

Deterrence: Its Past and Future: Panel Three

What are the key issues and near-term practical steps necessary to assist in moving now toward a safer and more stable form of deterrence with decreasing nuclear risks and an increasing measure of assured security for all nations?

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European Leadership Network, Nuclear Threat Initiative, Hoover Institution

Speech/Tesitmony

**Speaker – Han Sung-Joo, President Korea University
Nuclear Drawdown, Deterrence, and Non-Proliferation**

Key Issues and Near Term Practical Steps to Assist in Moving Toward a Safer and More Stable Form of Deterrence

In their *Wall Street Journal* column of March 7, 2011, the four wise-statesmen George Shultz, William Perry, Henry Kissinger and Sam Nunn asserted that in the post-Cold War era many leaders and publics cannot conceive of deterrence without a strategy that is linked to the possession of nuclear weapons (or mutual assured destruction) by superpowers. However, as they accurately point out, with the spread of nuclear weapons, technology and nuclear materials, and the emergence of a new spectrum of security threats, reliance on this type of nuclear-weapons-linked deterrence strategy is becoming increasingly risky and may in fact lead to lethal consequences.

Question 1: How to make deterrence compatible with nuclear drawdown and non-proliferation efforts?

To deal with the changing security environment and dangers of the post-Cold War era the four wise men call for movement towards the reduction of nuclear weapons and deterrence with assured security (rather than mutual destruction). The question, then, is how to make deterrence compatible with nuclear drawdown and non-proliferation efforts.

A major difficulty in achieving this objective is the fact that nuclear policy objectives of the United States and its allies often appear as incompatible, even contradictory with one another. A case in point is the April 2010 U.S. Nuclear Posture Review. It tries to capture three seemingly incompatible goals in one basket—reducing the number and role of nuclear weapons, deterrence, and non-proliferation. In Asia, the contradictions seem to be particularly conspicuous. The 2010 *Nuclear Posture Review* emphatically reaffirms the Cold War era U.S. policy of extending deterrence to its selected allies in Europe and Asia by emphasizing the objective of “strengthening regional deterrence and reassurance of U.S. allies and partners.” However, it also emphasizes the goal of “reducing the role of U.S. nuclear weapons” and “maintaining strategic deterrence and stability at reduced nuclear force levels.” This statement in the NPR had the effect

of causing concern among the alliance leaders in Japan and Korea about possible weakening of extended deterrence policies.

Question 2. What are the contradictions and problems in the Asian context?

In the Northeast Asian region, America's commitment to extended nuclear deterrence has given reassurance to its allies, Japan and South Korea, about protection and retaliation in case of attack. It has also had the desired effect of dissuading them from building nuclear weapons themselves and has probably prevented smaller scale conflicts from escalating into larger ones. However, extended

deterrence has been either unsuccessful or counter-productive in two critical areas: preventing small-scale conventional provocations and proliferation by adversaries, in this case North Korea.

Extended deterrence has given North Korea not only the incentive to acquire and deploy nuclear weapons, but also the rationale to do so as well. While deterrence per se does not promise to *punish* the adversary for acquiring nuclear weapons until they are used in a hostile manner, neither does it *deny* the adversary the ability to acquire them. In fact, deterrence policies and strategies could increase the adversary's threat perception and sense of insecurity, making him believe that he needs a nuclear deterrent of his own. Furthermore, in light of the U.S. invasion of Iraq in 2003 and the military intervention of NATO in Libya in the spring of 2011, countries such as North Korea could see their nuclear capability as a deterrent against an attempt to overthrow the regime through an invasion.

Question 3. How do we break the cycle of deterrence—that one's deterrence is strengthened when the other's deterrence is weakened?

The irony of deterrence is that one's deterrence is strengthened when the other's deterrence is weakened or nullified. North Korea might believe that, with nuclear weapons, it could cross the "red line," (whether it means testing the nuclear bomb, building a highly enriched uranium program, or declaring itself a nuclear weapons state) without fear of military punishment. It appears that North Korea is also trying to use its nuclear weapons as a means of compelling other countries to give it rewards and benefits, such as making the U.S. give diplomatic recognition to North Korea or compelling South Korea to provide more economic assistance. This means that North Korea's deterrence can be countervailed, thereby denying its freedom for provocations and proliferation, only through stronger deterrence on the other side.

Question 4. Is "tailored, multilayered deterrence" the answer?

Hence, deterrence, including extended deterrence, is a key element of security, whether it involves the nuclear component or not. The dilemma we face is how to make deterrence compatible with nuclear drawdown and non-proliferation efforts especially when we must deal with threats emanating from irrational and unpredictable states such as North Korea. The threat of nuclear proliferation, even though a major one, is only one of the various threats that need to

be deterred. And in meeting these threats both the nuclear and non-nuclear components of deterrence should be considered.

Therefore, when formulating policies we should consider what is known as “tailored deterrence” which involves a “future force that will provide a fully balanced, tailored capability to deter both state and non-state threats.” In addition to a nuclear deterrent, the force will include a wider range of conventional strike capabilities, including prompt global strike, and require use of non-kinetic capabilities, as well as diplomacy, coordination among agencies, and information exchange strategies.

