Governors aimed at further strengthening the effectiveness of Agency safeguards should be supported and implemented and the Agency's capability to detect undeclared nuclear activities should be increased. ... Nuclear fissile material transferred from military use to peaceful nuclear activities should, as soon as practicable, be placed under Agency safeguards in the framework of the voluntary safeguards agreements in place with the nuclear-weapon States.*

Perhaps the most significant achievement since 1995 has been the adoption of an Additional Protocol for safeguards by the IAEA. The protocol, agreed in 1997, allows the Agency new powers in collecting information and will greatly enhance confidence in compliance with the NPT. States are required to be more transparent and the IAEA now has the mandate to monitor state-wide nuclear activities and not just focus on nuclear material flow at facilities. The new protocol is voluntary however and as yet very few states have ratified. The NWS have signed and approved the protocol.

In addition, the IAEA, the United States and the Russian Federation agreed upon an initiative in 1996 to address technical, legal and financial issues associated with IAEA verification of weapon-origin fissile material designated as no longer required for defence purposes. Progress on the Trilateral Initiative has been slow. A second draft of the model verification agreement that will serve as the basis for implementing the new verification role has been prepared and it is hoped that this will be useful for other NPT NWS in the future. There have been a number of technical developments such as the building of a prototype verification system for plutonium and discussions on the methods to be applied at storage facilities.

#### SCORE

9/10 to the IAEA for learning lessons from the past and for developing and steering through a path-breaking approach to safeguards and verification.

- 10/10 to all those states that have ratified the Additional Protocol.
- 0/10 to all those states that have not yet ratified.
- 6/10 to the NWS for the increased transparency and cooperation with the Additional Protocol.
- 4/10 to the United States, the Russian Federation and the IAEA for the Trilateral Initiative since much more could have been achieved.

## *Conclusion*

Overall the report card is mixed. While there have been some serious attempts to fulfil the 1995 Principles and Objectives document, the trends have been down since 1997. At the core of concerns lies the continuing dependency on nuclear weapons by the NWS and the nuclear weapons tests by India and Pakistan. Despite constructive steps such as the additional protocol to safeguards agreements with the IAEA and the codification of two more NWFZs and the development of another, there is a sense that the United States and the Russian Federation have lost any enthusiasm that they might once have had for nuclear disarmament. The core bargain of the NPT is that the NWS will negotiate in good faith, and the Principles and Objectives document agreed in 1995 further underscored the need to move towards the elimination of nuclear weapons. If the NWS are backing away from that and if the world cannot be sure that other states won't follow Iraq, India and Pakistan and clandestinely develop nuclear weapons, then the very framework of the NPT could begin to crumble and the proliferation of nuclear weapons could then become a terrifying reality for the twenty-first century.

## **Note**

- <sup>1</sup> See, for example, Jayantha Dhanapala, "The NPT Review Process: Identifying New Ideas to Strengthen the Regime", *UNIDIR Newsletter*, No. 37, March 1998, pp. 9–14.

## Nuclear Disarmament, 1995–2000: Isn't It Pretty To Think So?

Miguel MARÍN-BOSCH

At the end of Ernest Hemingway's *The Sun Also Rises* the leading female character bids farewell to her male friend and remarks that things could have been better. "Yes," he replies, "Isn't it pretty to think so?" At the end of the twentieth century, those words could serve as well as the epitaph for the Treaty on the Non-Proliferation of Nuclear Weapons (NPT).

For forty years the NPT was at the centre of the nuclear non-proliferation debate. Since the 1995 NPT Review and Extension Conference, however, the Treaty has lost much of its relevance. In one sense, it has fallen victim to its successful indefinite and unconditional extension. Its temporary nature — a key provision when it was negotiated in the late 1960s and throughout the first four review conferences — ceased in 1995. The five-year reviews, now supposedly enhanced and more action-oriented, are today of little interest to the nuclear-weapon states (NWS). They have what they wanted in 1970 and but only obtained in 1995 — locking the non-nuclear-weapon states (NNWS) into a permanent legal instrument. Vertical proliferation is in the exclusive hands of the NWS. In another sense, the NPT has outlived its usefulness as a horizontal non-proliferation tool since all NNWS with nuclear aspirations have joined the Treaty.

Issues relating to the proliferation of weapons of mass destruction and their delivery systems dominated disarmament discussions during the second half of the twentieth century and will probably continue to do so well into the twenty-first. Although agreements exist for the elimination of bacteriological (biological) and chemical weapons, the goal of ridding the world of nuclear weapons is as remote as ever. Our purpose is to describe the situation regarding nuclear disarmament since the 1995 NPT Review and Extension Conference and to identify those developments over the past five years that could affect the 2000 Review Conference. Our principal conclusion today, as it was ten years ago, is that the various components of the present nuclear non-proliferation regime, including the NPT, are in need of a comprehensive review. Tinkering with them will not be enough; the regime has to be overhauled completely. And yet, most NPT parties continue to cling to the Treaty as if nothing has changed since 1970.

To begin with, few will challenge the assessment that the prospects for genuine nuclear disarmament are now far worse than a decade ago. The reasons for this sad state of affairs range from broad political, economic and social questions to the specific attitudes of the governments most directly involved. These can be summed up as follows:

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Ambassador Miguel Marín-Bosch is Mexico's Consul-General in Barcelona. The views herein are those of the author and not necessarily those of his government. Parts of this text are taken from a paper presented at the second Nuclear Suppliers Group International Seminar on the Role of Export Controls in Nuclear Non-Proliferation (New York, 8–9 April 1999) and other recent writings.

- Like so many other morally correct causes, nuclear disarmament is a victim of a general malaise that is affecting most of the planet. Immersed in a culture of violence, the world is reluctant to pursue a culture of peace.
- Those who should seek the elimination of nuclear weapons, and are legally bound to achieve that goal, refuse to do so. They continue to fuel the arms race and the arms trade. Leaders do not lead, and many politicians simply do not care about nuclear disarmament.
- Multilateral disarmament fora, like the United Nations itself, are undermined by the principal military powers.

For those who considered the end of the Cold War a harbinger of a better, less confrontational and violent world, the past decade has been very disappointing. To some, the Gulf War was proof that the major international players were ready and willing to implement the collective security provisions of the United Nations Charter. It was seen as the beginning of a new world order similar to that envisioned by the founders of the United Nations. But the Gulf War turned out to be an exception in a decade riddled with United Nations failures in Africa and Yugoslavia. Even in Iraq, where military action was successful, the United Nations has yet to certify the end of Baghdad's pursuit of mass destruction weapons.

Having lost its Cold War anchor, the international community has been unable to set a new, more promising, collective course. Confusing and often contradictory trends seem to guide political action. Double standards are applied and international law is flouted. Worse still, breaking the rules is then justified for supposedly moral considerations.

Over the past few decades, but especially since the fall of the Berlin Wall, many governments have embraced economic liberalization and political democratization. While the latter is most welcome, the former has had its share of critics.

Almost all countries have espoused the Reagan-Thatcher view of the world — the idea that neo-liberalism is the answer to all problems. This market fundamentalism has been pursued by politicians of all stripes in the Western democracies and embraced by the former Soviet bloc and developing nations with the zeal characteristic of converts. Although that enthusiasm is now tempered by some of the social problems globalization has engendered, politicians continue to govern with one eye on the stock market and the other on the polls. Society has replaced the notion of thrift with that of rampant consumerism. And politicians have encouraged this by setting aside any semblance of convictions and ideas in favour of a pragmatic approach that will allow them to remain in power. But pragmatists to what end?

Over the past two centuries, but more so in the second half of the twentieth, a single lifetime has been enough to witness rapid material progress derived from technological advances. But ethical thinking has not kept pace with technological development. Principles and lofty goals have given way to so-called pragmatism. And therein lies part of the problem.

*In many countries there is an abundance of information and a paucity of ideas. Politicians seem more interested in the idea of staying in power than in the staying power of ideas.*

In many countries there is an abundance of information and a paucity of ideas. And much memory has been lost. Politicians seem more interested in the idea of staying in power than in the staying power of ideas. Politics resembles a pinball machine — the aim is to stay in the game as long as possible, ricocheting off the light bulbs and accumulating points.

In the economic and social spheres, pragmatic politicians have opted to abandon their electoral platforms and follow the policies of their predecessors with only small deviations. To many observers, Tony Blair's Third Way and Gerhard Schröder's *Neue Mitte* (New Middle) are nothing more than a variation of Thatcherite neo-liberalism. And they are not exceptions.

In the nuclear field, developments since 1995 are no brighter. Again take the cases of the United Kingdom and Germany. In 1980 the United Kingdom's Labour Party adopted a non-nuclear defence policy. After the 1987 election defeat — which political analysts attributed in part to its defence stance — Labour, with Neil Kinnock and later, and more vigorously, with Tony Blair, espoused nuclear deterrence and again embraced NATO. In July of 1998, Prime Minister Tony Blair submitted his strategic defence review to the House of Commons. That White Paper contained some encouraging proposals and reflected a certain amount of NGO input. That is how things should be. But Prime Minister Blair's Government underplayed its importance, giving it little publicity. Labour's stance on nuclear issues has long been ambiguous. From a forthright espousal of unilateral disarmament decades ago it has now moved closer to the Tories. It would seem that calls for vigorous nuclear disarmament were actually hindering Labour's electoral prospects. That is most depressing.

Traditionally, Germany's Social Democrats have favoured nuclear deterrence. However, in late 1998, when Gerhard Schröder decided to form a government with Joschka Fischer's Green Party, he faced an immediate problem. The Greens tried to insist on shifting Germany's nuclear posture towards nuclear disarmament. But on this and other issues, the Chancellor prevailed and the Greens had to retreat.

Despite the end of the Cold War, NATO's nuclear stance, as reiterated at its fiftieth anniversary summit, has not changed. As the Kosovo intervention proved, it is no longer a purely defensive organization. It is now ready to operate "beyond the Allies' territory" and will continue to rely on nuclear weapons.<sup>1</sup> Its first-use posture is gaining more support as Alliance membership expands. The Russian Federation has also espoused that doctrine. Of similar concern is the trend that NATO nuclear doctrine has also begun to influence the non-NATO members of the European Union (EU). In their quest for a common foreign policy, once neutral EU members such as Austria and especially Finland are moving very close to their EU NATO partners.<sup>2</sup> Javier Solana, NATO's former Secretary-General, is now charged with developing further the EU's common foreign and security policy and the role of nuclear weapons is bound to play a major part in his consultations with countries such as Ireland and Sweden.

What can Ireland and Sweden do? They are keen to keep their distance from NATO. For one thing, they are the only EU members that have supported the three General Assembly follow-up resolutions regarding the 1996 advisory opinion of the International Court of Justice (ICJ) on the legality of the threat or use of nuclear weapons, one of the most important events since the 1995 NPT Conference.<sup>3</sup> For another, they were among the eight initiators of the New Agenda Coalition's proposal to pursue nuclear disarmament.<sup>4</sup> Despite the New Agenda's modest content, NATO rejected it.<sup>5</sup> With the exception of Denmark, Iceland and Norway, NATO members have also vigorously opposed all resolutions relating to the ICJ's advisory opinion. So much for the rule of law.

What can other countries do? It seems not much. Although the leaders of many nations speak publicly about the need to eliminate nuclear weapons, they are relatively quiet about this subject when they meet in private with their NWS counterparts. They are obviously more interested in other items of their bilateral agendas.

The main obstacle to nuclear disarmament is, of course, the attitude of the NWS governments. The challenge is great. Only governments can negotiate treaties and those of the NWS do not seem ready to embark on a course of genuine nuclear disarmament leading to the elimination of nuclear weapons. United Nations General Assembly resolutions have no impact on their mind set. The opinion of the ICJ makes them, and many of their allies, uncomfortable but not enough to change their policy. They can see the importance of defending just causes and preventing the massive violation of human rights. They are moved to promote reconciliation and peace processes in such places as Northern Ireland and the Middle East. They call for a more secure and peaceful world. And yet they insist on retaining nuclear weapons despite what it means in terms of proliferation.

The five so-called “recognized” NWS hold basically the same position. It is nuanced in terms of their technological development. All five are making some adjustments to their respective nuclear arsenals and are moving mostly towards smaller, more efficient weapons systems. However, their basic attitude towards nuclear weapons remains unchanged. All five continue to ignore their treaty obligations to pursue and conclude negotiations aimed at the elimination of nuclear weapons.

When it comes to Israel, the NWS opt for a double standard on non-proliferation and ignore the question. When India and Pakistan conducted a round of nuclear tests in 1998, the NWS reacted by repeating the same old line of “Do as I say and not as I do”. They refuse to accept the new situation in the subcontinent and think that they can wish away the nuclear weapons of those two states. At their behest, the Security Council called on India and Pakistan to join the NPT as NNWS. That is no way to deal with this deplorable development. Or take their attitude to the Comprehensive Test-Ban Treaty (CTBT). The United States, for example, urges India and Pakistan to sign a treaty it has not yet ratified itself.

The 1995 NPT Review and Extension Conference neatly divided the last decade of the twentieth century. And it was there, at that Conference, that the NNWS parties surrendered. In matters nuclear, the NPT as a disarmament tool ended in 1995 and gave way to a different, irrelevant and stillborn NPT.

The first part of the decade witnessed some unusual developments. As the 1995 Conference approached there was a flurry of new parties, including China and France. The latter, together with many of the latecomers, had fiercely resisted joining the NPT. And all of this occurred in the wake of the 1990 Review where it was obvious that the three original parties, but the United States in particular, had little or no intention of fulfilling their Article VI obligations.

Then came one of the most intense campaigns to ensure the indefinite and unconditional extension. Led by the United States, it lobbied governments at all levels. With the Non-Aligned Movement (NAM) in disarray and the Western neutrals undecided, the successful outcome of that campaign was a foregone conclusion. The NNWS surrendered the little leverage the temporary nature of the NPT gave them. In an ingenuous act they traded something for nothing. Article X.2 embodied the essence of the debate and the nature of the bargain. Now it is gone. Before 1995 the message of the NNWS was “We will not go nuclear but you must disarm”. After 1995 it is “We will not go nuclear but you can do as you like”.

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On the eve of the 1995 Conference, the media displayed a renewed interest in nuclear non-proliferation beyond the issues of horizontal proliferation. *The Washington Post*, for example, ran a series of front-page articles describing the history and fundamental questions regarding the NPT. But its prediction that there would be a confrontation between the NWS and NNWS on the link between nuclear disarmament and the indefinite extension proved incorrect. Long before the 1995 Conference opened, the NPT’s indefinite extension was backed by the required majority. Put together by some NWS, that majority included countries from all regions and quite a few from the NAM. The Treaty’s indefinite extension was therefore a foregone conclusion.

The NPT’s indefinite extension was achieved with surprising ease. No country or group of countries ever challenged the decision. In speeches many delegations criticized the NWS, but none then acted accordingly. As so often occurs in international conferences, one thing is a speech for home consumption, and quite another is action in defiance of a carefully orchestrated decision. Some will justify their acceptance of the NPT’s indefinite and unconditional extension in terms of the proliferation “scare”. The Iraqi example and the situation in the Democratic People’s Republic

of Korea, on the one hand, and in Belarus, Kazakhstan and Ukraine, on the other, seemed to call for “an enduring NPT”. Indeed, just when it seemed that the NPT regime was consolidating, the Soviet Union broke up and there appeared three new, so-called de facto NWS. Then, in this now uni-polar world, there was a campaign of “friendly persuasion”. Witness the United Nations Security Council in recent years. Indeed American influence in multilateral security fora is now largely uncontested and often unquestioned.

The 1995 Conference was organized in such a way that the discussions were diffused: the parties embarked on a process of review that was separate from the debate on the extension decision. Once the outcome was certain, the media lost interest while the NGO community (so visible in other world conferences) was kept at bay.<sup>6</sup> There was as well the increasingly ambiguous attitude towards nuclear weapons of a growing number of NNWS, especially in Europe. Finally and for different reasons, the NAM demonstrated an unusual degree of docility at the Conference.

In the end, however, the NPT was extended indefinitely and unconditionally for the same reason that so many other unusual things now take place in multilateral fora: the overwhelming role of the United States. The dominant influence of the United States is evident in its lack of confrontations in the Security Council. Since 1991, the United States has exercised its veto power in the Security Council only three times, compared to sixty during the previous decade.

At the Conference on Disarmament (CD) in Geneva, negotiations on a number of issues are at a standstill. After the CTBT, it entered one of its periodic dormant phases. Again, the CD is the victim of a lack of political will, which is part of a general neglect of international organizations and part of a perennial attitude of only negotiating disarmament treaties that will disarm the unarmed. The thought of negotiating genuine nuclear disarmament measures in the CD has probably never crossed the mind of policy-makers in the NWS.

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The attitude of some of the principal international players towards the CD reflects their broader disregard for multilateral organizations in general and the United Nations in particular. Since 1995, the negative attitude of certain countries has continued. In the case of the United States, this has given rise to instances of what American football rules call “unnecessary roughness” and which translates into contempt for others and a disregard for norms to which it has subscribed. As Boutros Boutros-Ghali has documented, the United States makes increasing demands on the United Nations and then undercuts its effectiveness.<sup>7</sup> For those who have traditionally supported and admired much about the United States, it is disheartening.

And then there is NATO’s intervention in Kosovo and bombing of Serbia, carried out without Security Council authorization. Some described NATO action in Yugoslavia as a new morality, with no national self-interest. But where is the new morality in other cases of massive human rights abuses? Moreover, the United States and/or NATO military intervention has left a series of unresolved conflicts due to an absence of creative diplomacy in the wake of such action.

What will it take to move the NWS towards the elimination of nuclear weapons? Will it be an accident? A limited nuclear exchange? On other, seemingly intractable issues change has come about rather quickly. Two seemingly disparate examples will serve to make this point. First, there is the concrete example of political action undertaken in light of mounting public opinion, as in the case of the campaign to ban anti-personnel landmines. Here, public figures took the moral high ground and pushed their governments to accept a total ban on these inhumane weapons. Second, there is the unrelenting push to establish the principle of humanitarian intervention regardless of sovereignty concerns.

In the field of nuclear disarmament there is plenty of room for leadership and unilateral action by the NWS. Unilateral steps, such as those envisioned years ago by Labour in the United Kingdom and by others elsewhere, would be a good starting point.<sup>8</sup> Another, perhaps more realistic, course would be to engage in an informal dialogue in Geneva regarding all aspects of the proliferation of weapons of mass destruction and their delivery systems. This was tried in the early 1990s and it could produce greater confidence and expertise among the delegates which, in turn, might translate into greater confidence and expertise among their respective governments.

One last thing: perhaps it is time to do away with the automaticity of NPT review conferences. They do not lead to much. And the few results obtained could be achieved elsewhere and at a lower financial cost. Each review conference is preceded by a long preparatory process that concentrates on organizational matters, leaving substantive issues for the conferences themselves where discussions centre on the nuclear disarmament provisions. At each review conference the goal has been to reach agreement on a common assessment of how the NPT is being implemented by its parties. But agreement is by consensus (which any party can block) and thus reflects the lowest common denominator. One of the mysteries regarding the NPT is how the parties agreed to work by consensus at the review conferences while the extension decision was to be taken by a simple majority. Review conferences have become a drafting exercise where the crafting of a document becomes paramount and wordsmithing replaces serious negotiations and serves to paper over differences.