Question 5. What should be the mix between nuclear and non-nuclear deterrence?

In the March 7th *Wall Street Journal* column cited, Shultz, Perry, Kissinger and Nunn also stressed that as a first step toward deterrence in the Post-Cold War era, nations should recognize that there is a new spectrum of security threats. It is for this reason that “tailored deterrence” which involves non-nuclear as well as nuclear components must assume importance and relevance. It will require both the offensive (retaliatory) and defensive (as in missile defense) capabilities. The response measures would be commensurate with the threats, thus making deterrence more credible and effective.

In the new age when there is a broader spectrum of security threats and when nuclear drawdown is being sought, it is important to also seek ways of non-kinetic and soft power capabilities to deal with threats. This means diplomatic efforts to address confrontations and conflicts, build confidence and understanding, and create give-and-take and win-win agreements. Such efforts can start with close coordination among those willing to cooperate in drawing a strategy of dealing with, coping with, and reducing the threats, through both military and non-military means. (May 2011)

Speaker – Professor the Hon. Gareth Evans, Asia Pacific Leadership Network, Co-Chair International Commission on Nuclear Non-Proliferation and Disarmament and Chancellor Australian National University

Getting serious about reducing the risks associated with nuclear deterrence – including extended nuclear deterrence offered by nuclear weapons states to their allies – means getting collectively serious about, sharply focusing our attention on, and taking some immediate steps to advance, three big policy objectives, relating to decision time, doctrine and down-sizing respectively.

Decision Time. The issue of de-alerting – extending warning and decision time, and reducing the still quite alarming human and system-error risks associated with the more than 2000 U.S. and Russian weapons presently on very high launch-on-warning alert status, is one that demands very high priority attention.

As the Australia-Japan International Commission on Nuclear Non-Proliferation and Disarmament (ICNND) put it, “when political, economic and security relations, at least among

the five NPT nuclear weapons states, render deliberate nuclear attack virtually unthinkable” to have just four to eight minute windows for presidential decision making as to whether to launch in response to some red-alert information or misinformation is “the ultimate absurdity of nuclear deterrence”.

But of course nothing is ever straightforward in the arms control business. As a result of the inability to break out of the Cold War mutual deterrence/mutually assured destruction mindset, we know that that mutual de-alerting is seen by Moscow as making Russia much more comparatively vulnerable than the U.S., because of its much less mobile, largely silo based, missile deployments. And that may mean that the step-by-step process of reducing that sense of vulnerability might ultimately prove as complicated as that of numerical weapons reduction itself.

It may be that, as Sam Nunn has suggested, the only way of really dealing with this issue is to make it even more complex by linking it with measures addressing warning and decision time for conventional weapons systems as well as nuclear ones. But the crucial need is for this issue to come close to the very top of the agenda in the next rounds of U.S.-Russia bilateral negotiations.

Doctrine. Changing nuclear doctrine to fundamentally reduce reliance on nuclear weapons in countries’ deterrence mindset is at the absolute heart of what this conference is about, and perhaps the most important issue of all to make early progress. The ICNND’s highest short-to-medium term disarmament priority was to encourage every nuclear weapons possessing state to embrace – if not, ideally, a commitment to *no first use* – at least the declaratory position that the *sole purpose* of nuclear weapons, so long as they exist, is to deter the use of such weapons against oneself or one’s allies. And we were successful at least to the extent of persuading Japan, in an historic shift which has not been given the attention it deserved, to say both publicly and privately to Washington that it could live with a sole purpose declaration.

The Obama Nuclear Posture Review flagged a willingness, and indeed intent, to go down this path but Washington is still giving very mixed messages. It obviously felt itself constrained by the fact that the ROK – or at least its military – would not follow Japan’s lead, and nor would a number of its Central and East European NATO allies.

I strongly hope that in the context of the further ongoing review of NATO nuclear posture – and simply because this is the right, game-changing thing to do if we are really serious about eliminating nuclear risks – the U.S. will revisit its hesitation on this issue: this conference could be an important voice of encouragement in this respect.

Of course what makes this issue a difficult one is that there are many policymakers in various countries – both allies and opponents of the U.S. – who are deeply resistant to quarantining the role of nuclear weapons in a way that a sole purpose declaration (softly) and a no first use commitment (much more explicitly) demands. There are three basic positions advanced to which we simply have to have good, specific, and maybe better answers than most of us have articulated so far:

- “Nuclear weapons are necessary to balance a potential enemy’s *conventional weapons superiority*.. This is an argument that we don’t hear much from US allies these days, but we certainly hear it very loudly from Pakistan against India and, even more importantly, from both China and Russia against the U.S. as a justification for either not further reducing, or in fact increasing, their nuclear arsenals. Part of the answer has to be (albeit that this is unlikely to persuade the skeptics and cynics) that we have to use- every possible policy lever to solve regional problems like Kashmir, and to consolidate a global climate in which war of any kind between any of the major powers really would be a thing of the past. But part of it also has to be a serious commitment to balancing, or at least not further unbalancing, conventional capability; and also finding ways of taking out of the equation the anxiety about superior U.S. capability in ballistic missile defence (on which we seem to be making some good progress with Russia, but not so far with China)

- “Nuclear weapons are necessary to deter against the kind of existential threat posed by other WMD – chemical and especially biological weapons”: the argument which continues to have strong constituencies in the ROK and Japan in particular. The only real answer to this, but it is a perfectly sufficient one, is that, at least in the North East Asian context where the issue has most salience, U.S. and allied conventional capability combined is far more than enough to constitute the necessary military deterrent to this potential threat. (One problem in emphasizing that capability may be that it feeds back into the first concern about overwhelming U.S. conventional superiority, but I think that’s a manageable concern in this context.)

- “Nuclear weapons are necessary to protect against the threat of forcible regime change.” This argument obviously has had salience in Pyongyang and may be influencing some of Iran’s brinkmanship, but its force is far more psychological than militarily credible. Any regime that actually used whatever nuclear weapons it had either proactively or reactively against the U.S. or an ally would be condemning itself to total destruction, and there are plenty of reasons quite apart from concern about *nuclear* retaliation why the U.S. is going to remain extremely reluctant to even contemplate forcible regime change in the states in question in the foreseeable future.

There are answers along these lines to those who remain persuaded that nuclear weapons are necessary to meet their various non-nuclear threat concerns. But I do think we are going to have to work much harder in developing and selling persuasive answers, particularly on the issue of conventional imbalance, than as a disarmament-advocacy community we have so far, and we should be reflecting this in our research and publication programs.

Down-sizing. The third objective, which ICNND believed was doable by our medium-term target date of 2025 if we seriously start the process now, is *minimizing the number of nuclear weapons* – from the present 23,000 or so down to 500 each by the U.S. and Russia, and no more than 1000 for the rest of the nuclear weapons states combined. (This objective is of course not an end in itself so much as the necessary prelude to the only entirely effective way of reducing the

risks associated with nuclear deterrence, i.e. complete elimination – but we all know this will be not just the next step in a continuum, but a different ball-game again.)

If we are to dramatically further reduce the number of nuclear weapons, down to around 10 per cent of the present inventory over the next ten to fifteen years, the next practical steps we have to take to advance this agenda are:

- first, re-establish momentum on the post New START bilateral U.S.-Russia negotiations – much easier said than done with the factors in play including conventional imbalances, ballistic missile defence and deep differences over tactical or non-strategic nuclear weapons, and continuing issues with ballistic missile defence – but an absolutely crucial precondition to getting serious momentum with the other nuclear weapons possessors; and
- second, in the context of persuading the other nuclear powers to at least not to *add* to their armories, establishing a serious strategic dialogue with each of China, India and Pakistan aimed at creating some common understandings about what minimum credible deterrence means for each of them (including what it would take for them to have survivable retaliatory capability). For this kind of dialogue a crucial accompaniment is far more transparency about their capability than each country has so far been willing to offer, and it is crucial that continued pressure be applied – and a good example offered – by the other nuclear powers in this respect.

From the General to the Particular. Of course policymakers are always more comfortable when faced with calls for action expressed in general and indirect terms, rather than honing in on very specific things their own governments could and should be doing to demonstrate that they really are serious about moving to a safer and stable form of deterrence. One way of concentrating minds a little bit more sharply might be for a conference like this to make some very specific calls on various key players – focusing on one or two big things that really would be game changers for the wider world if capitals were prepared to take them on

Maybe, to take just one example, based on my experience with the ICNND, we could ask Tokyo to explicitly confirm – what emerged during the commission process but on which not a word has been heard since – that it did in fact support a ‘sole purpose’, and ultimately a no first use, declaration by the US, making clear that its extended nuclear deterrent was only available for *nuclear* threat contingencies, and for Japan to engage in some serious advocacy with the ROK and the foot-dragging NATO Europeans to get them to come aboard.

One final point, about the necessity to keep multiple balls in the air. While it is important to set priorities on particular issues if we are not to get lost in the weeds, it is also important to recognize – and this was the central theme of the ICNND report – that a safer and saner nuclear world cannot be pursued in an ad hoc, piecemeal fashion, focusing on just a handful of themes.

As complex and difficult as this is to do in practice, particularly with so much public and political indifference to nuclear weapons issues, we just have to keep grinding away at the total

agenda – not just the disarmament and deterrence doctrine issues, with which this conference is concerned, but non-proliferation, terrorism and nuclear security, and the management of peaceful nuclear energy as well – and see the enterprise as an integrated whole, in which rational policy choice in one area does encourage and reinforce rational policy choices elsewhere.

That is the approach that the European Leadership Network is taking in Europe, and that we shall certainly be taking with the Asia Pacific Leadership Network for Nuclear Non-Proliferation and Disarmament (APLN), the sister organization we have just created in the Asia Pacific with NTI support. And it is also the approach that we will be taking in the new Centre for Nuclear Non-Proliferation and Disarmament (CNND) just established in Australia – with an outreach arm in Geneva and working with the Stockholm International Peace Research Institute (SIPRI) – which will be following up the work of the ICNND by producing a major “state of play” report at the end of 2012, summarizing where we have got to on the whole vast interlocking nuclear agenda that the world needs need to pursue, and making clear who is pulling their weight and who is not, and what the action priorities need to be for the short, medium and longer term ahead.