When the NWS and many of their allies speak of nuclear non-proliferation they are thinking of *horizontal* proliferation only. The NPT's Article VI and vertical proliferation is not on their mind. And that is the way it has been for thirty years. At the first Review Conference in 1975, I remember remarking to Ambassador Alfonso García Robles during the general debate that many speakers from East and West referred to the Treaty as if it was merely about the non-horizontal proliferation of nuclear weapons. And that, unfortunately, is still their attitude on the eve of the sixth review conference. But things have changed.

The situation regarding the non-proliferation of nuclear weapons is today much more complicated than it was ten or twenty years ago. The technology for their manufacture has been improving and what was once the monopoly of one, later two, three and eventually five nations has now become accessible to many. What you invent today to enhance your security has a tendency to reappear later elsewhere as a threat. The development of different and more sophisticated weapons and weapons systems, including missiles and missile defences, has a way of boomeranging. They seem to offer security until they are developed by others. The cycle then repeats itself.

***Most would agree that the achievement of an internationally safeguarded nuclear-weapon-free world would have been a lot easier at the end of 1945 than it is now or will be in the next century.***

Most would agree that the achievement of an internationally safeguarded nuclear-weapon-free world would have been a lot easier at the end of 1945 than it is now or will be in the next century. The nuclear non-proliferation agreements of the last thirty years have been one way to approach the problem. The idea that one must limit the number of players has also been pursued through export control regimes. But in the nuclear field, the problem of curbing technology transfers has been greatly complicated over the last decades by the emergence of more and more suppliers of nuclear technologies. The NWS have long lost their monopoly in this regard.<sup>9</sup> History is full of examples of technological advances spreading in the most unexpected ways and the story of nuclear proliferation is a prime example.

The question of the proliferation of weapons of mass destruction and their delivery systems in all its aspects is the most important item on the multilateral agenda. And yet countries refuse to tackle it in an honest, comprehensive way. They continue to attempt to patch up the present system.

They do so by trying to bolster the verification system of the Biological Weapons Convention. And this is also true in the nuclear non-proliferation field.

The NPT and the nuclear non-proliferation regime in general are in need of serious, collective rethinking. Perhaps this will lead nowhere but it must be attempted. And here are some reasons for doing so. How long is the international community willing to continue applying a double standard in matters of nuclear proliferation? In the United Nations General Assembly's recent resolutions on the International Atomic Energy Agency's report, there are, as in past years, clear and unequivocal references to the Democratic People's Republic of Korea and Iraq, yet weak and ambiguous references to Israel. In the resolution on the "Role of science and technology in the context of international security and disarmament" (53/73) the General Assembly urged "Member States to undertake multilateral negotiations with the participation of interested states in order to establish universally acceptable, non-discriminatory guidelines for international transfers of dual-use goods and technologies and high technology with military applications". All but seven of the thirty-three Nuclear Suppliers Group members that are also United Nations Members voted against that resolution. How does this square with the pertinent provisions of the NPT?

*How long is the international community willing to continue applying a double standard in matters of nuclear proliferation?*

How much longer shall we continue to ignore that the international situation is not a static one? Have we not accepted that the five permanent members of the Security Council are perhaps no longer representative of the world's present distribution of power — military, economic and political? Should we not face the facts and stop pretending that nuclear proliferation ended in the late 1960s? United Nations Members are adept at finding euphemisms. In United Nations-speak, India, Israel and Pakistan are now referred to as "those three states that are nuclear-weapons capable and that have not acceded to the NPT". When referring to these NPT "holdouts", the EU only mentions India and Pakistan by name, and urges them to adhere to the NPT "as it stands", i.e. as NNWS.<sup>10</sup> The United States follows a similar tack and also remains silent regarding Israel. The United States has called on all states to "cooperate with export control regimes to prevent proliferation of mass destruction weapons and their delivery systems".<sup>11</sup>

Such attitudes and measures are not conducive to the harmonization of efforts to prevent the proliferation of nuclear weapons. Taken in isolation from the broader concerns of international peace and security and implemented in an environment where non-state commercial interests are prevalent, export control regimes appear simply as an exercise in technology denial, an exercise doomed to failure.

What we must seek in the next century is a genuine, non-discriminatory nuclear non-proliferation regime. For this the international community — including all de jure or de facto NWS — should begin an honest and constructive dialogue on all aspects of the question, including export control regimes and nuclear disarmament. The present nuclear non-proliferation regime should be overhauled. Tinkering with its various components may buy us time, but the long-term solution lies elsewhere.

## Notes

<sup>1</sup> Washington Summit Communiqué, 24 April 1999, NATO Press Release NAC-S(99).

<sup>2</sup> The author has explored this subject in "Europe's nuclear family", *The Bulletin of the Atomic Scientists*, Vol. 54, No. 1 (January/February 1998), pp. 35–37.

<sup>3</sup> Ireland and Sweden abstained, together with Austria, on the original General Assembly request for an advisory

opinion (resolution 49/75 K of 1994), while all other EU members opposed it. But they have voted in favour of resolutions 51/45 M, 52/38 O and 53/77 W, while Austria and Finland, as well as Denmark, abstained. The ICJ rendered, among others, the following unanimous opinion: "There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control" (*Communiqué* No. 96/23, p. 2). The most comprehensive study to date of that advisory opinion is Laurence Boisson de Chazournes and Philippe Sands (eds.), *International Law, the International Court of Justice and Nuclear Weapons*, Cambridge, Cambridge University Press, 1999.

<sup>4</sup> The other six are Brazil, Egypt, Mexico, New Zealand, Slovenia and South Africa.

<sup>5</sup> Seven (Czech Republic, France, Hungary, Poland, Turkey, United Kingdom and United States) voted against the proposal and the other twelve abstained.

<sup>6</sup> NGOs were certainly more active than at previous meetings (held in Geneva) but their access to conference rooms and delegates was restricted. When it comes to the NPT, some NWS and Western European countries prefer to distance themselves from NGOs. This attitude is very different from the one they adopt towards those NGOs dealing with human rights or environmental issues. In these matters they welcome and even encourage the active participation of NGOs in their meetings.

<sup>7</sup> Boutros Boutros-Ghali, *Unvanquished: A U.S. – U.N. Saga*, New York, Random House, 1999.

<sup>8</sup> United Nations, *Unilateral Nuclear Disarmament Measures*, New York, 1985, 18pp.

<sup>9</sup> A 1988 study predicted that by the year 2000 there would be around forty countries technically capable of producing nuclear weapons (*Discriminate Deterrence*, Report of the Commission co-chaired by Fred C. Iklé and Albert Wohlstetter on Integrated Long-Term Strategy, Washington, DC, Government Printing Office, 1988). That prediction has probably proved correct.

<sup>10</sup> EU statement to United Nations General Assembly First Committee, 12 October 1998.

<sup>11</sup> United States statement to United Nations General Assembly First Committee, 14 October 1998.

## Changes in the Security Environment, Regional Discord and Contention on the 1995 Agreements

Ben SANDERS<sup>1</sup>

There has been little good news lately on nuclear non-proliferation and disarmament. A quick look at current events in those areas yields a long list of positive developments unachieved, and of negative occurrences we would have been better off without.

Among things long expected but not realized I count the entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT); the conclusion of a nuclear material cut-off treaty; the ratification of the second Strategic Arms Reduction Treaty between the Russian Federation and the United States (START II) and the opening of negotiations on START III; the initiation of talks on a multilateral nuclear reduction treaty; an internationally binding instrument on negative security assurances; and the replacement of the UNSCOM verification regime in Iraq with a system backed by the United Nations Security Council.

Recent negative developments include the nuclear tests of India and Pakistan and their increasingly inflexible nuclear posture; American plans to develop national missile defences and depart from the 1972 Anti-Ballistic Missile Treaty to make this possible; plans for a 'Theater High Altitude Area Defense' system which would eventually be deployed in East Asia; the Russian Federation's increased reliance on nuclear weapons, including tactical weapons; the sustained use of force, without Security Council authorization, against targets in Iraq; the use by NATO, also without United Nations sanction, of force to settle a regional conflict in the Former Republic of Yugoslavia; NATO's new nuclear doctrine and its nuclear-sharing policy.

There have been some ephemerally positive events recently, of which the consequences are not yet apparent. The South Asian tests have increased world concern about nuclear proliferation, but this has not yet led to concrete action and, as we have seen so often, worries tend to evaporate once the direct crisis is over. Concerted moves of governments in Northern and Eastern Asia have raised awareness of the risks of nuclear proliferation and increased interest in regional solutions such as the establishment of nuclear-weapon-free zones — but the same governments threaten the regional balance by their plans to deploy regional anti-missile defences. There has been progress in the creation of a Central Asian nuclear-weapon-free zone treaty, and in the acceptance of the concept of a single-state weapon-free area, as embodied by Mongolia.

It is hard to predict what impact such events may have on the 2000 Review Conference. I am not sure to what extent extraneous events influence the review process and doubt that events not directly related to nuclear disarmament or non-proliferation are invariably relevant. It is neither logical nor productive to assume that they should. The question may be one of definition: what are

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the “extraneous” events that should not directly concern the Non-Proliferation Treaty (NPT), and what events, outside the NPT framework, are of concern?

It would be useful to make such a distinction because it would allow putting aside events that might have some degree of relevance by affecting, perhaps, the general atmosphere, but need not operate as spoilers. It would also help one concentrate on the factors that are directly relevant to the operation of the Treaty.

Those factors must be sought in particular in the ambit of security. Security-related events and situations affect the way the operation of the Treaty is assessed, and are the main factors shaping the outcome of a review conference.

Past review conferences have often presented instances of secondary events being invoked to form a negative assessment of the operation of the Treaty. This is a dangerous practice that may

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harm the Treaty without curing major problems. It is pointless to complain about non-essential issues in the implementation of the Treaty as a surrogate for major problems that are currently incapable of solution. No doubt, the Treaty’s implementation has rarely measured up to the expectation of all parties, and it is unlikely ever to do so. But one must be careful not to overdo the disparagement, lest the protection

offered by the Treaty loses its credibility. A state whose security is at stake will benefit when its neighbours have formally accepted the non-proliferation norm embodied by in Treaty and the International Atomic Energy Agency (IAEA) verifies their compliance.

During the Kosovo hostilities, some analysts reasoned, on the contrary, that in situations where the integrity of a state — in this case Yugoslavia — is threatened by overwhelming force, that state will reason that the one guarantee of its national security is having nuclear weapons. But we have seen how Yugoslavia, for all its pariah situation, asked the IAEA to come and inspect its nuclear material in order to be able to show that it was in compliance with its non-nuclear pledge. One may reason that Belgrade made a virtue out of a necessity: since it could not develop a nuclear weapon while under NATO bombardment, it showed the world an innocent face. But if it had any nuclear ambitions, as was alleged, it would surely have tried to stash away as much nuclear material as possible and prevented IAEA inspectors from checking, with the excuse of the risk of air raids. It did not do so, and has thereby demonstrated its reliance on the NPT as a means of protecting its security interests.

The situation in the Democratic People’s Republic of Korea (DPRK) is somewhat comparable. The DPRK maintains tense relations with states in the region and with the United States. The IAEA’s verification has been cut back to the minimum needed to ensure that the reactor Pyongyang had used for plutonium production remains out of operation, and no irradiated fuel is reprocessed. But that minimum has already done much to diffuse a potentially lethal situation, and may help lead to an improvement in the country’s political and economic situation. Even in Iraq, we have seen how the old, inadequate verification activities of the IAEA, applied pursuant to the NPT, so complicated Saddam Hussein’s nuclear plans that he did not have the time to bring them to fruition.

These considerations cannot fail to help determine states’ attitudes to the Treaty, and thus contribute to the wish to have the review conference end with a reconfirmation of the Treaty’s validity. But these examples refer only to actions of non-nuclear-weapon states (NNWS). How about the way in which the nuclear-weapon states (NWS) live up to their obligations, and what do the NNWS think of this?

There have been many expressions of NNWS discontent with the way in which the NPT is being implemented, and especially with what they see as the failure of the NWS to meet their obligations under the Treaty. This is nothing new; it began almost as soon as the Treaty was concluded, and arises from that instrument's lack of balance. The concept of periodic reviews of the Treaty's operation was devised to help restore that balance.

Although at the time the novel concept of periodic reviews was incorporated into the Treaty it may not have been envisaged in exactly those terms,<sup>2</sup> over the years they have taken on the character of judgements on the way in which the NWS meet their obligations under Article VI and the Preamble regarding the eventual elimination of nuclear weapons from national arsenals. In this sense, the review process and the behaviour of the NWS under the Treaty have become tightly linked. The behaviour of the NWS is a major factor in the way parties view the Treaty.

The NPT does not provide any direct means of making the NWS live up to their obligations. Until 1995, states that were unhappy with the performance of the NWS could have opposed the indefinite extension. Now the only overt action remaining to states that object to the way things are going is to withdraw from the Treaty on the ground that their supreme national interests have been jeopardized. This will be difficult. Unless a decision to withdraw is taken by several states at once, for one or two states to do so might be risky as it would lead to the suspicion that they had decided to acquire a nuclear-weapon capability.<sup>3</sup> Also, by withdrawing a state loses the other advantages arising from the assumption of nuclear abstinence that graces NPT parties in good standing.

When the Review and Extension Conference of the NPT (NPTREC) was held twenty-five years after the Treaty entered into force, four earlier conferences had not been able to do what the review was created to achieve and there was considerable doubt that the majority of the participating parties would go along with an indefinite extension. The objections were overcome by the introduction of new measures designed to make the review process more effective, put teeth into the reviews, and make them into occasions where (in the words of one delegate) the feet of the NWS could be held to the fire.

There have now been three sessions of the Preparatory Committee (PrepCom) for the 2000 Review Conference, but the newly strengthened review process has not yet met the expectations of most parties. There has been little to indicate that the NWS are particularly concerned at criticism from NNWS about their failure to live up to expectations. There is an impression among a growing group of nations that after the relaxation that followed the Cold War, the NWS tend increasingly to rely on nuclear weapons as the mainstay of their national security. Many fear that this will weaken support for the NPT, which has still not brought the "levelling of the playing field" it had promised and shows no sign of doing so soon.

This prompts many to have low expectations of the outcome of next year's Review Conference. Their pessimism is predicated in part (and, I am convinced, not always with good reason) on negative political developments with various degrees of relevance to the NPT. For the most part it is due to disillusionment with the lack of effort the NWS seem to put into the reduction of their nuclear arsenals, and to disappointment with the inability of the PrepComs to come to grips with that problem. I have pointed to the link between the review process and the behaviour of the NWS under the Treaty. The less productive that behaviour, the more reliance must be placed on the review process as a means to influence it. One sees how disappointment with the meagre results the strengthened review process has so far had in this respect is being projected on to the Treaty itself. In my view, it is too early to draw conclusions from the way the process has worked so far. Some delegates have expressed the opinion that it is an obvious failure, which I believe is an unfair and hasty judgement based on a brief experience with an unfamiliar system. It is certainly premature to question the further viability of the Treaty on these grounds, as some participants have done. Coming

so soon after the indefinite extension of the Treaty, expressions of this nature are irresponsible, although the frustration that gives rise to them is understandable and must be taken seriously.

After the 1995 NPTREC many states expressed the opinion that with the indefinite extension they had *de facto*, if not *de jure*, been given the assurance that the NWS would make serious efforts to meet their obligations under Article VI of the Treaty — a political if not a legal *quid pro quo*. The President of the NPTREC, Jayantha Dhanapala, spoke of ‘permanence with accountability’. The promises have not been fulfilled. No doubt states will express deep dissatisfaction if by the 2000 Conference there is no progress in the measures the NWS were expected to take with regard to nuclear arms reduction, accessions to the CTBT, a cut-off treaty, the conclusion of a legally binding instrument on negative security assurances, etc. States will remember the presumption, five years earlier, of real progress in these areas.

But I, for one, do not believe that the absence of such progress should lead to the conclusion that the Treaty can do nothing to change matters for the better because the review process is helpless in the face of the intransigence of the major nations.

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It would be preposterous to condemn the NPT as no longer in the interest of the international community on the mere basis that the newly strengthened review process has not brought the millennium.

On the basis of our limited experience I strongly believe it is too soon to call the strengthened review process a failure. It is not yet possible to say to what extent the process has or has not worked, and whether it is capable of functioning productively. That will have to be shown by the Review Conference of the year 2000, which caps the current review cycle. The most one can say now is that the newly strengthened process has not yet operated quite as expected, and that all concerned must help the Review Conference to make up for this. The extent to which it can do so will largely depend on parties’ recognition of the Treaty’s value as a factor in their national security.

In judging the way review conferences may enhance the effectiveness of the NPT, it may help to look in some detail at the purpose and nature of the review process.

The basic premise is that the NPT distinguishes between two categories of states: those who at the time the Treaty was concluded had demonstrated a nuclear-weapon capability are known as NWS; and those which accepted the obligation not to receive or make such nuclear weapons — the NNWS. The obligations of these two categories differ. The NWS undertake not to help the NNWS acquire nuclear weapons, as well as to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament. In other words, the NWS have promised to do what they can to keep the number of their kind from growing. They have also committed themselves to a process that should change them from NWS to NNWS. The Treaty neither sets a schedule for this process, nor does it provide any sanctions against non-compliance.

The NNWS parties to the Treaty, on the other hand, have committed themselves not to change their non-nuclear status. From the moment they became parties they pledged they would never acquire or produce nuclear weapons or help others to do so. In return they are promised that the NWS will eventually get rid of their weapons. They are also promised the right to develop research, production and use of nuclear energy for peaceful purposes without discrimination. Their compliance with the vow of nuclear abstinence is verified by the IAEA, pursuant to agreements they must conclude with that body. Non-compliance by NNWS triggers sanctions by the IAEA and the Security Council.

Once more stating the obvious: these rules reflect the existence of a world of nuclear haves and have-nots. But they also try to create the conditions where the haves will eventually become have-nots or, at least initially, “have less”. The Treaty assumes that most states will recognize that their security is better served by nuclear abstinence than by nuclear weapons. It could not create the means to force the NWS into non-nuclear status. This inability has led to inequality between the two categories of states and it was to alleviate this inequality and make it temporarily palatable that the concept of periodic reviews of the implementation of the Treaty was incorporated in its text.

The purpose of these periodic reviews is to:

- help off-set the imbalance in the obligations of the many who did something right away (accept safeguards to prove non-proliferation) and the few who made a long-term promise to disarm;
- present a way for parties to see how their Treaty was working and express themselves on what they found; and
- produce conclusions for further action.

Even the first NPT Review Conference in 1975 was the scene of deep differences between NNWS, who sought early progress towards nuclear disarmament, and the only three NWS then party to the Treaty, the United Kingdom, the former Soviet Union and the United States. Mainly as a result of disagreement over the nature and the pace of the measures to be expected from the NWS, the Review Conferences of 1980 and 1990 as well as the review part of the 1995 conference could not agree on final texts; the declarations adopted in 1975 and 1985 presented a low common denominator of agreement. Only with regard to technical issues, such as the application of IAEA safeguards or nuclear-weapon-free zones, did some of the conferences yield helpful suggestions for international action. Differences on issues of security and disarmament could not be papered over and none of the first four Review Conferences helped NNWS ensure that the Treaty would be implemented in the way they expected.

This was how matters stood in 1995 when parties met to decide whether the Treaty should continue in force indefinitely or should be extended “for an additional fixed period or periods”.<sup>4</sup> As stated before, many had doubts about the wisdom of an indefinite extension that would perpetuate the Treaty’s shortcomings without a guarantee that its operation would improve. After hard debate, agreement was reached on a “package” of decisions: the Treaty would be extended indefinitely; the review process would be made more effective; the implementation of the Treaty would be guided by a set of “Principles and Objectives for Nuclear Non-Proliferation and Disarmament”; and in connection with one particularly vexatious issue (the fact that in the area of the Middle East there was one state that operated unsafeguarded nuclear facilities) a resolution was adopted calling on all countries in the area to accede to the NPT as soon as possible and join a zone free of weapons of mass destruction.

The decision on strengthening the review process made the review a virtually continuous operation between review conferences. A PrepCom session would be held in each of the three years preceding a review conference. These sessions have become intrinsic parts of the review process; they were given the task to “consider principles, objectives and ways in order to promote the full implementation of the Treaty, as well as its universality” and to make “recommendations thereon” to the review conference, making the PrepCom a venue for substantive discussion. The way the decision was formulated made clear that the procedural aspect is subordinate to the substantive work.

The PrepCom has had three sessions so far. It has adopted guidelines for the product the 2000 Conference should generate and has discussed how the Conference should meet the precept that

review conferences should evaluate the results of the period they are reviewing and identify areas where progress should be made.

The PrepCom has also formulated recommendations on procedural issues so as to enable the Conference to get underway — no mean achievement, as the strengthening decision made substantial changes in the review conferences' terms of reference and the PrepCom had to venture into largely unexplored territory. But one thing it could not do was to make "recommendations [on substance] to the Review Conference".

What effect will all this have on the outcome of the Conference? How about the predictions that the PrepCom's inability to adopt substantive recommendations to the Conference spells the same fate for the Conference?

I do not believe this conclusion is justified by events so far:

- PrepCom I succeeded in formulating comments and proposals for inclusion into a final declaration, but in the end it downgraded these results to "feed material" for consideration by the Review Conference;
- PrepCom II tried to consolidate that material but could not generate the impetus to produce a solid result, so that added little; and
- PrepCom III could not build on the previous product. Delegations seemed to think that not having agreed on substance so far there was little point in trying to do so now. But it resolved important procedural issues.

Thus, the three sessions did not produce substantive recommendations for the Review Conference. Many delegates thought this was due at least in part to inauspicious international conditions in each of the years in which a PrepCom session took place. Some of these were seen as having a potential impact on the NPT and were thought to pose a progressively worse background for each session. I have tried above to make the case that this view is not always justified. The facts are, however, that already in 1997, the first year of post-extension implementation, there were disappointments: entry into force of the CTBT, the main achievement of the period, was remote; the likelihood of early entry into force of START II and the beginning of negotiations START III was receding; there was no agreement on the start of negotiations on a convention banning the production of nuclear weapon material; prospects for a solution in the Middle East were dim. By 1998, that situation had not improved. Shortly after PrepCom II, India and Pakistan staged their nuclear tests. The Iraq situation had deteriorated to the point where the non-proliferation regime seemed virtually inoperable. In 1999, things seemed to have become even worse. Relations among the United States, China and the Russian Federation deteriorated over a range of security concerns, including the expansion of NATO's mission and American plans for national and regional anti-ballistic defence systems, seen as jeopardizing world-wide nuclear disarmament measures; the intervention in Kosovo; disagreement in the Security Council over measures to be taken regarding Iraq; concern over the DPRK's development of long-range ballistic missiles. All this was seen to result in the feeling that it might be better to leave in-depth substantive discussions to the 2000 Review Conference. At the same time, the thought took hold that the PrepCom might not be the place where compromise language on sensitive issues could be adopted: states tend to wait to enter into a compromise until they absolutely have to, i.e. in the last stage of the Review Conference itself, rather than during the run-up. This would mean that the PrepCom could discuss substantive issues but not decide on them.

This ignores what the 1995 decision says about the functions of the PrepCom, but there may be little choice. If the PrepCom cannot act as it is supposed to, this does not necessarily mean that its work has been a failure. Rather, it means that the 1995 decision should be reinterpreted in light

of practice. That would imply that the PrepCom should do what it is best equipped to do: discuss issues, compile material and prepare the ground for the review conference to forge it into useful conclusions on past performance and suggestions for future action. All this, of course, in addition to working out the procedural framework for the review conference and settling a variety of associated matters.

This will leave enough for the PrepCom to do during its three prescribed two-week sessions. The procedural aspects of the PrepCom's work may take up less time as precedents are established. However, issues such as the selection of officers for the Conference, dates and venues of meetings, the allocation to Main Committees of (new) items and so forth will always be time consuming. The PrepCom is a unique venue for precisely the work it has done over the past three years: the discussion of the substantive issues facing the Treaty and the Review Conference, even if such discussions do not result in consensus on substantive recommendations.

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The PrepCom did all it could reasonably have been expected to do. The Review Conference will have to make the best possible use of the material before it. It would be wrong to take the inability of the PrepCom to agree on substantive recommendations to the Conference as a negative omen. It leaves the Conference with much work, but it says nothing about its prospects.

The 2000 Conference will be difficult. An essential thing to remember is that it too will be working under a new mandate which it has to interpret and adapt to. In this respect, it would be wrong to expect too much too soon.

What about the undeniable fact that the PrepCom did not fulfil the mandate it was given in the strengthening decision? Can we blame circumstance and ascribe the failure to the unfavourable conditions of the moment? Should we conclude from what I have just said that the PrepCom is not able to perform as intended? Must we infer that the new procedures are not appropriate? If so, can we change them? Is it possible to change a decision that is part of a set of decisions without putting them all at risk, including the decision to extend the NPT indefinitely? Would any participant of the Conference dare call for such a move? Would the Conference be able to agree on an alternative? What should that be? Or should parties accept as unavoidable the procedure followed now: let the PrepCom try to formulate substantive recommendations and pass the resulting material on to the Conference?

I believe that in practice this is what will be done. But it must not be allowed to become a lasting issue between 'pragmatists', who accept the conclusion that the PrepCom may never be able to make substantive recommendations, and 'perfectionists', who adhere to the letter of the 1995 document and see the formulation of such recommendations as the PrepCom's principal task. We should avoid a situation where the latter group concludes that if it is impossible to make the PrepCom function as it thinks it should, the review process is a failure and the Treaty is doomed.

The technicalities of the review process are not alone in shaping the review conference. This will, as it has always done, hinge on many factors directly bearing on the implementation of the NPT. Obviously also essential are the quality of preparations for the Conference, and the readiness of delegations to find compromise solutions for difficult issues. That readiness may be influenced by the general political atmosphere but beyond that the responsible officials of the Conference should make every effort not to let the debate be led by events of secondary relevance.

NPT review conferences are complicated affairs. They deal with great problems and basic political and strategic issues. They are volatile and unpredictable: they may fail for reasons hard to

fathom or succeed against all predictions. Long experience indicates that for a positive outcome one needs thorough preparation and a willingness to compromise, and preferably a favourable political environment. Of these three factors, the first is within the reach of any party. The second factor is linked to each state's security considerations: a state will accept a compromise if it believes that a positive outcome serves its national security. The international political atmosphere of the moment may be largely extraneous to the review conference, but a positive atmosphere may enhance the chances of compromise, and an attitude of give-and-take on the part of key players may promote international *détente*.

The outcome of the 2000 Review Conference cannot be predicted. One thing is sure: baleful predictions and defeatism may help ruin that outcome because they discourage others from devoting time and enthusiasm to preparations. There are many factors involved, some of them unknown. The weightiest among them is the degree to which the NWS meet their obligation. The world's leading country obviously bears the greatest responsibility: it can cripple the Treaty by actions that detract from its credibility, and reinforce it by promoting the realization of Article VI. In my opinion, the single most important factor to determine the outcome in 2000 is the actions of the United States of America.

## Notes

- <sup>1</sup> Some of the arguments used in this article have also figured in a paper prepared for a conference held in Kyoto in August 1999 under the sponsorship of the United Nations Regional Centre for Peace and Disarmament in Asia and the Pacific.
- <sup>2</sup> Article VIII.3 gives as the intention of the review as "[to assure] that the purposes of the Preamble and the provisions of the Treaty are being realized".
- <sup>3</sup> Article X confirms the right of each state party to withdraw from the Treaty "if it decides that extraordinary events, related to the subject matter of the Treaty, have jeopardized the supreme interests of the country". When the DPRK threatened to withdraw in protest over the intrusive nature of IAEA inspections, the Security Council ruled that this was not legitimate ground for withdrawal. One may doubt whether long-standing dissatisfaction with the failure of a state or group of states to meet certain Treaty obligations constitutes a valid ground for withdrawal, unless the withdrawing state can show that the failure affects its supreme (i.e. presumably national security) interests. And if it were able to do so, that very fact could lead to the conclusion that the state is intent on protecting its "supreme interest" by the development of a nuclear arsenal.
- <sup>4</sup> NPT, Article X.2.

## Could the Non-Proliferation Treaty Collapse? The Uncertain Road Ahead

Sharon RIGGLE

The question of nuclear proliferation has increased in salience since the end of the Cold War. The deadly nuclear standoff between the two superpowers reduced the need and probability that other nations would attempt to build independent arsenals. While the Cold War raged, there were a few cases of covert development, but the situation in the 1990s has brought with it new and dangerous challenges unprecedented in the nuclear age.

The NPT is endlessly cited as the “cornerstone of the nuclear non-proliferation regime”. True, it is the treaty with the largest membership in the world, second only to the United Nations Charter, and that it has traditionally provided a respectable level of security to protect against the massive proliferation of nuclear weapons. It has also, however, shown its shortcomings and is currently revising its way of operating, attempting to address these shortcomings in its new strengthened review process.

To survive, however, it will need to do more than simply revise its *modus operandi*. It will need to also look at its *raison d'être*. All states parties agree in principle that proliferation of nuclear weapons would be a very negative turn of events. They also support the provisions in the treaty that allow for the transfer of information and technology to assist countries in their civilian nuclear programmes. *In principle*, they also stand together on the question of nuclear disarmament, the key future task of the treaty, but the actions of some states parties call into question the depth of commitment to this necessary goal. Nuclear disarmament is now not merely a question of *when*, but also of *if*.

In order to salvage and strengthen this important regime, steps will need to be taken in the near future to maintain the high level of commitment of states parties to the noble goal of non-proliferation. Some are small, some are enormous, but one of the keys will be a convincing commitment by the nuclear-weapon states (NWS) that they are determined to fulfil their commitment to Article VI sooner rather than later.

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Why does the NPT enjoy such a high level of adherence? Why are the eyes of the world's governments currently focused on this particular forum? This article will attempt to look at these and other questions, with a view to analyzing the solidity of the regime under the NPT.

### *What Led Us to the Current Situation?*

At the dawn of the nuclear age, just a few states had the capacity to create a real nuclear threat. Throughout the years, others started (South Africa, Argentina, Brazil) or considered starting (Germany) programmes, but either stopped or bought into security arrangements that provided an adequate umbrella. During the Cold War, the bipolar situation allowed countries to either shelter under one of the two big nuclear umbrellas, or take refuge in a neutral or non-aligned status. Post-Cold War, things are now a bit more complicated.

The once top-secret blueprints and associated delivery systems are suddenly available to a larger audience, some of whom are sub-state or non-state actors. Traditional alliances are evolving, and in many cases disintegrating, destabilizing the most secure of environments. India and Pakistan have shown that breaking out does not bring immediate pariah status and that even tough sanctions can be weathered to achieve some ultimate positive outcomes of going nuclear. This is not going unnoticed by those with future ambitions.

Most military planning is still run by the old guard that has a strong memory of a United States and Soviet Union locked in a deterrence posture that would assure the destruction of both sides — as well as, many would add, the destruction of any others that happened to be too near to the action. The NPT and the Conference on Disarmament in Geneva have East-West group-based systems still in place, which are relics of the Cold War. Change in the overall process of nuclear non-proliferation and disarmament is desired by most and blocked by some. However, largely in response to a lack of movement in key areas and an evolving set of loyalties, groups of like-minded states are emerging on various issues (within the NPT as well) and these are increasingly pre-empting the traditional group mentality, thus challenging old bilateral thinking (e.g. the New Agenda Coalition).

The domain once occupied by political ideology, resulting in a more moralistic approach to nuclear deterrence, is now increasingly filled by the global marketplace and the desire of all countries to profit from this new trend. There is little in security policy decision-making that is completely devoid of “bottom line” thinking somewhere. These special interests are an increasingly powerful player in the defence arena, and that includes nuclear weapons doctrine and policy.

### *What Are the Current Contributing Factors?*

There are innumerable contributing factors to the current situation, but a few merit special attention. These are the focus of increasing debate and dissension among traditional allies and, if continue unchecked, could lead to a highly destabilized international security environment.

A major blow to the regime came in May 1998 when India and Pakistan in turn conducted a short series of nuclear tests, with a goal to becoming nuclear powers. Reactions were swift and severe from the international community, including a harsh set of sanctions by some states. Opinion was virtually unanimous on condemning the tests and refusing to acknowledge the South Asian nations as nuclear-weapon states. Since then, most sanctions have been lifted and relations are starting to thaw.

The effect was especially severe in the psychological sense, as this was the first time in the history of the NPT that any state had dared to break the established norm and go nuclear. The relative complacency of many was broken as well and a major reassessment was necessary to determine where it was the regime actually stood. An initial reaction was paranoia over others suddenly breaking out as well, although this fear seems to have subsided just a bit. However, as information and technology become easier and easier to obtain, states will be looking over their shoulder to see who is moving in the direction of nuclear state status. While there are control regimes attempting to mitigate this possibility (such as the Zangger Committee, the Nuclear Suppliers Group and the Missile Technology Control Regime), it seems highly unlikely that even efficient and vigilant control will be enough to stem the tide if the political will is there to obtain weapons of mass destruction.

A second area that has had an effect on the non-proliferation regime, and on the NPT in particular, is the recent move by NATO to maintain its Cold War nuclear posture in the vastly changed new era. Hopes were high, perhaps unrealistically, that NATO would change — however little — its decades-old stance of a nuclear first-strike doctrine. In its new Strategic Concept issued this April, however, these hopes were dashed as little changed, save for references to reductions already made.<sup>1</sup> These reductions do constitute an improvement in European security, however they were easily done given the greatly reduced Eastern threat. A small core of tactical nuclear weapons continue to be kept on the soil of six non-nuclear-weapon states, and the language in the Strategy remains largely as it always has been, as a robust and unequivocal testament to the unchanged and unrepentant nuclear deterrent posture of the most powerful military alliance in the world.

Needless to say, this leaves some a bit disquieted. Why would an institution with the most advanced conventional weaponry in the world need to rely on nuclear weapons to deter potential aggression, as is indeed their stated aim? Security. This answer that facilely rolls off the tongue of many NATO supporters is a dangerous one. It is one that may very well be used by any number of states seeking to protect themselves in a similar future alliance. Or by individual nations, for that matter. It is certainly one that does not reassure those states that have bought into the NPT regime, with its explicit commitment to nuclear disarmament — as well as the questions raised over the grey areas regarding the nuclear sharing arrangements themselves.<sup>2</sup>

A virtual standstill in the START process has left an uncomfortable space in the realm of confidence-building and progress on deep reductions. The political situations in both the United States and the Russian Federation have determined that there will be no progress for the foreseeable future, regardless of idealistic promises made by the respective heads of states, and necessitates a re-think of the whole system and its purpose. While bilateral reductions by the largest possessors of nuclear weapons are key, putting all the eggs into the START basket may mean we are left with some rotten eggs in the end. Innovative new approaches to this problem are key in maintaining and increasing stability in the non-proliferation field.

The nuclear safety question in the Russian Federation also poses some hard new questions for the regime. How can sovereignty be maintained while stemming a flow of dangerous materials that inevitably will have consequences outside national borders? Several new programmes have attempted to address this difficult area, but there is speculation that it is too late to control all the materials that once belonged to the Soviet Union. Several would-be NWS have already tried their luck at acquiring these materials and unless there is a reduction globally in the coming years and decades, this will continue to plague the regime.

*While bilateral reductions by the largest possessors of nuclear weapons are key, putting all the eggs into the START basket may mean we are left with some rotten eggs in the end.*

*Nuclear disarmament of conviction vs. nuclear disarmament of convenience* — therein lies the single largest and enduring challenge to the NPT and the non-proliferation regime. In the grand tradition of arms control, those who give up their weapons generally are no longer in need of them. Nuclear weapons are no exception. The glossy papers presented by some of the P5 at the NPT PrepCom in 1999 outlined the progress made in reducing their nuclear arsenals. It is with sincere appreciation that these reductions are welcomed. So why do the other 182 states parties keep grumbling?

With one hand the flash brochures are distributed, while the other is raised in protest over language in the Chairman's paper that one should not mention too frequently the call for nuclear disarmament. The message? "Accept what we are willing to give, but do not ask for more". As the item under question is a weapon that with one push of a button could reduce an entire region to ashes and send poison across tens of borders, and not a bomb that would merely take out an airport hangar, they do ask for more. And will continue to. It will not go away, only become stronger and a more arduous battle for those that fight for the right to possess them. This very well could be the string that eventually unravels the safety net of non-proliferation.

The lack of *speedy* progress on true nuclear disarmament is another element of the puzzle. Yes, there have been significant and welcome reductions made. Yes, grand speeches are made about serious commitments to fulfilling the Article VI requirements of the Treaty. No, there is not much faith that these commitments will be filled in the near, or even distant, future.

It cannot be stated too frequently that a lack of serious progress on this core task of the Treaty will cost the regime dearly. Since indefinite extension of the Treaty in 1995, the vast majority of states parties have watched with rapt attention the moves by the nuclear-weapon states in the new review process. While cautiously optimistic at first with a mild success at the 1997 PrepCom, cynicism has returned and expectations are generally low for the Review Conference in 2000. A failed conference would deal irreparable damage to the NPT and to the regime as a whole.

### ***Regional Trouble Spots***

The spotlight regularly trolls around looking for "hotspots" or areas with a much higher potential for proliferation than others. The list below includes areas generally viewed as trouble spots, i.e. any that hinder the ultimate goal of zero proliferation.

Centre stage at the moment is South Asia, with North Korea a close second. At the time of writing, the latter seems to have stabilized a bit with a sudden reprieve resulting from a pledge from North Korea to halt its missile programme. It is notoriously unpredictable, however, and attention will have to be kept on developments in the region.

India and Pakistan have blazed the trail for new nuclear-weapon states. This is by far the most destabilizing situation the NPT has ever faced. How states parties now tackle this question at the Review Conference in 2000, as well as national reactions in dealing with the two countries, will determine to a large extent the potential future challenges to the regime. Weaponization plans add to the uncertainty and tension in the region, especially as fighting in Kashmir heats up. Another element to watch will be how the Western/industrial powers react to and interact with these countries. If rewards seem imminent, rolling back the programmes will be harder to achieve.