None of these efforts by themselves will be remotely decisive, but I hope they will feed into and reinforce the tremendous leadership role that has been played by Sam Nunn, George Shultz, Bill Perry and Henry Kissinger – the inspirers not only of this conference but of the whole contemporary nuclear debate that has been running since 2007.

Speaker – H.E. Kanut Saudabayev, Secretary of State of the Republic of Kazakhstan

First of all, let me express my gratitude to the organizers of the Conference for its excellent organization.

As you know, the doctrine of nuclear deterrence was formulated during the Cold War and, despite the small number of conflict situations over these years, the world managed to avoid usage of lethal weapons. However, if the international community fails to discontinue increase in the number of states possessing nuclear weapons in the foreseeable future, the concept of nuclear deterrence may completely lose its meaning. In this regard, we believe that the steady decline in the number of nuclear arsenals, unconditional refusal of all members of the international community from horizontal and vertical proliferation, control over proliferation and non-discriminatory usage of nuclear energy and technology for peaceful purposes under the absolute IAEA supervision is the way that has no alternative.

That is why President Nursultan Nazarbayev of Kazakhstan at the Nuclear Security Summit in Washington in April 2010 proposed an initiative to adopt the Universal Declaration of A Nuclear-Weapons Free World, which would stipulate commitment of all states to gradually move towards a nuclear weapons-free world. We intend to actively and consistently work for promoting this initiative, and look for support of all those, who strive to free the planet from the sword of Damocles of nuclear threat.

This year will mark 20 years since the closure of the world's largest nuclear test site at Semipalatinsk by the Decree of the head of our state. Nursultan Nazarbayev has shown exceptional courage by taking this difficult decision against the will of the Soviet leadership. During all subsequent years, Kazakhstan and its Leader have been consistent and active in supporting the global non-proliferation and reduction of nuclear weapons. The international community has recognized this through the UN Resolution adopted on 9 December 2009 proclaiming August 29, the day of the official closure of the Semipalatinsk test site, as the International Day against Nuclear Tests.

On October 11-13, this year Astana will host the International Forum for A Nuclear Weapons-Free World devoted to the 20th anniversary of the closure of the world's largest nuclear test site. We sincerely invite the organizers and guests of this Conference to participate in the event. In recent years the subject of creating the International Nuclear Fuel Bank (INFB), proposed by the Nuclear Threat Initiative (NTI), has occupied an important place on the IAEA agenda, which is associated with relevance of developing a multilateral mechanism for ensuring access of consumer countries to nuclear fuel on the non-discriminatory and stable basis in the long run. If established, the Bank will contribute to strengthening the nuclear non-proliferation regime, and promoting the role of the IAEA and the Treaty on the Non-Proliferation of Nuclear Weapons. Kazakhstan, which is the world's leading producer of uranium ore and has the capacity to produce nuclear fuel, plans to expand its participation in usage of atomic energy for peaceful purposes under the Treaty on the Non-Proliferation of Nuclear Weapons and the IAEA.

In this regard, on 6 April 2009, President Nursultan Nazarbayev said that in case the Nuclear Fuel Bank was created, Kazakhstan could consider placing it on its territory. The official request on Kazakhstan's readiness to place the Bank in its territory and ensure proper storage of nuclear fuel was presented at the IAEA on 11 January 2010. The decision-making process on the Bank location and other organizational issues is completely the IAEA prerogative.

The INFB placement within Kazakhstan is expedient due to the following objective factors:

- the stable socio-political situation in the country and considered foreign policy of Kazakhstan ensuring the necessary level of confidence of the project participants;
- the long-standing and strong commitment and active participation of our country in the global non-proliferation and nuclear weapons reduction, as well as effective cooperation with the IAEA;
- the developed and reliable export control system of Kazakhstan, and legal framework to address issues of licensing, storage, transport and export of nuclear materials;
- the possibility of using the existing infrastructure of the former Semipalatinsk nuclear site and JSC Ulba Metallurgical Plant in Ust-Kamenogorsk. These facilities meet the requirements of long-term storage and physical protection of nuclear materials, and are under the IAEA guarantees;
- the participation of Kazakhstan in the International Uranium Enrichment Centre (IUEC) in Angarsk, Russia, allowing usage of the Centre capacities for providing reserves of the International Nuclear Fuel Bank (INFB).

According to the concept of the International Bank of Low-Enriched Uranium, it will keep a small guaranteed reserve for producing nuclear fuel assemblies for nuclear power stations. It is assumed that LEU would be stored in portable cleaned cylinders, which will be placed in hermetic containers.

In case of a positive decision on the candidacy of Kazakhstan, the agreement between Kazakhstan and the IAEA will include clauses that stipulate the levels of physical protection of LEU during usage, processing, storage and transportation. According to the internationally recognized experts from the IAEA, low-enriched uranium is not an attractive material for terrorists. In principle, the storage of small amounts of LEU will not change susceptibility of the enterprise dealing with other activities or storage of the other type of LEU to terrorism.

I would like to note that the idea of establishing the INFB is supported even by the countries which cause concern for the international community in terms of nuclear non-proliferation. President Mahmoud Ahmadinejad of Iran during his visit to Astana in April 2009 supported the idea of establishing the INFB in the territory of Kazakhstan, noting that any country which had reserves of uranium in its territory and which had the technology on its enrichment could become a nuclear fuel bank.

This bank will not be a permanent source of nuclear fuel supply. It will become a kind of 'insurance mechanism' in case of any disruptions in nuclear fuel supply due to non-economic reasons. The idea of creating the Bank of Low-Enriched Uranium of the IAEA does not restrict the inalienable right of each NPT member-state to develop nuclear technology for peaceful purposes.

The possible deployment of the International Nuclear Fuel Bank in the territory of Kazakhstan will also contribute to:

- further promotion of the international image of the RK as an active supporter of the non-proliferation regime and one of the key actors in the process of reducing the global nuclear threat;
- strengthening of the cooperation of the RK with the IAEA, as well as the state sponsors of the INFB project, including new U.S. administration, which treats strengthening of the international non-proliferation regime and the role of the IAEA as one of the most important foreign policy priorities;
- development of nuclear energy, introduction of the most advanced technology and experience exchange with the developed countries in this area;
- additional involvement of a number of the Kazakhstan companies of uranium industry and nuclear fuel cycle.
- We hope for an objective and positive consideration of our request, and are ready to do our best to ensure reliable and safe storage of the guaranteed reserve of low-enriched uranium.

Kazakhstan, which voluntarily renounced the world's fourth largest nuclear arsenal, has been, is and will be a reliable partner of the international community in nonproliferation, disarmament and peaceful usage of atomic energy. Our policy in these matters is still balanced, consistent and

responsible. We will continue to cooperate with all responsible members of the international community to make our world safer and more predictable.

Thank you for your attention.

**Key Issues and Near Term Practical Steps to
Strategic Stability without Mutual Nuclear Deterrence
Speaker – Sergey Rogov, Director, Institute for the U.S. and Canadian Studies,
Russian Academy of Sciences**

Strategic Stability

- *Broad* Definition: equilibrium, balance of power management
 - *Intermediate* Definition: prevention of war between nuclear powers
 - *Narrow* (“*the narrowest*”) Definition: prevention of use of nuclear weapons – Crises Stability
- The New Russian-American Agenda: From narrow to intermediate to broad definition of strategic stability!!!

Political Functions of Nuclear Weapons

1. *War-fighting* – irrational
2. *Deterrence* – rational

As long as nuclear weapons exist deterrence will remain

Mutual assured destruction

- Numerical *Parity*
- *Counterforce* Capability
- *Disarming* and *Decapitating* Strike?
- Possibility of a *Surprise* Preemptive Attack
- Reliance on *Early Warning*
- *Combat Readiness* (Alert Status): Launch on Warning/ Launch under Attack
- Limitations on *Strategic Defense*
- *Conventional* Balance
- Unique for U.S.-Soviet/Russia Relationship

Director of National Intelligence Clapper: Russia is the mortal threat to the United States

Senator Karl Levin: the US is the mortal threat to Russia

Can we get rid of MAD?

The New START

START-7: SALT-1, SALT-2, START-1, START-2, START-3, SORT, New START
Warheads to Targets Ratio

- Pre-START-1: 12000 warheads vs. 2000 launchers ~ 5/6 to 1
- START-1: 6000 warheads vs. 1600 launchers ~ 4 to 1
- New START: 1550 warheads vs. 700/800 launchers ~ 2 to 1

Fading Concerns

- Throw-weight
- Mobile ICBMs
- Heavy Bombers (SALT-1) counting rules
- Productions Facilities
- Early Warning?

Problem 1: Deployed/Undeployed Strategic Warheads

“Creative Accounting”

- U.S.: $1550+2500=4000$ strategic warheads (START-1 accounting rules)
- Russia: $1550+500=2000$ strategic warheads (START-1 accounting rules)

U.S. Uploading Capability Superiority

- Warheads/Targets Ratio: 4000 warheads vs. 400 targets = 10 to 1?
- Preemptive Strike Scenario?