The Middle East is perennially a problem in the non-proliferation game. This entry would include first Israel, as it has been a thorn in the side of the NPT for the longest amount of time. While arguably more stable than its neighbours who are in various stages of acquisition, its arsenal is the

most sophisticated and perhaps more troubling, and it is sanctioned by the world's strongest nuclear power, the United States. The United States consistently plays an advocacy role for Israel in the NPT, which causes endless friction. The tacit presence of these weapons makes negotiations difficult on a range of security issues in the region, and serves as a convenient excuse for development of weapons of mass destruction by others in the neighbourhood.

By no means is Israel the sole perpetrator, as Iraq and Iran have had caused more than their fair share of problems. Their programmes are covert, run by authoritarian regimes and their aims unclear. Nuclear weapons have not been the only goal, as there is deep concern over the chemical and biological weapon capabilities of these countries.

In order to maximize stability in a region fraught with tension, some effort or mechanism will need to be sought to bring the three nuclear-capable states outside the treaty into the fold. Regular dialogue within the purview of the NPT would go a long way to build confidence in both South Asia and the Middle East, but that is discussed later in the article.

Eyes are turning increasingly to China as well. There is much speculation as to what extent they have been modernizing their arsenal and producing new weapons. China remains a largely unknown quantity in NPT negotiations, relying heavily on rhetoric and impressive pledges. As a Group of One, they are involved in the Bureau of the NPT, which runs the administrative aspects of the meetings, but do not participate formally in other coordination groups. The one exception is the meeting of the five nuclear members of the NPT, which convene to prepare joint statements and loosely coordinate. Their motives are often hard to predict, which makes negotiations more difficult. While bilateral confidence-building measures seem to be providing some levels of understanding, China remains more of a mystery than most nations would like to admit. That, combined with accusations over covert nuclear sharing with other countries, should make China a focus for future scrutiny.

NATO's nineteen members adopted a new Strategic Concept in early 1999. It is considered here a regional trouble spot because there is deep concern over its continued reliance upon nuclear weapons, its planning and consultation on nuclear strategy and doctrine that involve sixteen non-nuclear countries and its dubious sharing arrangements with six non-nuclear-weapon states. Without change from this military organization, there will be little hope for true progress on nuclear disarmament, and commitments by its members to non-proliferation will be tainted by their association with an organization that has not satisfactorily answered the calls for openness and clarification.

The Russian Federation has a unique set of problems, many of which are receiving remedies. It is as yet unclear the extent to which proliferation of nuclear materials has already happened and where they have gone. But nuclear safety is just one element of the problem, as reliance on tactical nuclear weapons is growing in the Russian strategy. Their strategic arsenal, with or without START II or III, will continue to decline and they will be left with a number well under 1,000. Given the uncertain political situation in the country, and the virtual lack of decision-making infrastructure, this region will remain on the trouble spot list for some time.

The United States is perpetually one of the most recalcitrant of nations in regards to nuclear disarmament, which is intrinsically linked to non-proliferation. While absolute proponents of the latter, the former is a tougher nut to crack. Cuts are made according to a formula that leaves the arsenal and the doctrine very much intact, and accompanying statements reiterate the plan to keep these policies "for the foreseeable future". Statements in the NPT, however, are vigorous in their conviction that nuclear disarmament is a core goal and at the top of their agenda. Conflicting

*It is simple — without concrete disarmament, non-proliferation is merely a holding pattern that someday will come crashing down.*

messages such as these, combined with a digging in of heels at any potential forum for disarmament, cast a serious shadow of doubt as to the true aims of this powerful country. It is simple — without concrete disarmament, non-proliferation is merely a holding pattern that someday will come crashing down.

### *The Obsession With Verification and Non-Compliance*

The first question that springs to mind is: Have we progressed far enough to discuss the implementation of compliance and verification mechanisms? While verifying compliance on the bits and pieces that are going right so far seems like a good idea, there is much yet to accomplish. It sometimes seems a bit like the cart being put before the horse. We have two *de facto* new nuclear countries, at least three others that could very well break out in the next decade under the right circumstances, and countless others with the knowledge to do so but just lacking the ambition at the moment.

The scheme imposed on Iraq, the most intrusive yet, has been an abject failure. North Korea continues to be placated by an escalating set of economic measures, while its missile technology grows in fits and starts. Suspected proliferation by China to Pakistan remains unchallenged, and other cases like it, even though it shatters Article I commitments. And progress made to-date by the NWS on Article VI has been inadequate. What progress could we cap that is not already covered by the IAEA and the new Model Protocol? More thought needs to be given to what exactly and how we plan to enforce verification and react to non-compliance.

If a mechanism is introduced, as many support, will it include a hard look at *all* cases of non-compliance? Or just those most politically expedient at any given time? Will large, powerful countries undergo the same scrutiny as the small, often autocratic regimes? If compliance is perceived to be a too one-sided affair, faith in the NPT as a whole will be undermined. This is certainly an area that warrants more study and attention, but it is premature to focus on it as the core of the debate on non-proliferation.

### *What Happens If the NPT Stagnates?*

If nothing changes, the NPT will suffer in the long run. We're not talking about an immediate mass exodus from the Treaty if the 2000 Review Conference fails, but the damage will be deep and difficult to repair. The likely scenario is one of gradual erosion in various aspects of the regime, with the possibility of an eventual reduced membership. This could possibly lead to a state going nuclear if the international regime crumbles and they see that it is in their interest to do so — economically, politically, socially or militarily. It certainly is possible from a technological point of view, all that currently lacks is ambition to do so.

The justifications for going nuclear have thoughtfully been provided by the P5 and NATO, whose rhetoric for indefinite retention of nuclear weapons has already come to the aid of India and Pakistan. These words will come back to haunt them. This, however, is not the inevitable scenario if measures are taken to ensure that current commitments are met and the objects of proliferation are delegitimized as valid guardians of security.

## *Possibilities for Action*

What remains clear is that the current situation cannot remain unchanged. To do so would risk achievements to-date and the relative stability that they have brought. There are, however, several possibilities for action, which taken separately or in combination could paper over some cracks in the regime or potentially create new, stable paths for the future.

### NUCLEAR DISARMAMENT

The most obvious place to start would be with strong, concrete steps by the nuclear-weapon states towards nuclear disarmament. While a well-worn sentiment, the fact remains that such moves would greatly increase confidence in the NPT. Reductions that hurt, rather than the elimination of surpluses, are a key element in judging the sincerity of the disarmament pledge. Building such confidence could take many forms and does not necessarily mean the immediate conclusion of a nuclear weapon convention. There are intermediate steps, albeit towards some sort of legally binding final goal, that would provide inestimable assistance to the non-proliferation regime as a whole. These could be unilateral moves such as reductions, bilateral cooperation towards an effective de-alerting regime, increased transparency over all fissile materials including stocks, plurilateral agreements between the P5 outlining concrete further plans — even if specific dates were not attached. Innovative new approaches and an unequivocal demonstration of an intent to fulfil Article VI would silence many detractors and create an environment in which more would be possible on a range of related issues.

### NPT REVIEW CONFERENCE 2000

The Review Conference will be a pivotal moment for the NPT. States will either walk away feeling as if they are involved in a dynamic, vital process worth investing in or they will leave doubting the ability of the Treaty to meet the needs of their own country and the security environment as a whole. There are opportunities for action not just by the NWS, but other countries as well, to engage seriously in the debate and tackle some of the most problematic aspects of the Treaty. Four suggestions are mentioned below, but are by no means the only solutions.

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Firstly, there must be no doubt as to the seriousness with which the NWS take their commitments to Article VI, as mentioned above. This action could translate into any number of mechanisms, but must contribute to solving the concerns of the majority of states parties.

In order to remain relevant, the NPT will need to address the question of South Asian testing, thus showing that states parties will act cohesively to support the non-proliferation norm that the Treaty has created. Failure to do this will highlight the weaknesses in the Treaty and limit its capacity to act in the future.

Flexibility is vital on the question of the Middle East resolution and its related problems. Both sides must work for the greater good health of the Treaty and minimize external problems in this forum. Progress in the Middle East peace process will mean a lessening of tensions over this issue, but it will still be one of the more difficult obstacles to overcome.

Lack of transparency and accountability by various ad hoc control regimes are a perpetual thorn in the side of many states parties. The Nuclear Suppliers Group, the Missile Technology Control Regime and the Zangger Committee could all report to the 2000 Review Conference on their respective activities. It would be a welcome and overdue measure to increase NPT stability and confidence.

#### NEW AGENDA COALITION

This new group was borne of the frustration encountered by many countries regarding the lack of timely progress on the nuclear disarmament front. They contribute to the overall environment outside of the NPT, but also act as well within the Treaty. In 1999 for the first time a large number of states issued a joint statement reciting many of the goals of the NAC. States parties would be well advised to take up these suggestions in their NPT deliberations, as well as in other fora. One opportunity for action would be additional co-sponsors of this statement at the 2000 Review Conference, and in the United Nations General Assembly.

#### CONFERENCE ON DISARMAMENT

This “single multilateral negotiating forum on disarmament matters in the world” is struggling to maintain its relevancy as well. Lack of substantive progress on any issue for the past few years is merely a reflection of difficulties encountered on a range of disarmament issues. Heavy outdated rules of procedure hang like a lead weight around its neck, and the consensus format means it gets bandied about like a political baton by those wanting to block progress or simply make a point. It is, however, still a forum in which actions could be taken to strengthen the NPT. Discussions on fissile material cut-off and negative security assurances, talks on nuclear disarmament (Slippery slope? Wear good shoes) are all areas that have been discussed in the NPT forum and which would fortify the Treaty and regime as a whole.

#### GROUP STATEMENTS AND COORDINATION

Joint statements from influential groups of countries, like the Non-Aligned Movement and the European Union (EU), addressing specific problematics in the NPT and offering concrete solutions would be an interesting and useful new step. The EU could go one further and offer language on rejection of a “nuclear” EU in future, as Europe moves ever closer to a common defence.

## NATO

A huge confidence-building measure by NATO's nineteen members would be a clear and high-profile statement at the meeting of NATO heads of state in December of 1999 reiterating their unequivocal commitment to all NPT articles, especially Article VI. A blow was dealt by these same nineteen NPT members in April when they renewed NATO's nuclear posture in the 1999 Strategic Concept. A second, future option would be a withdrawal of American tactical nuclear weapons from the soil of non-nuclear countries. Then the issue of nuclear sharing and NPT treaty articles could be permanently put to rest. Even further, NATO could renounce the nuclear option altogether and remain a solely conventional military alliance.

## UNITED NATIONS GENERAL ASSEMBLY

Core NPT concerns could also be supported in various resolutions on the table at the General Assembly. The Treaty does not exist in a vacuum and several cross-issues could be bolstered in the yearly First Committee and plenary.

## MALAYSIAN WORKING PAPER ON UNIVERSALITY

One of the most interesting new developments at the 1999 PrepCom was a working paper submitted by Malaysia on a mechanism to enhance chances for a NPT with universal adherence. It outlined a mechanism that would provide a more balanced approach to working with those states still outside the treaty, thus giving states parties more equal access to discussions and decision-making affecting the universality of the NPT. Universality of this important treaty is a key goal, and establishing such a forum would allow a greater number of countries to actively pursue this aim. Currently, much work is done bilaterally and on an ad hoc basis, with no coordinated overall approach.

Two of the most outstanding external problems for the Treaty at the moment are South Asia and the Middle East. These crop up every year and regularly serve as sticking points for discord and inaction. A mechanism to constructively engage the countries outside the Treaty would open up a vital forum that would simultaneously strengthen the NPT and greatly increase stability for the entire non-proliferation regime. First, a dialogue would begin on why these countries are unable to join at present, and conversely why NPT states parties want those countries to accede. That would provide a link that currently only exists in a bilateral fashion, and begin the process of "socialization" between those outside and inside the Treaty necessary for mutual understanding and cooperation.

A forum then would also be there when those states were ready to begin negotiations for entry. Trust would be higher in a known forum, and would facilitate the delicate process. Also, if there is another crisis in future, a forum would already exist in which the matter could be addressed constructively and jointly on behalf of all those concerned — which includes all NPT states parties. How would such an established forum have aided in reacting to the nuclear tests by India and Pakistan last year? Arguably such a conduit would have helped ease tensions and provided a welcome arena for discussion.

## Conclusion

While the NPT has performed well to-date, it is not a Treaty that can afford to remain complacent and indifferent to the external environment. It must adapt to new situations, and maintain a high level of confidence by its members in order to avoid becoming irrelevant. There is a serious danger of that happening at some point in the not-so-distant future if attitudes do not also change. The norm that has been established by having so many countries invested in this important process must be maintained at all costs. However, in order to accomplish this worthy task, some unpleasant pills will have to be swallowed by those who have escaped distasteful actions thus far.

Nuclear disarmament progress will top the list of most, and continued heel-dragging will bring unwanted results for the NWS. A taboo can only exist if *all* states parties are seen to reject these weapons. If that is not the case, it is reasonable to assume that others will follow the example set by the NWS.

The nuclear-capable countries will need to be brought into the regime, which may or may not include membership in the NPT in the near-term. A dialogue forum, such as the one outlined by the Malaysian paper, could help ensure that the norm is respected and protected regardless of respective membership.

A strong and responsive Review Conference in 2000 will go a long way in ensuring the continued vitality of the Treaty. Measures outlined here could contribute to a successful outcome, but are by no means the only factors. Success is a relative term to be decided by individual states, but will need to be the catchword post-Review Conference in order to keep members invested in the process.

Can the NPT continue to be the cornerstone of the nuclear non-proliferation regime? Absolutely. But the bottom line is that it will have to continue to meet the perceived security needs of its member states. That necessitates change from the current situation, but is certainly possible provided the will to do so is there.

## Notes

- <sup>1</sup> "The supreme guarantee of the security of the Allies is provided by the strategic nuclear forces of the Alliance...". NATO Strategic Concept, 1999, para. 62.
- <sup>2</sup> "A credible Alliance nuclear posture and the demonstration of Alliance solidarity and common commitment to war prevention continue to require widespread participation by the European Allies involved in collective defence planning in nuclear roles, in peacetime basing of nuclear forces on their territory and in command, control and consultation arrangements". NATO Strategic Concept, 1999, para. 63.

## Towards Nuclear Disarmament

Tariq RAUF

*Nuclear weapons are held by a handful of states which insist that these weapons provide unique security benefits, and yet reserve uniquely to themselves the right to own them. This situation is highly discriminatory and thus unstable; it cannot be sustained. The possession of nuclear weapons by any state is a constant stimulus to other states to acquire them ... a central reality is that nuclear weapons diminish the security of all states.*

Report of the Canberra Commission on the Elimination of Nuclear Weapons

**B**arring unexpected dramatic breakthroughs in the remaining few weeks of this century, the millennium will begin with a legacy of false promises and dashed expectations in the realm of nuclear arms control and disarmament. Following decades of a costly East-West arms race, the late 1980s witnessed the beginning of a hopeful new era in nuclear arms reductions with the negotiation of the 1987 Intermediate- and Shorter-Range Nuclear Forces (INF) Treaty; START I in July 1991 and parallel unilateral cuts in American and Soviet sub-strategic nuclear weapons a few months later; moratoria on nuclear weapon testing initiated in October 1990 by the then-Soviet Union and followed by the United States in 1992; renunciation of "inherited" (Soviet stationed) nuclear weapons by Belarus, Kazakhstan and Ukraine; START II in January 1993; indefinite extension of the nuclear Non-Proliferation Treaty (NPT) in 1995; establishment of nuclear-weapon-free zones (NWFZs) in South-East Asia in December 1995 and in Africa in April 1996; and conclusion of a Comprehensive Nuclear-Test-Ban Treaty (CTBT) in September 1996. The ending of the Cold War and its associated winding down of the nuclear and conventional confrontation between East and West raised hopes internationally of finally moving towards prohibition of biological, chemical and nuclear weapons.

But in the aftermath of the Cold War several factors intervened to dampen hopes and bring into question the resolve to achieve further nuclear reductions and to implement fully a number of negotiated arms control agreements. The bilateral START process has been at a standstill, entry into force of the CTBT remains at best a remote possibility, testing and deployment of missile defence systems threaten the integrity of the Anti-Ballistic Missile Treaty, and new rationales justifying the continuing retention or modernization of nuclear forces are ascendant in three out of the five NPT nuclear-weapon states (NWS).

Impediments to nuclear arms reductions include, but are not limited to, marked deterioration in relations between the United States and the Russian Federation and the People's Republic of

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China, increased saliency of nuclear weapons in the Russian Federation's security policy, the rise to power of a domestically focused element in the legislatures of the Russian Federation and the United States that remain unconvinced about the importance of arms control as an element of national security policy, eastward expansion of the North Atlantic Treaty Organization (NATO) without adequately taking into account non-proliferation implications, increased reliance by the Russian Federation on nuclear arms in general and sub-strategic nuclear weapons in particular, NATO's continuing reliance on nuclear weapons even in the absence of a credible threat, and heightened proliferation concerns in South Asia, the Korean Peninsula and the Middle East.

On the multilateral track, the world's sole negotiating forum remains mired in deadlock, unable to initiate negotiation on a fissile material treaty (FMT) or even a discussion on nuclear arms reductions or preventing weapons in space. The much vaunted "strengthened review process" agreed at the 1995 NPT Review and Extension Conference (NPTREC), which made indefinite extension possible, failed to deliver expected results primarily due to the unhelpful stance of the NWS. The inability of the Preparatory Committee (PrepCom) for the 2000 NPT Conference to agree on even draft recommendations on substantive matters, together with the failure of the international community to respond adequately to the South Asian nuclear tests, threatens to erode global non-proliferation norms.

The decade of the 1990s was largely unproductive in terms of nuclear arms control. Nonetheless there were a few bold attempts to provide new thinking about nuclear disarmament and eventually a nuclear-weapon-free world. These initiatives, which continue to face major resistance among the NWS, include: the August 1996 Report of the Canberra Commission on the Elimination of Nuclear Weapons outlining practical steps towards a nuclear-weapon-free world, including the related problem of maintaining stability and security during the transitional period and after; the efforts of the New Agenda Coalition's "Towards a nuclear-weapon-free world: the need for a new agenda", initiated by the Joint Ministerial Declaration of 9 June 1998;<sup>1</sup> and most recently the Report of the Tokyo Forum for Nuclear Non-Proliferation and Disarmament<sup>2</sup> of 25 July 1999. These were supplemented by other national efforts to cope with the nuclear challenge, such as by Canada<sup>3</sup> and Germany. Each of these initiatives tried to inject new life into the moribund nuclear arms control debate but fell upon deaf ears in the NWS and among new nuclear proliferators.

Except for a handful of middle powers — such as Canada, Finland, Germany, Japan, South Africa and Sweden — policy-makers in the NWS and most Organisation for Economic Co-operation and Development countries remain disengaged with nuclear disarmament and non-proliferation matters, thus adding to the policy drift and conceptual deficit on nuclear arms control.