Next Step

All deployed and undeployed warheads should be counted

Verification and Monitoring: All deployed and undeployed warheads

Problem 2: Tactical Nuclear Weapons

- Artificial Distinction: Strategic vs. Tactical nukes
- After START-1: Approximately Equal Numbers of Strategic and Tactical Nuclear Weapons
- After New START: Russia’s Superiority in Tactical Nuclear Weapons (2000-4000 vs. 500-1000 warheads)

Disbalances

Russia – Offensive and Defensive (Air Defense, BMD) Nonstrategic Weapons (perhaps 50:50)

Europe: USA (200) + France (300) + UK (160) = 700 nonstrategic weapons

NATO-Russia conventional disbalance (3:1)

CFE is Not Working

NATO-Russia tactical nuclear disbalance (1:2 or 1:3)

Asia: Russia vs. Asian nuclear weapons states: (3:1 or 4:1)

No Separate TNW Agreement is Possible

Problem 3: Other Nuclear Powers

3 official nuclear weapon states: U.K. (160), France (~300), China (~200) +

3 unofficial nuclear weapon states: Israel (~200), India (<100), Pakistan (100)

~ 1000 warheads

New START (1550 deployed warheads):

- For Russia – 60% (~15% of the total arsenal)
- For the United States – 60% (~20 % of the total arsenal)

China and India: How much is enough?

Challenges to China:

- U.S. Strategic and Regional BMD
- India's Triad

Challenges to India:

- China
- Pakistan

Multilateral Nuclear Arms Race in a Multipolar World in 2020?

Problem 4: U.S. Conventional (Non-nuclear) Capabilities

Precision Guidance Munitions

- U.S. SLCMs: 600, 4000, 20000?
- Prompt Global Strike*: ICBMs/SLBMs or New Systems?

Space weaponization

- Orbital Platforms
- Other Platforms (*X-37B etc?*)

Cyber Security

- Defensive and Offensive Capabilities*
- Cyber Deterrence?*

Problem 5: BMD

1. New START: the present BMD is not a threat to strategic stability:

U.S. Strategic BMD is limited (less than 100 interceptors permitted by the 1974 Protocol)

2. European Phased Adaptive Approach:

- Phases 1,2,3: Regional BMD against short and medium range ballistic missiles
- Phase 4: Additional Strategic BMD Capabilities: SM-3 Block IIB in Poland and Romania or 2-stage GBI in 2018-2020

Aegis BMD Ships

Aegis ships

- FY2011: 84 (22 cruisers, 62 destroyers)
- FY2020: 93 (22 cruisers, 71 destroyer)

Aegis BMD ships

- FY2011: 23 (5 cruisers, 16 destroyers)
23 with SM-3 Block IA and B
- FY2015: 38 (9 cruisers, 29 destroyers)
24 with SM-3 Block IA and B and 14 with Block IIA
- FY2020: 43 (10 cruisers, 33 destroyers)
18 with SM-3 Block IA and B and 25 with Block IIA and B

Each cruiser: 110 tubes

Each destroyer: 90 tubes

BMD 2011

	The United States	
<i>Strategic BMD</i>	Three-stages GBI	30
<i>Non-Strategic BMD</i>	Patriot PAC-3	791
	SM-3 Block IA & IB	110
	Russia	
<i>Strategic BMD</i>	A-135 interceptors	100 (68)
<i>Non-Strategic BMD</i>	S-300	~ several hundred?
	S-400	~ several dozen?

BMD 2015

	The United States	
<i>Strategic BMD</i>	Three-stages GBI	30+8 in reserve
	Two-stages GBI	some?
	SM-3 Block IIA Ashore	24 (in Romania)
<i>Non-Strategic BMD</i>	Patriot PAC-3	~900
	SM-3 Block I A & IB	263
	THAAD	226
	Russia	
<i>Strategic BMD</i>	A-135 interceptors	100 (68)???
<i>Non-Strategic BMD</i>	S-300	~ several hundred?
	S-400	~ several dozen?

BMD 2020

	The United States	
<i>Strategic BMD</i>	Three-stages GBI	30+17 in reserve
	Two-stages GBI	10-20?
	SM-3 Block IIB Ashore	48 (in Poland, Romania)
	SM-3 Block IIB	several dozen?
<i>Non-Strategic BMD</i>	Patriot PAC-3	> 900
	SM-3 Block I A & IB	436 (in 2018)
	THAAD	> 431
	Russia	
<i>Strategic BMD</i>	A-135 interceptors	100 (68+16)???
<i>Non-Strategic BMD</i>	S-300	~ several hundred?
	S-400	~ several hundred?
	S-500	~ several hundred?

BMD: other countries

- Israel (non-strategic)
- Japan (non-strategic)
- UAE (THAAD)
- NATO countries (ALTBMD)
- MEADS – canceled
- U.S. Ground Based BMD in NATO countries
- Aegis – sales to Japan, Korea, Spain, Netherlands, Norway
- China?
- India?

Challenges

- MAD can not be disinvented (counterforce capability is to stay)
- Will MAD survive in the 21st century?
- Cooperative retreat from MAD: Mutually Assured Security (BMD cooperation, etc.)
- Unilateral Effort by the United States to Achieve Absolute Superiority in Nuclear and Non-Nuclear Capabilities
- Multilateral Arms Race in a Polycentric World: U.S., Russia, China, India
- Is MAD between China and U.S. possible?
- Is MAD between China and India possible?