Given these challenges that threaten to reverse hard won gains in nuclear disarmament and non-proliferation, it is essential for the international community not to "substitute a new adversary from the South or elsewhere for the former enemy in the East ... [but] to take account of the ... dangers of proliferation."<sup>4</sup> French Admiral Jacques Lanxade aptly pointed out that: "There is indeed something paradoxical about the representatives of nuclear powers condemning the evils of proliferation and at the same time defending the virtues of their own national deterrent."<sup>5</sup> This sentiment was further amplified by the Canadian Foreign Minister, Lloyd Axworthy, in his address to a North Atlantic Council meeting, when he noted that "we need to 'see ourselves as others see us' and ensure that we do not send messages that we do not intend. We should be circumspect about the political value we place on NATO nuclear forces, lest we furnish arguments proliferators can use to try to justify their own nuclear programmes."<sup>6</sup>

This paper briefly addresses the future of the NPT, nuclear disarmament (including sub-strategic weapons, FMT, CTBT and NWFZs), restoring American-Russian cooperation in non-proliferation, and principles for nuclear disarmament and nuclear non-proliferation.

## *The Future of the NPT*

The Treaty on the Non-Proliferation of Nuclear Weapons signed on 1 July 1968 remains the bedrock of the post-Second World War global non-proliferation regime. With 187 states parties, this Treaty is the most widely adhered to and the most successful multilateral arms control agreement in history. Today, only four states remain non-parties: Cuba, India, Israel and Pakistan. The NPT remains the only global legally binding instrument committing the NWS to disarm, and its indefinite extension in 1995 strengthened the global nuclear non-proliferation norm. Responding to the most significant challenge to the NPT to date, i.e. the Indian nuclear detonations of May 1998, in contrast to the largely hypocritical statements emanating from the NWS, Canadian Foreign Minister Axworthy stressed that: "The nuclear non-proliferation regime is based on, and anchored in, international law and norms, as well as incorporated into international mechanisms. The NPT is fundamental, but the broader regime is a complex system of multilateral and bilateral agreements, arrangements and mechanisms intended to promote and achieve a world without nuclear weapons, sooner rather than later. This was valid during the Cold War and remains valid today. At the same time, the regime is intended to provide a framework to enable the world to make effective use of nuclear capability for peaceful purposes."<sup>7</sup>

As the 2000 NPT Review Conference draws closer, the NPT finds itself under threat on several fronts that require bold and concerted action:

- Nuclear tests by India and Pakistan have challenged the international non-proliferation norm established by the Treaty, and the international community remains at a loss how to categorize and deal with these two states: as non-nuclear-weapon states (NNWS) not party to the NPT; NWS not party to the Treaty; or threshold nuclear-weapon states? Similar concerns also apply to Israel.
- Compliance with the safeguards obligations and overall intent of the Treaty by two states — North Korea and Iraq — remains unresolved and in question.
- Nuclear disarmament obligations of the NWS essentially remain unfulfilled, with bleak prospects for further reductions in the near term.
- Many NNWS believe that the strengthened review process for the Treaty is being undermined, principally by the NWS. The strengthened review process agreed at the 1995 NPTREC failed to deliver expected results, thus increasing the frustration of many member states and the risk of failure at the 2000 Review Conference.

Regarding nuclear non-proliferation, the key issue is compliance with the Treaty, especially Articles I and II in the following contexts:

- alleged breaches of Article II of the Treaty by NNWS through clandestine activities designed for the production of nuclear explosives — in particular, programmes in North Korea and Iraq that clearly were violations and which many feel have not been adequately addressed; while some identify Iran as a possible similar case, the IAEA has not found any evidence;
- controversy over the legitimacy of "nuclear sharing" or nuclear war planning involving NWS and NNWS, as in NATO;
- nuclear tests by India and Pakistan directly challenged the NPT's non-proliferation norm; and
- whether the nuclear arms build up and inadequate progress in nuclear disarmament by the NWS is contrary to their nuclear disarmament commitments under Article VI.

The 1995 NPTREC decision on “principles and objectives” recommended a “programme of action” comprising three specific measures: an immediate objective of the completion of negotiations on a CTBT before the end of 1996; a follow-on objective of the “early conclusion of negotiations on a non-discriminatory and universally applicable convention banning the production of fissile material for nuclear weapons or other nuclear devices” (a FMT); and the “determined pursuit by the nuclear-weapon States of systematic and progressive efforts to reduce nuclear weapons globally”.

### COMPREHENSIVE TEST-BAN TREATY

The CTBT opened for signature in September 1996 with an entry into force provision requiring ratification by all forty-four states operating nuclear research reactors. In the event that these ratifications were not completed three years after its opening for signature, a political conference of states parties would be held to consider how to expedite entry into force and repeated annually thereafter. This conference was held in Vienna from 6–8 October 1999 but its outcome remains unclear. Thus far only two NWS, France and the United Kingdom, have ratified the Treaty. Three of the forty-four still have not signed (North Korea, India and Pakistan) and the latter two states have blatantly detonated nuclear devices in May 1998. Furthermore, loopholes in the CTBT permit subcritical laboratory tests that are not subject to any verification or observation as well as the retention of operational national test facilities. Useful confidence-building measures that might be considered in this context could be a form of managed transparency for subcritical tests to provide reassurance that new warhead designs or nuclear explosive concepts were not being tested, and for national test facilities to be either permanently closed or at least placed under a monitoring regime.

Unless serious measures are undertaken to promote the early entry into force of the CTBT and a legally binding norm against further testing is established, there will be pressure in some of the NWS to resume nuclear testing. Such a resumption of testing would be justified in the United States

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on the grounds of revitalizing an ageing arsenal and maintaining the nuclear weapons production infrastructure, in the Russian Federation in terms of certifying existing or new sub-strategic warhead designs to compensate for declining conventional forces, and in China as required for nuclear force modernization to respond to deployment of theatre or national missile defences by the United States. These pressures are likely to be the

strongest in the Russian Federation and China, and should these two countries resume nuclear testing it is unlikely that the United States would not respond in kind.

### FISSILE MATERIAL TREATY

After two years of deadlock in the Conference on Disarmament (CD) over whether negotiations on a FMT and discussions on a future programme for disarmament should proceed in parallel, the South Asian tests prompted establishment of an *ad hoc* committee in August 1998 on a FMT based on the mandate contained in the March 1995 report of the Special Coordinator. However, during its 1999 session, the CD was unable to re-establish an *ad hoc* committee on a FMT, due to differences over parallel negotiations on nuclear disarmament, and consideration of “prevention of an arms race in outer space” to prevent weaponization of space, among other reasons.

Originally conceived as a nuclear disarmament instrument, a FMT has come to be regarded by the NWS principally as a non-proliferation treaty. The inclusion of existing stocks or historic production of weapon-usable fissile material has become a bone of contention, with the NWS, India and Pakistan arguing for exclusion while the G-21 and other (Western and Eastern) states would prefer to include such stocks. In order to be effective, a FMT will have to fulfil both nuclear disarmament and nuclear non-proliferation functions, and will have to be fully consistent with the principles and obligations of the NPT. Other complexities pertaining to definitions, scope, declarations, verification et cetera will not be addressed here due to space considerations and the reader is referred to issue 2, 1999 of *Disarmament Forum*, which dealt with the FMT. Suffice it to add that a FMT negotiation will be the most complex and controversial yet at the multilateral forum of the CD. Given current trends, it is unlikely that the CD will have started serious negotiations on a FMT by the time of the 2000 NPT Review Conference — this would indicate clearly a failure as regards the achievement of one of the elements of the programme of action elaborated at the 1995 NPTREC.

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## NUCLEAR DISARMAMENT

Disagreements over whether progress has been achieved toward the goal of nuclear disarmament have been a perennial feature at previous NPT reviews. The significance of these disputes derives from several factors. The NPT is the only legally binding instrument through which the NWS have committed themselves to “pursue negotiations in good faith on effective measures relating to ... nuclear disarmament”. Its significance was highlighted by the International Court of Justice (ICJ) in 1996 when it rendered an advisory opinion on nuclear weapons. The Court found that Article VI of the NPT committed the NWS to not just negotiate on nuclear disarmament, but also to conclude agreements. Thus the NPT provides a legal framework within which the NNWS hold the NWS accountable for their actions on nuclear disarmament.

Furthermore, it is implicit in the NPT that the possession of nuclear weapons by the NWS is only temporary and not a permanent situation and that the NPT is both a nuclear disarmament and a nuclear non-proliferation treaty, with the latter being a contributing condition for achievement of the former and *vice versa*. Thus both politically and from an international security perspective, substantively addressing nuclear disarmament in NPT reviews constitutes an important mechanism for strengthening both the NPT and the non-proliferation regime.

Current negotiated and unilateral nuclear arms reduction agreements between the United States and the Russian Federation, if fully implemented, will result in roughly an 80% decrease in *deployed* nuclear weapons by 2007. Given its weak economy and declining strength of conventional forces, the Russian Federation has increased its reliance on nuclear weapons. And while the role of nuclear weapons has diminished in the defence posture of the United States, such weapons “continue to play a critical role in deterring aggression against the United States, its overseas forces, its allies and friends”.<sup>8</sup> The United Kingdom and France have unilaterally reduced their nuclear weapons, and France is dismantling its weapon-usable fissile material production facilities. China apparently may be increasing its nuclear arsenal, partly as a response to the missile defence plans of the United States.

In the field of diplomacy, however, the NWS have systematically and determinedly opposed all attempts since the 1995 NPTREC to be involved in a substantive engagement on nuclear disarmament

issues in any multilateral fora, be it the NPT review process, the CD, the First Committee or even NATO councils. In NPT review fora, the NWS have accepted “talking” sessions on nuclear disarmament, but they have continued to reject any and all proposed language calling upon them to either implement existing bilateral treaties, negotiate new reductions, or to take unilateral measures toward nuclear disarmament. This phenomenon was markedly in evidence at the 1999 session of the NPT PrepCom. At the American-Russian bilateral level, the START standstill has endured for nearly a decade and negotiation of START III remains uncertain. The three lesser NWS continue to reject participation in any plurilateral mechanism on nuclear arms reductions until the United States and the Russian Federation drastically reduce their respective arsenals. Thus, the NWS continue to dance around implementing their NPT disarmament commitments.

To shore up the NPT and non-proliferation norms it is vital for the NWS to ensure that their commitment to nuclear disarmament is not empty rhetoric or merely a smokescreen to maintain their nuclear weapons monopoly. What is urgently required is for the United States and the Russian Federation to speedily conclude a START III agreement and proceed to the simultaneous implementation of both START II and III. Beyond START III, the following phase in nuclear arms reductions should involve plurilateral negotiations among the NPT NWS aimed at reducing nuclear arsenals to a few hundreds, while at the same time engaging the three NPT pariah states and finding non-nuclear means of assuring their security — to be followed by steps to achieve a world free of nuclear weapons.

### *Sub-Strategic Nuclear Weapons*

Over the past decade attention has focused on reductions in, and safety and security of, strategic nuclear weapons in the context of START I/II and the denuclearization of the Soviet successor states — Belarus, Kazakhstan and Ukraine. Sub-strategic or tactical nuclear weapons have been largely ignored following the successful conclusion and implementation of the 1987 INF Treaty and the late 1991 Bush/Gorbachev unilateral initiatives on sub-strategic nuclear weapons. These weapons comprise those with ranges up to 500 kilometres. Under their respective unilateral initiatives, the United States would cut by one-third and Russia by one-half their sub-strategic nuclear weapons, with the remainder being deployed on national territories. Reportedly, the Russian Federation now holds the entire stockpile of over 20,000 sub-strategic nuclear warheads produced by the former Soviet Union, while the active tactical stockpile of the United States numbers approximately 1,500 warheads (with several thousands in storage), including some 150 B61 (Mod. -3, -4, -10) air-delivered warheads still deployed in five countries in Europe.

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Sub-strategic nuclear weapons traditionally have been deemed the most dangerous and the most destabilizing due to their portability, proximity to zones of conflict, lack of strong permissive action links, dangers of pre-delegation, and the risk of early, pre-emptive or accidental use. Given the deterioration of the Russian armed forces and the nuclear complex, the safety and security of sub-strategic nuclear weapons remains an important concern. These concerns are further exacerbated following Russian threats

to re-deploy sub-strategic nuclear weapons in Belarus and some of the newly independent states along the Russian Federation’s western and southern borders, and on ships in the Baltic Sea, or to make additional ones. American military planners, for their part, remain interested in the perceived

deterrent value of sub-strategic nuclear systems to thwart chemical and biological weapons use by so-called “rogue” states.

With the advent of “smart” advanced conventional munitions, sub-strategic nuclear weapons are no longer as crucial for military planners as they once were during the height of the Cold War. Reportedly, even the United States Air Force would prefer to remove its remaining B61 nuclear bombs from Europe. Security would be enhanced if steps were taken to codify the 1991 Bush-Gorbachev declarations and to agree on a framework on data exchanges covering numbers and locations of sub-strategic nuclear warheads, monitored central storage, and warhead deactivation and dismantlement. Both the United States and the Russian Federation should be encouraged to take steps to withdraw all sub-strategic nuclear weapons from Europe — i.e. the area from the Atlantic to the Urals — and further to consider the complete prohibition of this class of weapon, perhaps in the framework of START III. At the 1999 NPT PrepCom, several countries from across the political spectrum spoke out about the compelling need to address immediately sub-strategic nuclear weapons disarmament.

### *Nuclear-Weapon-Free Zones*

Over the past four decades, NWFZs have achieved recognition as a regional concept designed to complement other international security arrangements. Negotiated NWFZ treaties, together with United Nations expert studies and pronouncements, have assisted in further defining the scope and framework of the concept. The NPT sanctioned such zonal arrangements in its Article VII, and Decision 2 of the NPTREC endorsed the negotiation of additional such treaties. Strong support was expressed for NWFZ arrangements at all three sessions of the PrepCom for the 2000 NPT Review Conference. A consequence of more than 100 countries covered by negotiated NWFZ arrangements in four continents is the reduction in the area for the deployment of nuclear weapons, thus contributing to the objective of promoting nuclear non-proliferation and disarmament.

Of the four NWFZ treaty arrangements — Tlatelolco (1967), Rarotonga (1986), Bangkok (1995) and Pelindaba (1996) — three have already entered into force and efforts are underway to facilitate the entry into force of the African NWFZ (Pelindaba). Efforts have been underway since 1997 to draft a NWFZ treaty arrangement for Central Asia and in April 1999 a draft treaty text was completed for further consideration and negotiation. Some countries have unsuccessfully floated proposals for a NWFZ to cover parts of Central and/or Eastern Europe. In 1992, Mongolia proclaimed the nuclear-weapon-free status of its territory and sought international recognition for this initiative. The United Nations General Assembly adopted resolution 53/77D in December 1998, accepting Mongolia’s nuclear-weapon-free status. Such initiatives would compliment negotiated NWFZ treaties and could be considered by other countries as well.

While the 2000 NPT Review Conference will welcome the two latest NWFZ arrangements — Bangkok and Pelindaba — the completion of a Central Asian NWFZ treaty by mid-2000 would be one of the few positive developments in nuclear non-proliferation and disarmament at the start of the new millennium.

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## *Devaluing Nuclear Weapons*

Nuclear deterrence overwhelmingly dominated the Cold War calculus of international security. Nuclear weapons dictated a requirement for instant readiness for war-fighting that continues to this day. Even though Presidents Ronald Reagan and Mikhail Gorbachev agreed that a nuclear war cannot be won and must never be fought, thousands of nuclear weapons remain on hair-trigger alert.

Despite their best efforts the supporters of the concept of nuclear deterrence cannot prove that nuclear weapons preserved the peace in Europe or elsewhere in the world. What can be claimed though is that they played a supporting role in preserving the peace. Nor can supporters of deterrence prove that the many crises during the Cold War were resolved or contained primarily by the threat of nuclear war. The history of the Cold War is replete with compelling evidence of the

pernicious effects of the open-ended quest for nuclear deterrence, as shown by Professors Janice Stein and Richard Ned Lebow in a study entitled *We All Lost the Cold War*.<sup>9</sup>

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In today's post-Cold War world, defining national security merely, or primarily, in military terms conveys a false sense of reality. Nearly half a century of Cold War fashioned the issue of security into

powerful conventional simplifications that are no longer valid. Unfortunately, many of these traditional and out-moded concepts retain great currency amongst certain security analysts and defence planners, and the dominance of military and strategic considerations in the conduct of international relations endures as a legacy of the Cold War. While stability was and continues correctly to be of prime strategic importance, in a transforming world its pursuit by some influential countries places exaggerated emphasis upon nuclear weapons and military concepts that are presumed still to lie at its core.

In a post-Cold War world, the political value of nuclear weapons has declined markedly rendering them more a liability than an asset. Despite the changed political climate and the window of opportunity to restructure international relations away from reliance on nuclear weapons, many influential thinkers and military planners in the United States, NATO, the Russian Federation and in some other countries still believe in the integrity of nuclear deterrence — i.e. that stability and security would necessarily be jeopardized in the absence of nuclear deterrence. Such deeply embedded beliefs are extraordinarily resistant to new thinking or to change. They also reflect the reluctance of national security planners in the NWS to conceive of a security architecture that does not rely on nuclear arms.

With the collapse of the Soviet Union, defence planners have had to live with a shrinking of their bloated Cold War nuclear arsenals and have had to reduce their target sets in order to comply with START restraints. In the United States, present targeting requirements call for 2,000–2,500 deployed strategic nuclear warheads, with about 5,000 kept in reserve, along with some 500 sub-strategic nuclear warheads, for a total of about 8,000 warheads. The arbitrary nature of the 1994 Nuclear Posture Review and of the 1997 Quadrennial Defense Review of the United States gives rise to questions about their governing rationales, which recommended continuing high levels of deployed nuclear forces together with a “hedge” against the possibility of a resurgent Russian Federation should its democratic reforms fail. Starkly put, the Russian Federation simply has little capacity to maintain even 1,000 strategic nuclear warheads, much less the several thousands now permitted under existing START I and START II, and the proposed START III, agreements. Over the

next ten to fifteen years, the Russian Federation is likely to go down to 500 operational strategic weapons. If there are concerns about nuclear safety and security in the Russian Federation, should not that constitute an argument for getting rid of as many Russian warheads as rapidly as possible? And if that is the case why is it that the Russian Federation is pressing for deeper cuts under a START III — going down to 1,000 or less deployed nuclear warheads?

Reducing nuclear arsenals down to a few hundred requires a fundamental change in how the United States and the Russian Federation view the utility of deterrence. Unless Moscow and Washington recognize the sufficiency of an existential deterrent of 50–100 weapons, their nuclear forces will remain at relatively high levels. After presidential elections this year in both the United States and the Russian Federation, the new leaders must clean house in the respective defence and nuclear weapon complexes and retire Cold War era nuclear war planners who seem unable to formulate security doctrines without nuclear weapons.