NATO: the most successful military alliance

Global Share:

- 11% - population
- 40% - GDP
- 70% - defense expenditures
- 80% - defense procurement
- 90% - defense R&D

Conventional Balance in Europe

	NATO	Russia
Tanks	12 thousand	4,5 thousand
APCs	24 thousand	9 thousand
Artillery guns	15 thousand	5 thousand
Combat aircraft	2500	1800
Attack helicopters	1200	400

NATO to Russia ~ 3 to 1

Military expenditures ~ 20 to 1

Both Nuclear Deterrence and Conventional Superiority + BMD = Military Dominance

NATO Power Projection Capability: Kosovo, Afghanistan, Libya

Lisbon: Russia is not a threat

Plans to defend Baltic states from a Russian attack

Non-nuclear challenges

1. CFE-2:
 - All European countries
 - Holdings as new ceilings
 - No flank zones
 - Transparency
2. SLCMs
3. Prompt Global Strike
4. Strategic BMD limitations
5. Cyber weapons limitations
6. Asia

Possible “Red Lines”

- Unilateral Strategic BMD Deployment > 100 interceptors
- Deployment of 2-stages GBI in Europe
- Deployment of SM-3 Block IIB in Black, Baltic and Barents Seas
- Prompt Conventional Global Strike > 20 missiles
- NATO Enlargement – Ukraine, Georgia
- China > 300 nuclear warheads
- India > 200 nuclear warheads
- Iran + “Shock Wave” – Turkey, Saudi Arabia, etc.
- Terrorist Attacks

Changing the Rules of the Game

5. Counting All Strategic Offensive and Defensive missiles

Example: 400 offensive and 100 defensive interceptors (GBI + SM-3 Block IIB) – *Unlikely*

5. Counting All Strategic and Non-strategic Deployed and Undeployed Weapons – freedom to mix

Example: 1000 deployed and 2000 undeployed strategic and tactical warheads – *Possible*

5. From Counterforce to Countervalue Targeting?

Treating nuclear weapons as WMD, not as a military means: 50-100 urban/economic targets – *Possible*

5. No First Use and/or No Use of Force – *Possible*

5. No Build-Up by other nuclear weapon states – *Unlikely*

5. CTBT, Cut-off Treaty – *Unlikely*

BMD cooperation

1. Joint BMD (under single control) is impossible
2. Cooperative BMD between Russian and American (NATO) systems is possible:
 - Integration of Informational Assets
 - Zones of Responsibility
 - Separate Fire Control
 - Technology sharing
 - Multilateral (NATO, Israel) possibilities
3. Is Executive Agreement before 2012 possible?
4. A Key Element of a Defense Partnership (Alliance?)

Fundamental Transformation of U.S.-Russia Strategic Relationship

1. From Mutual Assured Destruction to Mutually Assured Security
2. Is there a Common Enemy?
 - North Korea
 - Iran
 - China
 - Country X
 - Taliban, El Qaida
3. Afghanistan Transit Precedent: An Element of a Military Alliance
4. BMD Cooperation
5. Mutual Security Treaty?

Speaker – Sid Drell, Stanford University’s Hoover Institution

So far the single demonstrated success of a nuclear deterrence based on Mutual Assured Destruction (MAD) has been avoiding a nuclear holocaust during the Cold War between the United States and the Soviet Union that would have led to a global catastrophe of unprecedented, unimaginable proportions. This would be true if just a substantial fraction of the 10’s of thousands of nuclear bombs and missile warheads possessed by these two superpowers were exploded. Otherwise nuclear weapons did not prevent wars in Korea, Viet Nam, the Soviet invasion of Afghanistan or their military actions in Hungary in 1956 and Czechoslovakia in 1968. They were not deterred.

The mission of preventing MAD pretty much disappeared 20 years ago at the end of the Cold War. The most recent U.S. Nuclear Posture Review issued in 2010 formally recognizes that the key object of U.S. nuclear policy and posture is to prevent nuclear proliferation and terrorism, and also to reduce reliance on nuclear weapons. For this policy to succeed one must enlist the cooperation of all nations working together to build on the success of the New START Treaty that entered into force between the United States and the Russian Federation on February 5th. In my paper I list 5 actions that can contribute and should be pursued. They are listed in what I think is in the order of increasing difficulty:

1. Cancel outdated U.S./Russian war plans against one another that still require each country in today's world to deploy 1550 nuclear bombs, as negotiated in the New START Treaty, an absurdly large number. With many of these bombs at the ready for prompt launch scenarios we know we still face an existential risk of accidental or unintended launch leading to potentially terrible consequences.
2. Implement the commitment made by 47 world leaders at the Washington, D.C. summit little more than a year ago to complete the program initiated by the U.S. Congress 16 years ago, known widely by the name of Nunn-Lugar, and now endorsed with broader international support, to put all special nuclear material and weapons under safe control within the next four years.
3. Renew talks between Moscow and Washington to stand up a Joint Data Exchange Center that would provide more robust protection against misinterpreting data as an incoming missile attack. This is a practical step, and necessary one, toward developing a cooperative ballistic missile defense program. It does not require sharing classified technology.
4. Begin to act more aggressively on multi-lateral confidence building measures where much can be accomplished with increased transparency and broader cooperation in the verification process. One specific example is by strengthening the NonProliferation Treaty's verification teeth by extending the Additional Protocols that permit challenge onsite inspections of suspect sites. They have been signed on to by approximately half the nations and should become binding on all nations. A second important example would be negotiate a Fissile Material Cutoff Treaty (FMCT).
5. Press for further reductions in broader categories of nuclear weapons, including tactical as well as strategic weapons, and non-deployed as well as deployed weapons. The United States should ratify the Comprehensive Test Ban Treaty, and work to bring it into force, although prospects before the next U.S. Presidential election do not seem likely. On purely technical grounds, I believe the nearly completed International Monitoring System for the CTBT meets all necessary requirements for monitoring a CTBT, and under its policy of requiring no new weapons for new military missions the United States can maintain confidence in the reliability, safety and effectiveness of its nuclear deterrent under a CTBT.