*Reducing nuclear arsenals down to a few hundred requires a fundamental change in how the United States and the Russian Federation view the utility of deterrence.*

### ***New Initiatives on Nuclear Disarmament***

Given the continuing stalemate in the CD and NPT reviews on nuclear disarmament, an increasing sense of frustration permeates the representatives of many NNWS due to the lack of progress in formulating a new agreed international vision for nuclear disarmament. This is compounded by the emergence of a “new nuclear realpolitik” conveying a complex of new and modified political and military rationales used both by proliferators, such as India, and by the NWS to justify proliferation or retention of nuclear weapons — even if at lower numbers.<sup>10</sup> Continuous efforts by the NNWS are required to confront and defeat this nuclear realpolitik.

One important plurilateral initiative was the 9 June 1998 Joint Ministerial Declaration “Towards a Nuclear-Weapon-Free World: The Need for a New Agenda”. This effort was the product of eight states from all the main United Nations caucus groups, which later sponsored Resolution L.48 at the First Committee and Resolution 53/77Y in the United Nations General Assembly. Most notable was that twelve NATO states abstained rather than vote “no” as urged by the United States and supported by the United Kingdom and France. The New Agenda Coalition must now focus on broadening and deepening the consensus on a new disarmament agenda by working through all available international fora such as the CD, NPT reviews and the First Committee.

On 25 July 1999, the Tokyo Forum produced its report on “Facing Nuclear Dangers”. The Forum was set up in August 1998 by then Foreign Minister and current Prime Minister of Japan, Keizo Obuchi, to respond to the loss of confidence in the non-proliferation regime resulting from the South Asian nuclear tests as well as from the failure of the NWS to proceed toward a prohibition of nuclear weapons. Having sponsored and funded the Tokyo Forum it would come as a great disappointment if the Japanese Government did not take the necessary steps to promote broad acceptance and implementation of the Forum’s recommendations (see article in Open Forum).

### ***Restoring American-Russian Cooperation in Non-Proliferation***

One of the few but important successes in managing international security during the Cold War was the often close consultations between the United States and the Soviet Union on constraining nuclear proliferation and promoting adherence to the NPT. This cooperation in the form of high-

level semi-annual consultations continued despite changes in leadership in both Washington and Moscow, and persisted even during the most troubled periods of East-West relations in the 1970s and 1980s. Though the Cold War has ended, this cooperation ironically has been withering under the deterioration in American-Russian strategic relations and differences over a wide range of security matters — such as Russian nuclear cooperation with India and Iran, divergent policies regarding UNSCOM activities, and absence of cooperation on important regional security issues in South Asia, the Korean Peninsula and the Middle East.

Restoration of American-Russian cooperation is key to dealing with security challenges such as avoiding nuclear anarchy in the territories of the former Soviet Union, preventing defections from the NPT, shoring up the role of the United Nations in combating possible reconstitution of Iraq's weapons of mass destruction programmes, and preventing terrorist use of biological, chemical, radiological or information weapons. In addition to reviving American-Russian cooperation in non-proliferation, at the same time it is critical to draw China further into the fabric of global non-proliferation norms and regimes.

## Conclusion

At the NPTREC, Vice President Al Gore, and later at the September 1996 signing of the CTBT, President Bill Clinton, committed the United States to promote non-proliferation and disarmament measures leading to the eventual prohibition of all nuclear weapons. The leaders of the other NWS made similar promises. On living up to these commitments, however, the record is mixed and there is a crying need for political leadership.

Following the NPTREC decisions, all states parties are legally bound to work toward achieving the eventual prohibition of nuclear weapons, and the NWS are doubly bound — first under the NPT and again through the NPTREC decisions. While there might be contradictory views on the advisory opinion rendered by the ICJ on the elimination of nuclear weapons, what cannot be challenged is the ICJ's unanimous finding that: "There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control."

More specifically, the opinion added: "[T]he legal import of that obligation goes beyond that of a mere obligation of conduct; the obligation involved here is an obligation to achieve a precise result — nuclear disarmament in all its aspects by adopting a particular course of conduct, namely the pursuit of negotiations on the matter in good faith." The Court's opinion does not dictate any timetable or negotiating forum for reaching this result. The ICJ's emphasis on the obligatory character of NPT Article VI appears to represent common legal ground between the NWS and the NNWS.

Although the Court's opinion refrains from directly criticizing the current behaviour and practice of the NWS, it seems rather evident that the most important NWS have for several decades preferred, and even insisted upon, an arms control approach based on minimizing the risks of possessing nuclear weapons rather than on prohibiting them. Given the politics of nuclear weapons and their continuing role in international security, without concerted international pressure, in the short- to medium-term it is unlikely that prohibition regimes of the type negotiated for biological and chemical weapons could be achieved for nuclear weapons.

A constructive alternative, in the interim, might be to give greater weight to the legal commitment (under the NPT) of the NWS to pursue nuclear disarmament as a serious policy goal, and to urge the establishment at the CD of an *ad hoc* committee for the substantive discussion and consideration of nuclear disarmament issues.

The undertakings in Article VI of the NPT include a commitment “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament”, which is binding on all NPT parties and is not necessarily contingent upon negotiations toward general and complete disarmament.

“We have met the enemy and he is us” observed Pogo, the comic-strip sage. While the end of the Cold War has greatly reduced the traditional threat of superpower conflict, maintaining and even strengthening global non-proliferation regimes have become important new challenges. The linkage between nuclear non-proliferation and nuclear disarmament has acquired greater saliency. In this context, the challenge to the NWS is to fashion a strategy to delegitimize nuclear weapons that follows the new logic of post-Cold War security dynamics and capitalizes on the possibilities opened by emerging strategic realities where inter-state war is declining. Establishing new norms in concert with proactive diplomacy to resolve regional conflicts, meshing supply-side restraints and demand-side motivations, offers the best prospect of reversing proliferation and shoring up a fraying NPT regime. A fundamental question is: How important is nuclear disarmament and nuclear non-proliferation, and what price are the NWS prepared to pay to realize the non-proliferation objective?

*The challenge to the NWS is to fashion a strategy to delegitimize nuclear weapons that follows the new logic of post-Cold War security dynamics and capitalizes on the possibilities opened by emerging strategic realities where inter-state war is declining.*

General (ret.) George Lee Butler, former Commander in Chief of the United States Strategic Command, who is one of a very few nuclear war planners to evaluate the entirety of the 12,500 targets in the single integrated operational plan of the United States for using nuclear weapons and reduced it down to 3,000 targets, concluded: “I long ago took to heart the words of Omar Bradley, spoken virtually a half century ago, when he observed, having seen the aftermath of the bombs on Hiroshima and Nagasaki, this: ‘We live in an age of nuclear giants and ethical infants. We live in a world that has achieved brilliance without wisdom, power without conscience. We’ve unlocked the mysteries of the atom and forgotten the lessons of the Sermon on the Mount. We know more about war than we know about peace, more about killing than we know about living’.”<sup>11</sup>

Leadership whether on regional security, nuclear disarmament or non-proliferation issues depends on vision. Being satisfied with the lowest common denominator of agreement among states is at best an unreliable guide to security and stability. It is therefore vital to formulate a grand strategy for the prohibition of nuclear weapons as part of a broader vision of international security. That is why it is important to enunciate principles for nuclear disarmament and nuclear non-proliferation.

### *Principles for Nuclear Disarmament and Nuclear Non-Proliferation*

- Promote the complete prohibition of all categories of weapons of mass destruction — nuclear, chemical and biological — in the shortest feasible time frame.
- Work consistently to reduce and eliminate the political legitimacy and value of nuclear weapons as a basis for international security, with the goal of securing the complete prohibition of such weapons. Defend and assert nuclear disarmament and nuclear non-proliferation principles and goals in the context of a human security agenda and principles of multilateralism.
- Promote transparency and irreversibility in the process of nuclear disarmament and nuclear non-proliferation. Preserve the integrity of all negotiated nuclear arms reduction and non-proliferation instruments.

- Reinforce the authority, integrity and relevance of the NPT with respect to international peace and security. Promote universal adherence to, compliance with and full implementation of all aspects of the NPT, as well as ways of further strengthening the NPT regime — i.e. permanence with accountability.
- Defeat any new nuclear realpolitik that espouses political and security rationales justifying the proliferation or continuing retention (even at lower numbers) of nuclear weapons.
- Ensure the purely peaceful, non-explosive uses of nuclear energy under effective international safeguards.

## Notes

- <sup>1</sup> United Nations, The Joint Ministerial Declaration issued by the Ministers of Foreign Affairs of Brazil, Egypt, Ireland, Mexico, New Zealand, Slovenia, South Africa and Sweden, entitled “Towards a nuclear-weapon-free world: the need for a new agenda”, *Official Records of the General Assembly*, A/53/138, annex.
- <sup>2</sup> *Facing Nuclear Dangers: An Action Plan for the 21<sup>st</sup> Century*, The Report of the Tokyo Forum for Nuclear Non-Proliferation and Disarmament, 25 July 1999, [www.infojapan.org/policy/un/disarmament/forum/tokyo9907/key.htm](http://www.infojapan.org/policy/un/disarmament/forum/tokyo9907/key.htm).
- <sup>3</sup> *Canada and the Nuclear Challenge: Reducing the Political Value of Nuclear Weapons for the Twenty-First Century*, Report of the Standing Committee on Foreign Affairs and International Trade, House of Commons, Canada, 10 December 1998, [www.parl.gc.ca/InfoComDoc/36/1/FAIT/Studies/Reports/fairp07-e.htm](http://www.parl.gc.ca/InfoComDoc/36/1/FAIT/Studies/Reports/fairp07-e.htm); *Government Response to the Recommendations of the Standing Committee on Foreign Affairs and International Trade on Canada’s Nuclear Disarmament and Non-Proliferation Policy*, Department of Foreign Affairs and International Trade, 19 April 1999, [www.dfait-maeci.gc.ca/nucchallenge/ANNEXB-e.htm](http://www.dfait-maeci.gc.ca/nucchallenge/ANNEXB-e.htm); and *Government Statement: Nuclear Disarmament and Non-Proliferation: Advancing Canadian Objectives*, 19 April 1999, [www.dfait-maeci.gc.ca/nucchallenge/POLICY-e.htm](http://www.dfait-maeci.gc.ca/nucchallenge/POLICY-e.htm)
- <sup>4</sup> Admiral Jacques Lanxade, Chef d’état-major des armées, Ministère de la défense, France, 1993, quoted in Serge Sur (ed.), *Nuclear Deterrence: Problems and Prospects in the 1990’s*, New York, United Nations, 1993, p. xvii.
- <sup>5</sup> Ibid.
- <sup>6</sup> Notes for an Address by The Honourable Lloyd Axworthy Minister of Foreign Affairs to the North Atlantic Council Meeting, Department of Foreign Affairs and International Trade, Ottawa, Canada, given in Brussels, Belgium, 8 December 1998.
- <sup>7</sup> Notes for a Statement by The Honourable Lloyd Axworthy Minister of Foreign Affairs to the Standing Committee on Foreign Affairs and International Trade, *India’s Nuclear Testing: Implications for Nuclear Disarmament and the Nuclear Non-Proliferation Regime*, Department of Foreign Affairs and International Trade, Ottawa, Canada, 26 May 1998.
- <sup>8</sup> Walter Slocombe (United States Under-Secretary of Defense for Policy), “Is there still a role for nuclear deterrence?”, *NATO Review*, November-December 1997, p. 24, [www.vm.ee/nato/docu/review/articles/9706-07.htm](http://www.vm.ee/nato/docu/review/articles/9706-07.htm)
- <sup>9</sup> Richard Ned Lebow and Janice Gross Stein, *We All Lost the Cold War*, Princeton, NJ, Princeton University Press, 1994; and “Deterrence and the Cold War”, *Political Science Quarterly*, Vol. 110, No. 2, 1995.
- <sup>10</sup> See note 7.
- <sup>11</sup> Testimony on 10 March 1999 before the Standing Committee on Foreign Affairs and International Trade, House of Commons, Ottawa, Canada.

# Facing Nuclear Dangers: An Action Plan for the 21<sup>st</sup> Century

## The Report of the Tokyo Forum for Nuclear Non-Proliferation and Disarmament

Given the long-standing and highly vocal opposition to nuclear testing, the deafening silence from the western peace movement when India and Pakistan carried out their nuclear tests in 1998 was remarkable. Apart from protests in India and Pakistan themselves, the only country where mass civil society demonstrations took place was in Japan. In response to the tests the Japanese Government enacted sanctions against India and Pakistan, high level politicians and diplomats made strong speeches condemning the tests and the government announced the creation of a body of experts who would look at the issues of nuclear non-proliferation and nuclear disarmament and report on their findings in the summer of 1999.

The Tokyo Forum for Nuclear Non-Proliferation and Disarmament first met in August 1998 in Tokyo. It was the first of four meetings, each lasting two or three days. The second took place in Kyoto, the third in New York and the final meeting in Tokyo. The Forum originally started with nineteen members and this number had grown to twenty-three by the end of its lifetime. The forum was co-chaired by Yasushi Akashi and Nobuo Matsunaga. Not all members of the Tokyo Forum stayed the course. Sadly Oumirseric Kasenov of Kazakhstan died on his way to the first meeting and Ambassador Qian Jiadong of China was unable to attend the last session. Jasjit Singh of India did not attend the last two meetings and he has made it known that he has disagreed strongly with some of the contents and tone of the report. Each of the members participated in their personal capacities and the views expressed in the report do not necessarily reflect the views of the governments or organizations to which they belong. The Forum was supported by a secretariat made up of the Japan Institute of International Affairs, the Hiroshima Peace Institute and the Japanese Ministry of Foreign Affairs.

In many respects the Tokyo Forum was following in the footsteps of the 1995–96 Canberra Commission on the Elimination of Nuclear Weapons. The Canberra Commission report was written at a time of great optimism following the end of the Cold War, the extension of the Nuclear Non-Proliferation Treaty (NPT) and the concluding months of the Comprehensive Test-Ban Treaty (CTBT) negotiations. The Canberra Commission put forward a series of proposed steps that could have been taken immediately to make the world safer. Those steps included: taking nuclear forces off alert;

removing warheads from delivery vehicles; ending deployment of non-strategic weapons; ending nuclear testing; further American-Russian bilateral negotiations; and no first use and no use agreements. That all but one of these steps (ending nuclear testing) were not undertaken, and that the sole exception of stopping nuclear testing was abrogated by the tests of India and Pakistan, speaks volumes for the changing political landscape between 1996 and 1999.

Four members from the Canberra Commission were participants in the Tokyo Forum and an expert from the Australian Department of Foreign Affairs and Trade who had worked with the Canberra Commission was seconded to the Japanese Ministry of Foreign Affairs for the later stages of the Tokyo Forum process. These experts provided continuity between the Canberra Commission and the Tokyo Forum and also provided a "reality check" on the degree of change in terms of potential opportunities since 1996. Indeed, the Tokyo Forum report stated: "Much has therefore changed since the Canberra Commission on the Elimination of Nuclear Weapons issued its important report in 1996. Troubling signs are now evident on many fronts. The report and recommendations of the Tokyo Forum are aimed at clarifying the alarming nature of recent developments and the urgent need for steps to stop the decline in regional and international security."

The Tokyo Forum report was laid out in five parts. The final section contained seventeen key recommendations, but many other recommendations were embedded within the body of the report.

The key recommendations are as follows:

1. **Stop and reverse the unravelling of the NPT regime by reaffirming the Treaty's central bargain.** The NPT demands both disarmament and non-proliferation. The nuclear-weapon states must demonstrate tangible progress in nuclear disarmament, while the non-nuclear-weapon states must rally behind the Treaty and take stronger steps of their own, such as adopting improved IAEA safeguards. To support the NPT's core bargain, a permanent secretariat and consultative commission should be created to deal with questions of compliance and to consider strengthening measures for the Treaty.
2. **Eliminate nuclear weapons through phased reductions.** The world faces a choice between the assured dangers of proliferation or the challenges of disarmament. The better choice is the progressive reduction and complete elimination of nuclear weapons. No other cities must be put through the devastation wrought by nuclear weapons and the agony of recovering from their effects as endured by Hiroshima and Nagasaki. Nuclear-weapon states must reaffirm the goal of elimination and take sustained, concrete steps towards this end.
3. **Bring the nuclear test ban into force.** The CTBT must be ratified urgently by those key states still holding out — the United States, the Russian Federation, China, India, Pakistan, North Korea and Iraq. All states must respect a moratorium on nuclear testing and pay their fair share of the Treaty's verification costs.
4. **Revitalize START and expand the scope of nuclear reductions.** The Tokyo Forum calls on the United States and the Russian Federation to initiate new comprehensive talks on nuclear arms reduction and security issues, to combine START II and III processes and to further extend reductions to 1,000 deployed strategic warheads. If these treaties remain stalled, we call on both countries to pursue parallel and verifiable reductions to that level. Verifiable reductions and elimination should be extended to non-deployed and non-strategic nuclear weapons. In addition, the Tokyo Forum calls on China to join the United Kingdom and France in reducing and, in the first instance, not increasing nuclear weapon inventories.
5. **Adopt nuclear transparency measures.** Irreversible reductions in nuclear forces require great transparency. The Tokyo Forum welcomes the transparency measures undertaken so far by the nuclear-weapon states and calls on them to take steps to increase transparency further. Recent

transparency measures by the United Kingdom and France have shed considerable light on their nuclear weapons numbers and stocks. These could be further developed. The United States has put in place many transparency measures concerning its doctrines, deployments and technical developments. More information on reserve stocks would have a positive impact on steps towards nuclear disarmament. The Russian Federation has declared some aspects of its nuclear weapons programme. The Russian Federation could increase the degree of transparency concerning doctrine, numbers of tactical nuclear weapons and stocks of fissile material. China has put in place few transparency measures. The implementation of further transparency measures on the numbers and types of nuclear weapons and on the amounts of fissile material should be encouraged in view of the favourable regional and global impact.

6. **Zero nuclear weapons on hair-trigger alert.** The Tokyo Forum calls for all states with nuclear weapons to endorse and implement the goal of zero nuclear weapons on hair-trigger alert. To this end, we call on the United States and the Russian Federation to immediately stand down nuclear forces slated for reduction in START II. To eliminate the risk of the millennium computer bug leading to an accidental launch, all nuclear weapons in all states should be removed from alert for the period of concern.
7. **Control fissile material, especially in the Russian Federation.** We call on the United States to continue and to increase cooperative threat-reduction efforts in the former Soviet Union. The world community, especially the G8 states and the European Union, must substantially expand cooperative threat-reduction efforts. We call for the prompt conclusion of a Fissile Material Cut-off Treaty. We further call on China, India, Pakistan and Israel to declare moratoria on producing fissile material for nuclear weapons. Nuclear-weapon states should put all excess military stocks of fissile materials and civil fissile materials under International Atomic Energy Agency safeguards.
8. **Terrorism and weapons of mass destruction.** The Tokyo Forum calls for regional and global cooperative efforts to prevent weapons of mass destruction from falling into the hands of extremist, fanatical or criminal groups.
9. **Strengthen measures against missile proliferation.** The guidelines of the Missile Technology Control Regime need to be strengthened. We call on all states, particularly North Korea, to respect these guidelines, and for expanded participation in the MTCR. The international community should explore realistic ways to control and reverse missile proliferation, including global or regional agreements drawing upon the provisions of the 1987 US-Soviet Treaty on Intermediate and Shorter-Range Nuclear Forces. A special conference of concerned states should be convened to deal with the growing problem of missile proliferation.
10. **Exercise caution on missile defence deployments.** The Tokyo Forum recognizes the uncertainties and complications missile defence deployments could produce. Recognizing the security concerns posed by ballistic missiles, we call on all states contemplating the deployment of advanced missile defences to proceed with caution, in concert with other initiatives to reduce the salience of nuclear weapons.
11. **Stop and reverse proliferation in South Asia.** In the near term, the Tokyo Forum calls on India and Pakistan to: maintain a moratorium on nuclear testing; sign and ratify the Comprehensive Nuclear-Test-Ban Treaty; support prompt negotiation of a Fissile Material Cut-off Treaty; adopt and properly implement nuclear risk-reduction measures; suspend missile flight tests; confirm pledges to restrain nuclear and missile-related exports; cease provocative actions; and take steps to resolve the Kashmir dispute. In the long term, we urge India and Pakistan to accede to the Treaty on the Non-Proliferation of Nuclear Weapons as non-nuclear-weapon states.

12. **Eliminate weapons of mass destruction in the Middle East.** The Tokyo Forum recognizes the linkage between the core objectives of a Middle East that is peaceful and one free of weapons of mass destruction (WMD). We call for: a revitalized Arab-Israeli peace process; resumption of an effective WMD control regime for Iraq under UN Security Council auspices; restraint on missile and flight test programmes; effective and verifiable implementation of the Chemical Weapons Convention and Biological Weapons Convention by all states in the region; implementation of strengthened International Atomic Energy Agency safeguards; and Israel's accession to the Treaty on the Non-Proliferation of Nuclear Weapons as a non-nuclear weapon state.
13. **Eliminate nuclear and missile dangers on the Korean Peninsula.** The Tokyo Forum urges all parties to redouble their efforts to achieve the goal of a denuclearized Korean Peninsula as soon as possible. We call for coordinated global efforts to maintain North Korea's freeze on its graphite-moderated nuclear reactors and related facilities. All nuclear weapon and missile-related activities in North Korea must cease, including production and sale of WMD-capable missile technology. We call for the full and effective implementation of the 1994 Agreed Framework, North Korea's full compliance with an International Atomic Energy Agency safeguards agreement, and its adherence to the Agency's strengthened safeguards system.
14. **No vetoes in support of proliferation.** The Tokyo Forum calls on the UN Security Council to pass a resolution declaring that the proliferation of weapons of mass destruction constitutes a threat to international peace and security. Permanent members of the Security Council have a special responsibility to prevent proliferation. We call on them to refrain from exercising their vetoes against efforts to assist or defend UN Member States that have become victim to the use or the threat of use of weapons of mass destruction. All current and prospective permanent members of the UN Security Council should have exemplary non-proliferation credentials.
15. **Revitalize the Conference on Disarmament.** The Tokyo Forum calls on the Conference on Disarmament to revise its procedures, update its work programme and carry out purposeful work, or suspend its operations. The consensus rule is causing perpetual deadlock. Consensus among members of the Conference on Disarmament should not be necessary to begin or conclude negotiations on a multilateral convention.
16. **Strengthen verification for disarmament.** The Tokyo Forum calls for widespread adoption of effective verification measures. The scope of verification of nuclear disarmament should be expanded to non-deployed nuclear weapons and the dismantling of nuclear weapons. An effective verification protocol should be agreed for the Biological Weapons Convention, and implementation decisions weakening the verification regime of the Chemical Weapons Convention should be stopped and reversed.
17. **Create effective non-compliance mechanisms for nuclear non-proliferation and disarmament.** The Tokyo Forum calls on all states seeking nuclear non-proliferation and disarmament to actively support the development of arrangements through which states in non-compliance with arms control treaties will know not only that they will be caught, but also that they will face serious consequences. The international community must be united and unequivocal in its intended response to would-be violators based on a broad consensus, including possible recourse to Chapter VII of the UN Charter. A revitalized United Nations with a reformed and authoritative Security Council is essential to building and maintaining the support of the international community for the effective enforcement of compliance.

There were many disagreements and debates between the members of the Tokyo Forum and a disclaimer stating that "The members of the Tokyo Forum subscribe to the general thrust of the report but not every member may agree to every point in the report" was included at the outset. However one participant, Hu Xiaodi of China, expressed dissenting views on some aspects of the report,

particularly on missile technology controls, missile defences, fissile material moratorium, transparency, Korea, South Asia and nuclear weapons reductions.

Perhaps the most divisive issue within the Forum was that of missile defences. A cursory reading of the tenth key recommendation clearly demonstrates the compromises made within the Forum. There were strong views on both sides — ranging from those completely against ballistic missile defences under almost any circumstance to those in favour of national missile and theatre missile defences to be deployed in the near term.

In some ways, the debate over ballistic missile defences is at the heart of the debate about the future of arms control and disarmament. In deciding to go ahead with the development of a national missile defence system, the United States seems to have given up on arms control and has decided that the only way to protect itself is through military might. Whilst a ballistic missile defence system can temporarily offer a sense of national security, to others it can appear as a threat which in turn could lead to increased military capabilities in other countries and could further destabilize turbulent regions such as North-East Asia. The Tokyo Forum did agree however that the deployment of ballistic missile defence systems would have considerable repercussions for global and regional security. The Forum members were agreed that this is an issue that needs multilateral debate and that debate needs to consider all of the possible ramifications of deployment.

In the light of the October 1999 United States Senate vote against the ratification of the CTBT and the response of the Russian Federation and China to the proposed deployment of a national ballistic missile system in the United States, the sober tone of the Tokyo Forum report has been vindicated. The realistic approach to today's situation contained within the Tokyo Forum report has unfortunately assumed an even stronger salience and deserves full international attention and the key recommendations need urgent and immediate action.

### **Patricia Lewis**

Director of UNIDIR and a member of the Tokyo Forum

## **Web resources regarding innovative non-proliferation thinking**

COALITION TO REDUCE NUCLEAR DANGERS

<http://www.clw.org/coalition/index.html>

Leading nuclear arms control and non-proliferation organizations are working together through the Coalition to Reduce Nuclear Dangers to build support for a practical, step-by-step programme to reduce the dangers of nuclear weapons and prevent new nuclear threats from emerging.

INSTITUTE FOR SCIENCE AND INTERNATIONAL SECURITY

<http://www.isis-online.org/>

ISIS is a non-profit, non-partisan institution dedicated to informing the public about science and policy issues affecting international security. Its efforts focus on stopping the spread of nuclear weapons, bringing about greater transparency of nuclear activities worldwide, and achieving deep reductions

in nuclear arsenals. Site includes documents prepared by ISIS for distribution to delegates at the 1998 NPT PrepCom.

DEPARTMENT OF FOREIGN AFFAIRS AND INTERNATIONAL TRADE

<http://www.dfait-maeci.gc.ca/nucchallenge/policy-e.htm>

Good information on Canadian initiatives to strengthen the nuclear disarmament and non-proliferation regime.

THE NUCLEAR CONTROL INSTITUTE

<http://www.nci.org/home.htm>

The Nuclear Control Institute is an independent research and advocacy centre specializing in problems of nuclear proliferation. NCI monitors nuclear activities worldwide and pursues strategies to halt the spread and reverse the growth of nuclear arms. Site includes good search engine and numerous helpful links.

BRITISH AMERICAN SECURITY INFORMATION COUNCIL (BASIC)

<http://www.basicint.org/nukeindx.htm#goals>

BASIC focuses its nuclear work on the goal of a nuclear-weapon-free world. Site includes information regarding ensuring the implementation of the "Principles and Objectives" agreed to at the 1995 NPT Review and Extension Conference.

THE HENRY L. STIMSON CENTER

<http://www.Stimson.org/>

The Henry L. Stimson Center is an independent, non-profit, public policy institute committed to finding and promoting innovative solutions to the security challenges confronting the United States and other nations in the twenty-first century.

THE ACRONYM INSTITUTE

<http://www.acronym.org.uk/>

The Acronym Institute conducts research and publishes information on negotiations and verification of arms control, disarmament and related treaties and agreements. Contains up-to-date information about current initiatives related to the NPT.

CENTER FOR NONPROLIFERATION STUDIES

<http://www.cns.miis.edu/>

The Center for Nonproliferation Studies of the Monterey Institute of International Studies is devoted to combating the spread of weapons of mass destruction.

### Tactical Nuclear Weapons

UNIDIR, in cooperation with the Monterey Institute of International Studies and Peace Research Institute Frankfurt, has launched a research project on the urgent issue of tactical nuclear weapons (TNWs). The project will address such topics as the definition of TNWs, numbers, the roles of TNWs in various military and political doctrines, and future measures to address the TNW problem. The project will be carried out over a period of nine months at UNIDIR. The Institute will commission papers from experts and coordinate the research and related research meetings. The main findings of the study will be ready for discussion prior to the May NPT Review Conference. The project will result in the publication of a Research Report in the UNIDIR series and a “UNIDIR Brief” setting out the main findings of the study in succinct form for broad distribution.

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### The Costs of Disarmament

In order to present the cost-benefit analysis of disarmament, UNIDIR proposes to take key countries as examples and carefully research what their commitments to disarmament treaties means to them in terms of financial and resource costs. In addition, the project will try to ascertain what each country perceives are the benefits brought to them through their participation in the agreements and whether there is consensus that there is a net gain to the state in question. The aim of the project is to achieve a better understanding of the costs and benefits of disarmament agreements with a view

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to assisting policy-makers decide how money is spent on such commitments, which budget lines are best structured to handle such spending and how states could approach this aspect of negotiations in the future.

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## **Peace-building and Practical Disarmament in West Africa**

UNIDIR is currently running a project on peace-building and practical disarmament in West Africa. The project is undertaken within the framework of the West African Moratorium on Importation, Exportation and Manufacture of Light Weapons, signed on 31 October 1998 in Abuja (Nigeria). The project aims at strengthening the necessary participation of West African civil societies in the implementation of the moratorium. The broad objective is to build grass-root capacities through research on peace and security issues and to empower ordinary citizens in such a way that civil society organizations become determinant constituencies for disarmament and arms control.

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## **Information Technology Warfare**

As part of the response to General Assembly resolution 53/70 on “Developments in the field of information and telecommunications in the context of international security”, the Department of Disarmament Affairs and UNIDIR held a discussion meeting in Geneva on 25 and 26 August 1999. The meeting was attended by over seventy participants from more than forty countries.

The meeting aimed to raise awareness among Member States of security issues relating to developments in Information and Communications Technologies (ICT) and to initiate multilateral dialogues. The workshop provided the first forum of its kind at this level for governmental and non-governmental experts to discuss these issues. A conference report is being prepared.

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## Peace-keeping in Africa: Meeting the Growing Demand

This project examines current efforts to develop African capacities to undertake peace-keeping and peace enforcement operations. The project will analyze the reasons for the United Nations Security Council's growing tendency to sub-contract the promotion of peace and security to others and will pay particular attention to regional and sub-regional organizations. It will also review Western and African attempts to make "burden-sharing" work and propose policies to strengthen peace-keeping in Africa. Particular attention will be paid to capacity-building efforts of the United Nations and regional and sub-regional organizations. UNIDIR will publish the project's conclusions as a book.

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## UNIDIR Handbook on Arms Control

UNIDIR is producing a handbook that will explain the major concepts and terms relating to arms control. The handbook will be used as both a primer for an audience with limited familiarity with arms control and as a reference for students, scholars, diplomats and journalists who are more experienced in arms control matters.

The handbook will be organized as a thematically structured glossary of approximately 400 terms relating to arms control. Each term is situated within its wider context so that, on the one hand, a specific term can be looked up quickly, and on the other hand, an entire issue can be covered. Cross-references to other terms and concepts will point the reader to relevant related issues. The researcher designing and drafting the handbook will be assisted by an editorial committee consisting of regional and arms control experts.

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## Expert Group on Ammunition and Explosives

The Expert Group on Ammunition and Explosives was established by the Secretary-General pursuant to operative paragraph 3 of resolution 52/38J on "Small Arms". This group, chaired by Ms. Silvia Cucovaz (Argentina), held its first meeting at the invitation of the Department of Disarmament Affairs in New York on 27 April–1 May 1998. Two of the eight members of the Study Group are from UNIDIR: Dr. Christophe Carle and Lt.Col. Ilkka Tiihonen.

The Group's task was to assist in the preparation of the Secretary-General's report, was submitted to the 54<sup>th</sup> session of the General Assembly. The report will be part of the reference documents for the preparatory process of the conference on small arms to be held in 2001. The final report is available on the webpage of the Department of Disarmament Affairs ([www.un.org/Dept/dda/DDAHome.htm](http://www.un.org/Dept/dda/DDAHome.htm)).

Twenty-nine papers originally prepared for four regional workshops to inform the work of the expert group have been collected in the volume *Small Arms Control: Old Weapons, New Issues*, recently published by UNIDIR and Ashgate.

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## Fissile Materials

In April 1999, UNIDIR published *Fissile Material Stocks: Characteristics, Measures and Policy Options* by William Walker and Frans Berkhout. The publication is intended to support the Conference on Disarmament in its thinking on the range of options available to deal with stocks of fissile material. Additionally, UNIDIR has commissioned a report on fissile material inventories to provide an up-to-date account of fissile materials, assess national policies related to the production, disposition and verification of fissile materials, and identify facilities and locations which might be subject to safeguards under a treaty.

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## **UNIDIR Disarmament Seminars**

UNIDIR occasionally holds small, informal meetings on various topics related to disarmament, security and non-proliferation. These off-the-record gatherings allow members of the disarmament community, missions and NGOs to have an opportunity to discuss a specific topic with an expert. Recent topics covered include fissile materials, the prevention of war, peace-building in West Africa, reducing nuclear dangers, and biological and chemical weapons programmes. Speakers at recent meetings have included William Walker, Ambassador Jonathan Dean, Michael Krepon and Peter Batchelor.

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## **DATARIs**

In cooperation with SIPRI (Stockholm International Peace Research Institute), UNIDIR has developed an on-line database of disarmament, arms control, security and peace research institutes and projects around the world. The database can be accessed through UNIDIR's website and institutes can update their information via a password.

*If you would like for your institute to be included in DATARIs, please contact:*

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## The Transfer of Dual-Use Outer-Space Technologies: Confrontation or Cooperation?

The right of every state to develop outer-space technologies, such as launching capabilities, orbiting satellites, planetary probes or ground-based equipment, is in principle unquestionable. In practice, however, problems arise when technology development approaches the very fine line between civil and military applications, largely because most of the technologies can be used for dual purposes. This dichotomy has raised a series of political, military and other concerns that affect the transfer of outer-space technologies in different ways, particularly between established and emerging space-competent states. Accordingly, for many years several states have sought ways to curb the transfer of specific dual-use outer-space technologies, specifically launcher technology, while still allowing some transfer of these technologies for civil use. The results of this research will be published by UNIDIR.

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## Geneva Forum

Together with the Programme for Strategic and International Security Studies of the Graduate Institute of International Studies and the Quaker United Nations Office, UNIDIR organizes an ongoing discussion series called Geneva Forum. Thanks to the generous support of the Government of Switzerland, Geneva Forum focuses on issues related to small arms and light weapons. Invited speakers deal with specific thematic and/or regional dimensions of the issue. Geneva Forum is an occasional seminar held at the Palais des Nations that addresses contemporary issues. The series targets the local missions and organizations in an effort to disseminate information on a range of security and disarmament topics. The series seeks to act as a bridge between the international research community and Geneva-based diplomats and journalists.

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## PUBLICATIONS

### Small Arms Control: Old Weapons, New Issues

The twenty-nine papers collected in this volume were originally prepared for four regional workshops organized by the United Nations Department for Disarmament Affairs to inform the work of the United Nations Panel of Governmental Experts on Small Arms. These workshops were held during 1995–96. Most of the papers were updated in 1998. Authors include academic, military, governmental and activist experts.

The editorial committee consisted of: Jayantha Dhanapala, Under-Secretary-General for Disarmament Affairs, United Nations; Mitsuro Donowaki, Ambassador and Special Assistant to the Minister for Foreign Affairs of Japan; Swadesh Rana, Chief, Conventional Arms Branch, Department for Disarmament Affairs, United Nations; and Lora Lumpe, Senior Researcher for the Norwegian Initiative on Small Arms Transfers (NISAT) at the International Peace Research Institute, Oslo (PRIO).

The publication is divided into four parts:

Causal Factors and Policy Considerations

The Problem of Small Arms and Light Weapons in Africa

The Proliferation of Small Arms and Light Weapons in Latin America and the Caribbean

The Plague of Small Arms and Light Weaponry in South Asia

*Jayantha Dhanapala, Mitsuro Donowaki, Swadesh Rana and Lora Lumpe*

Editors

UNIDIR/Ashgate publication

ISBN 0 7546 2076 X

## Fissile Material Stocks: Characteristics, Measures and Policy Options

In 1998, on the basis of the Shannon Mandate, the Conference on Disarmament (CD) established an ad hoc committee for negotiating a fissile materials treaty. The treaty is intended to achieve a ban on the production of fissile materials for military purposes in a non-discriminatory, multilateral and internationally verifiably manner. Stocks of fissile materials have accrued transnationally due to armament and disarmament processes, as well as to civil uses of nuclear power. However, very little is known in the public domain about the nature, size and whereabouts of such stocks, and the complexities surrounding their regulation and control. UNIDIR's report on fissile material stocks seeks to begin to redress this problem by providing factual background information on all of these important matters. The report categorizes and quantifies fissile material stocks, and examines the measures which have heretofore been developed regarding their control and management. The report also includes an overview of broad policy options available to states in addressing the stocks issue, which could prove valuable in informing negotiations in the CD.

Fissile material stocks: function, scale and distribution

Characterization by type of inventory

The scale, type and location of fissile material stocks

Measures relating to fissile material stocks: recent developments

Military inventories: continuing absence of international regulation

Transitional inventories: towards regulation and disposition

Civil inventories: the extension of transparency

Policy strategies and options

Stocks and the FMT: possible diplomatic approaches

Possible measures for reducing risks posed by fissile material stocks

Fissile materials and their production processes

International safeguards and physical protection

*William Walker and Frans Berkhout*

Sales no. G.V.E.99.0.15

ISBN 92-9045-131-9

## Sensors for Peace

United Nations peace operations have a tradition of several decades, and their scope and importance has increased markedly since the end of the Cold War. Peacekeeping operations, both of the traditional and the extended type, comprise monitoring tasks as a central part of their mandates. Agreements or resolutions, whether they demand withdrawal behind a cease-fire line, keeping a buffer zone demilitarized, or banning heavy weapons in control zones or safe havens, require that compliance is checked reliably and impartially. The more comprehensive the monitoring, the more likely the compliance. In practice, however, monitoring duties often require the surveillance of such large areas that United Nations peacekeeping units cannot provide continuous coverage. Thus, peacekeeping personnel are permanently deployed only at control points on the roads or areas deemed most sensitive. Minor roads and open terrain are covered by spot-check patrols. This creates many opportunities for infractions and violations.

Unattended ground sensor systems allow all this to change. Unattended ground sensors are suited to permanent, continuous monitoring. They can be deployed at important points or along sections of a control line, sense movement or the presence of vehicles, persons, weapons, etc. in their vicinity and signal an alarm. This alerts peacekeepers in a monitoring centre or command post, who can send a rapid-reaction patrol immediately to the site to confront the intruders, try to stop them, or at least document the infraction unequivocally.

Unattended ground sensor systems generally have not been used in peace operations. Thus, the wider introduction of unattended ground sensor systems in future United Nations peace operations requires fresh study from operational, practitioner, system design and legal perspectives. *Sensors for Peace* is an excellent first look at this timely issue.

Introduction — *Jürgen Altmann, Horst Fisher & Henny J. van der Graaf*

The Use of Unattended Ground Sensors in Peace Operations — *Henny J. van der Graaf*

Questionnaire Answers Analysis — *Willem A. Huijssoon*

Technical Potentials, Status and Costs of Ground Sensor Systems — *Reinhard Blumrich*

Maintaining Consent: The Legality of Ground Sensors in Peace Operations — *Ralph Czarnecki*

Conclusions and Recommendations — *Jürgen Altmann, Horst Fisher & Henny J. van der Graaf*

***Jürgen Altmann, Horst Fischer and Henny J. van der Graaf***

Editors

Sales No. GVE.98.0.28

ISBN 92-9045-130-0

## The Implications of South Asia's Nuclear Tests for Non-proliferation and Disarmament Regimes

On 7 and 8 September 1998, UNIDIR held a private, off-the-record meeting on *The Implications of South Asia's Nuclear Tests for the Non-proliferation and Disarmament Regimes*. This "track one and a half" meeting was designed to address the needs of policy-makers — governmental and non-governmental agents — in their assessment of the impact of the nuclear-weapons tests carried out by India and Pakistan in May 1998. The governments of Australia, Denmark, Italy, Norway, New Zealand and the United States generously sponsored the meeting.

More than fifty people from over twenty-five countries attended the conference. Each participant attended in his or her personal capacity as an expert and not as a representative of a country or a NGO. At the end of this two-day meeting, there was general agreement among participants that neither India nor Pakistan had enhanced its own security or international status by conducting the tests, but that the risk of nuclear war in the region is now greater. Also, it was recognized that the NPT and the CTBT had been in difficulty prior to the tests, although they remained the best solutions available to reduce potential for further conflict and therefore remained crucial. Finally, many participants expressed their concern that if India and Pakistan were rewarded in any way for demonstrating their nuclear capabilities, this may cause some NPT members to reassess their membership in the regime.

International response to the nuclear tests in South Asia was inadequate: there is a need for more coherent and collective action. Participants focused on practical suggestions to policy-makers to reduce the risk of war; to save the non-proliferation and nuclear arms control regimes; and to anticipate the effects of the tests on areas of regional tensions, particularly the Middle East.

### The Responses to the Tests

#### Causes of the Tests

#### Consequences of the Tests

##### Regional Security

##### Consequences for Non-Proliferation and Disarmament

#### Damage Limitation

#### Developing the Non-Proliferation and Disarmament Agenda

#### Conclusions and Policy Options

##### Main Summary

##### Prevention of Nuclear War

##### Saving the Non-Proliferation and Arms Control Regimes

##### The Effects on Regional Tensions, Especially in the Middle East

GE.99-00415  
UNIDIR/99/2

## A Peace of Timbuktu: Democratic Governance, Development and African Peacemaking

Mali is admired for two recent accomplishments. The first is the country's transition to democracy, which took place in 1991–1992. This effort included the overthrow of Moussa Traoré's twenty-three year military dictatorship on 26 March 1991 — a process of military and civilian collaboration which fostered national reconciliation, a referendum for a new constitution, and elections which brought to power Mali's first democratically elected president, government and legislature. The second achievement is the peacemaking between the Government of Mali and the rebel movements in the northern part of the country: this process successfully prevented the outbreak of civil war and presents useful lessons in preventive diplomacy for the international community. The peacemaking culminated in a ceremony known as the Flame of Peace, when rebel weapons were incinerated in Timbuktu on 27 March 1996. This study of the events surrounding the uprisings in the North of Mali and the measures which restored peace (and those which will maintain it) is the result of a collaboration between the United Nations Development Programme and the United Nations Institute for Disarmament Research.

This peace process was remarkable for the way in which the United Nations agencies were able to help, discreetly dropping oil into the machinery of peacemaking. For a cost of less than \$1 million, the United Nations helped the Malians to avoid a war, and lit the Flame of Peace. With less than \$10 million, the United Nations became the leading partner of Mali's Government and civil society, in peace-building, disarming the ex-combatants and integrating 11,000 of them into public service and into the socio-economy of the North through a United Nations Trust Fund. The experience shows that not only is peacemaking better than peace-keeping, but that it is much cheaper.

*A Peace of Timbuktu* includes in-depth coverage of the following topics:

- Mali's History and Natural Environment
- The Build-up to the Crisis in Northern Mali
- The Armed Revolt 1990–1997
- Peacemaking and the Process of Disarmament
- The International Community as a Catalyst for Peace
- Ensuring Continued Peace and Development in Mali
- The Flame of Peace Burns New Paths for the United Nations

United Nations Secretary-General Kofi Annan has written the preface. The book includes maps, texts of relevant documents and laws, and a bibliography, as well as photographs by the authors and peace drawings by the children of Mali.

***Robin Edward Poulton and Ibrahim ag Youssouf***

Sales No. G.V.E.98.0.3

ISBN 92-9045-125-4

Updated second edition now available in French

## Curbing Illicit Trafficking in Small Arms and Sensitive Technologies: An Action-Oriented Agenda

Illicit trafficking affects both the stability of states and the safety of their populations. There are no national or regional boundaries delimiting this type of traffic: the problem is truly global and has multifaceted ramifications. Curbing its further development and proliferation calls for a better assessment of the phenomenon and a new way of looking at problems and identifying solutions. In a world of growing interdependence, one of our greatest challenges today is making bold decisions establishing new priorities and starting innovative cooperative ventures, while changing old ways of thinking and working.

Issues and Aspects — *Jasjit Singh*

Weapons of Mass Destruction — *Alfredo Luzuriaga*

Trafficking in Delivery System Technologies and Components — *Genaro Mario Sciola*

Small Arms, Drugs and Terrorist Groups in South America — *Silvia Cucovaz*

Central America and Northern South America — *Daniel Ávila Camacho*

The Role of Manufacturers and Dealers — *Carlos Fernández*

National and International Initiatives — *Wilfrido Robledo Madrid*

African and European Issues — *Stefano Dragani*

Small Arms Trafficking, Drug Trafficking and Terrorism — *Antonio García Revilla*

The Role of Arms Manufacturers and Traffickers — *Rubén José Lorenzo*

Developing New Links with International Policing — *Donald Manross*

Border Patrols and Other Monitoring Systems — *Julio César Saborío A.*

The Role of State — *Swadesh Rana*

Nuclear Materials and Vector Components — *Olivier Mahler*

Nuclear/Radioactive Substances — *Hiroaki Takizawa*

Illicit Trafficking in Nuclear Material — *Pedro Villagra Delgado*

Illicit Trafficking in Chemical Agents — *Masashi Matsuo*

Prospects and Strategies — *Louise Hand*

Awareness and Access to Biological Weapons — *Malcolm Dando*

Strengthening the Convention on Biological and Toxic Weapons — *Louise Hand*

The Role of Intelligence Services — *José Athos Irigaray dos Santos*

The Role of Export Controls in Addressing Proliferation Concerns — *Sergei Zamyatin*

Control Regimes for Toxic Chemicals and Pathogens — *Malcolm Dando & Graham S. Pearson*

Using Satellites to Track and Monitor Illicit Traffic — *Panaiotios Xeftaris & Maurizio Fagnoli*

The Situation in Latin America — *Marta Parodi*

Other Regions in Perspective — *Isabel Sarmiento*

Strengthening International Cooperation — *Patricia Salomone*

Nuclear Issues — *María José Cassina*

Chemical and Biological Agents — *Eduardo Duarte*

A New Agenda for Control Regimes? — *Luis Alberto Padilla*

Final Recommendations — *Eduardo Pelayo, Péricles Gasparini Alves & Daiana Belinda Cipollone*

### *Péricles Gasparini Alves and Daiana Belinda Cipollone*

Editors

English            GVE.98.0.8            ISBN 92-9045-127-0

Spanish            GVS.98.0.8            ISBN 92-9045-128-9

## Nuclear-Weapon-Free Zones in the 21st Century

The establishment of nuclear-weapon-free zones (NWFZs) through the initiative of regional parties, approved by the United Nations General Assembly, and endorsed by the relevant external states, is an important contribution to non-proliferation, disarmament and, above all, to international security.

Jointly with OPANAL (The Organization for the Prohibition of Nuclear Weapons in Latin America and the Caribbean) and the Government of Mexico, UNIDIR convened an international seminar on “Nuclear-Weapon-Free Zones in the Next Century” in Mexico City on 13–14 February 1997 — the thirtieth anniversary of the Treaty of Tlatelolco’s opening for signature. This book analyzes the role of the Treaty of Tlatelolco as the first effective expression of a NWFZ in a densely inhabited part of the globe. It also covers other NWFZs (existing or proposed). The relationship between NWFZs and peace processes, as well as cooperation among existing NWFZs, is also noted.

- Towards the Consolidation of the First NWFZ in the World — *Sergio González Gálvez*  
 Precursor of Other NWFZs — *Enrique Román-Morey*  
 Tlatelolco and a Nuclear-Weapon-Free World — *William Epstein*  
 Actual Projection of the Treaty of Tlatelolco — *Jorge Berguño Barnes*  
 Major Paradigms of International Relations — *Luis Alberto Padilla*  
 Precedents and Legacies: Tlatelolco’s Contribution to the 21st Century — *John R. Redick*  
 The Treaty of Rarotonga — *Makurita Baaro*  
 The Pelindaba Treaty — *Isaac E. Ayewah*  
 The Bangkok Treaty — *Arumugam Ganapathy*  
 A Nuclear-Weapon-Free Space in Central and Eastern Europe — *Alyaksandr Sychou*  
 A Possible NWFZ in Central Europe — *Michael Weston*  
 NWFZ in the Middle East — *Nabil Elaraby*  
 Middle East: Future Perspectives — *Yitzhak Lior*  
 Central Asia: Future Perspectives — *Jargalsaihan Enkhsaikhan*  
 Denuclearization Efforts on the Korean Peninsula — *Seo-Hang Lee*  
 South Asia and the Korean Peninsula — *Kim Chan Sik*  
 Towards the Zero Option in Nuclear Weapons? — *Thomas Graham, Jr.*  
 A World Free of Nuclear Weapons in the Year 2020 — *Antonio de Icaza*  
 The Role Carried Out by the Zones Exempt from Nuclear Arms — *Joëlle Bourgois*  
 Strengthening of OPANAL: New Challenges for the Future — *Héctor Gros Espiell*

***Péricles Gasparini Alves and Daiana Belinda Cipollone***

Editors

English  
Spanish

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Sales No. G.V.S.97.0.29

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ISBN 92-9045-124-6

## Increasing Access to Information Technology for International Security

The European security landscape is undergoing a profound transformation at present, and there is an increasing need to improve mutual understanding of regional security issues in a rapidly changing world. Institutes and related organizations working in the field of international security have an important role to play in this regard.

This book contains a forward-looking appraisal of how information technology can best serve institutes and the security dialogue. It addresses issues such as how to promote concrete cooperation between research institutes in Europe and North America. Of particular importance is the appraisal of present and prospective demands for cooperative ventures between and among institutes in Europe, the United States and Canada. It also provides insight on how to put together intellectual, human, material and financial resources to foster cooperation, notably in the identification of partners, information needs, connectivity issues and fund-raising strategies. In this respect, a number of innovative recommendations are made in a plan of action to increase cooperation in the late 1990s and well into the next millennium.

- Assessing Partnership Initiatives — *Andreas Wenger & Stephan Libiszewski*  
Identifying the Needs of International Organizations — *Anthony Antoine & Gustaaf Geeraerts*  
Increasing Interregional Exchanges and Partnerships — *Seyfi Tashan*  
Information Needs and Information Processing in International Security — *Gerd Hagemeyer-Gaverus*  
A New Approach to Conflict Prevention and Mediation Processes — *Albrecht A. C. von Müller*  
A European Information Network on International Relations and Area Studies — *Dietrich Seydel*  
Appraising the Status of East/West Connectivity Problems — *Zsolt Pataki*  
The Need to Improve Basic East-West Computer Equipment and Supplies — *Christoph Reichert*  
Connectivity Issues: Political and Financial Constraints — *Edward Ivarian*  
American and European Foundations: A Stock-Taking — *Mary Lord*  
Assessing International Grant Making by US Foundations — *Loren Renz*  
European Fund-Raising: Innovative Cooperation Schemes — *Xavier Pacreau*  
Assisting the Development and Consolidation of Democratic Security — *Francis Rosentiel*  
Preparing Tomorrow's Research Establishments — *István Szönyi*  
Joint Research Activities: The Bulgarian Experience — *Sonia Hinkova*

***Péricles Gasparini Alves***

Editor

Sales No. C.V.E.97.0.23

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## The Transfer of Sensitive Technologies and the Future of Control Regimes

This book comprises papers by fourteen international experts from the diplomatic, military and academic communities in which they identify tomorrow's key technologies in both weapon systems and components, particularly emerging technologies that may become objects of control and constraint eight to ten years hence. This includes conventional weapons and weapons of mass destruction, but special attention is also given to sensor technologies and technologies for the collection, processing and dissemination of information. The authors attempt to identify cooperative technology transfer controls which are likely to forge *new* approaches to solve *old* problems. In this connection, the book presents imaginative and challenging ideas as regards the relationship between technology supplier and recipient states. This publication is essential to those who are interested in following the trends in the transfer of sensitive technologies in the next decade, as well as those concerned with the political and diplomatic issues related to such developments.

Foreword — *General Alberto Mendes Cardoso*  
Major Weapon Systems — *Ravinder Pal Singh*  
Chemical and Biological Weapons — *Graham S. Pearson*  
Nuclear Weapons — *Mark Goodman*  
Emerging Sensor Technology: Technology Transfer and Control — *Leonard John Otten III*  
The Transfer of Space Technology — *Masashi Matsuo*  
Impacts of the "Information Revolution" — *Jeffrey R. Cooper*  
Chemical, Biological and Nuclear Weapons Enabling Technology — *Michael Moodie*  
Launchers and Satellites — *Mario Sciola*  
The Need to Ensure Technology Transfer — *Jasjit Singh*  
Prospective Technology Transfer Controls — *Alain Esterle*  
The Role of Intelligence Services — *Rodrigo Toranzo*  
Intelligence Services and Non-Proliferation Control Instruments — *The Brazilian Intelligence Service*  
The Export/Import Monitoring Mechanism (EIMM) — *Frank R. Cleminson*  
Summary and Conclusions — *Sverre Lodgaard*

***Péricles Gasparini Alves and Kerstin Hoffman***

Editors

Sales No. G.V.E.97.0.10  
ISBN 92-1-100744-5

## Non-Offensive Defence in the Middle East?

Non-offensive defence (NOD) emerged as a proposed remedy to the military security problems of East and West during the latter part of the Cold War. Grounded in the notion of “cooperative security”, NOD is premised on the postulate that states in the international system are better off pursuing military policies which take account of each other’s legitimate security interests than they are in trying to gain security at each others’ expense. Competitive military policies which seek to achieve national security through a build-up of national military means, may well be counter-productive and leave states more insecure. Seeking to procure national military security through a build-up of national armaments raises suspicions as to the purpose of these armaments, which in turn trigger countervailing armament efforts which ultimately lower the level of security for all. By making the defence of domestic territory the sole and clear objective of national military policies, NOD aims to strike a balance between the imperatives of ensuring adequate national military security and of avoiding provocation.

NOD aims towards national military defences strong enough to ensure adequate national military security, but not strong enough to be seen as threatening by others. The provision of adequate yet non-threatening military defence can be highly useful in a region such as the Middle East where political and military confrontations are inextricably linked, and where political settlement in the absence of military security is inconceivable. In the Middle East, NOD could reduce prevailing military tensions and open the way for broader political arrangements on the future of the region.

The introduction of NOD in the Middle East would not require that all Middle Eastern states adopt the same NOD model. Rather, each Middle Eastern state can select the particular NOD model most suitable to its requirements.

Non-Offensive Defence in the Middle East — *Bjørn Møller*

Non-Offensive Defence in the Middle East: Necessity versus Feasibility — *Ioannis A. Stivachtis*

Cooperative Security and Non-Offensive Defence in the Middle East — *Gustav Däniker*

Non-Offensive Defence and its Applicability to the Middle East: An Israeli Perspective —  
*Shmuel Limone*

*Bjørn Møller, Gustav Däniker, Shmuel Limone and Ioannis A. Stivachtis*

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ISBN 92-9045-129-7

## Building Confidence in Outer Space Activities

This book sets out to clarify some of the prerequisites and modalities of a confidence-building process in outer space. It is the result of efforts undertaken by several experts on outer space matters who examine the role of earth-to-space monitoring in enhancing the safety of outer space activities and preventing the deployment of weapons in that environment. The book concludes by proposing the creation of an International Earth-to-Space Monitoring Network (ESMON) as the most appropriate means to improve both transparency and predictability in outer space activities.

Preface — *Sverre Lodgaard*

Confidence-Building Measures and Outer Space — *Frank Ronald Cleminson*

Monitoring Outer Space Activities — *Ralph Chipman & Nandasiri Jasentuliyana*

CSBMs and Earth-to-Space Tracking: Existing Proposals — *Laurence Beau*

CSBMs in Outer Space: Some Political Considerations — *Edmundo Sussumu Fujita*

Artificial Satellites and Space Debris — *Paolo Farinella*

Rocket Launches — *Péricles Gasparini Alves*

Command and Control of Artificial Satellites — *Fernand Alby*

Radio Tracking and Monitoring: Implications for CSBMs — *Péricles Gasparini Alves & Fernand Alby*

Laser Systems for Optical Space Observation — *Janet S. Fender*

Monitoring CSBMs — *Alexandr V. Bagrov*

Radar/Interferometry and CSBMs in Outer Space — *Wayne H. Cannon*

Applying CSBMs to the Outer Space Environment — *Péricles Gasparini Alves*

Monitoring Scenarios for Different CSBMs in Outer Space — *Péricles Gasparini Alves*

Establishing an Earth-to-Space Monitoring Network — *Péricles Gasparini Alves*

***Péricles Gasparini Alves***

Editor

Available from Dartmouth

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## Evolving Trends in the Dual Use of Satellites

Earth-observation, global-positioning, communications and other satellite data are playing increasingly important roles in international security events. This book evolved from discussions by various experts in different areas of satellite technology and applications who met to debate the evolution and implications of such dual-use events. Particular emphasis has been given to providing an understanding of the policy orientation of space agencies and private companies both in traditional and emerging space-competent states. Moreover, the book aims at improving the knowledge of manufacturers, suppliers, users and experts of each others' capabilities and possibilities for cooperation. In this context, attention has been directed to a discussion on the different technical and financial aspects of satellite R&D, as well as the present and prospective markets for satellite data, particularly tomorrow's dual use of satellites.

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