Progress along these lines, and to achieving more extensive and comprehensive activity monitoring than just counting deployed strategic warheads and launchers as in the new START treaty, will take considerable diplomatic efforts to gain support of many nations willing to participate. On the technical side, improved means for activity monitoring will be required. It is breathtaking to take stock and realize how far we have already come in establishing the current cooperative norms in New START for data exchanges and onsite inspections and activity monitoring. Think what we have already accomplished over the past 25 years -- for example 1100 onsite reciprocal inspections by the United States and the Russian Federation through the course of the 1991 START Treaty. This augurs well for the future, which will require further progress.

In that spirit let me close by calling attention to the Open Skies Treaty that currently includes 34 nations in the Organization for Security and Cooperation in Europe (OSCE), and has

been in effect and operating successfully since 2002. In this discussion I am drawing on work in collaboration with Dr. Christopher Stubbs of Harvard University.

The Open Skies Treaty could provide substantial long-term verification dividends as we look towards a future with reduced numbers of nuclear weapons. It gives short-notice *unrestricted* territorial access to verification from aircraft, which have atmospheric collection options that simply can't be done from satellites. Expanding the number of signatory nations, beyond the current 34 nations in the OSCE, will lay an important foundation for the technical verification challenges ahead, based on an existing and successful international cooperative agreement.

I am well aware of how hazardous it is to project the state of science and technology in the future, but I anticipate no imminent game changers, and judge it likely that nuclear arms control and verification technology will continue developing on an evolutionary path. This puts a premium on augmenting and taking full advantage of demonstrated procedures and technologies as in the OST.

The Open Skies Treaty provides for reciprocal 24 hour-notice verification overflights over *any and all* portions of the 34 states, currently participating. The Treaty has been in force since 2002, and close to 750 over flights have been carried out to date. The ground resolution obtained by Open Skies images is stipulated in the Treaty. At visible wavelengths this is roughly comparable to that obtained by commercial satellites. It also allows for thermal infra-red sensors for nighttime and activity viewing, and coherent synthetic aperture radar viewing for all-weather activity monitoring and detecting changes. Currently the OST is suffering serious budgetary limitations on its effectiveness.

Important benefits of OST viewing include:

- The fact that the Open Skies collection platforms are aircraft provides technical verification opportunities that simply aren't possible from satellites, for example airborne collection of trace gas and particulate samples. These data would be important in searching for covert WMD development programs. Obtaining gas and particulate samples would require adding new capabilities to the Open Skies sensor suite, but the Treaty spells out a clear path for enhancing the instruments. Particulate and gas collection and analysis are mature and demonstrated technologies.
- Implementing modern digital cameras to replace the current antiquated film-based cameras with digital imaging systems is long overdue, and will facilitate full dissemination and exploitation of Open Skies images. Digital images can be more easily geo-registered and fused with other data sources. I understand Russia is already moving ahead with such upgrades that are consistent with the Treaty.
- Expanding the group of signatory nations would allow verification access to an increasing fraction of the globe. Open Skies is an unclassified system. Both its sensors and the information it produces can be shared with all participating countries.

The Open Skies Treaty provides an existing successful framework for addressing verification challenges of the future. Taking these three steps,

- 1) implementing a modern suite of all three currently allowed Open Skies sensors,
- 2) working to enhance the scope of collections undertaken from Open Skies platforms, and
- 3) expanding the international participation in the Treaty.

Would lay an important foundation for the long-term goal of achieving a reduction in nuclear dangers.

Speaker – Lt Gen (Retd) VR Raghavan, Delhi Policy Group

Key Issues and Near Term Practical Steps to Assist in Moving Toward a Safer and More Stable Form of Deterrence

India's nuclear doctrine is based on the principles of No First Use and Minimum Credible Deterrence. India views nuclear weapons as instruments to deter the use of nuclear weapons against it. The doctrine asserts a massive nuclear response to a nuclear attack. Indian nuclear weapons are not part of operational plans. India thus views nuclear weapons and their deterrence value as limited to desisting the nuclear adversary from contemplating a nuclear attack. Indian nuclear assets are therefore not on hair trigger alert, nor are they in assembled and ready to use state.

Indian defence planners are clear that nuclear weapons by themselves cannot prevent wars. Nuclear weapons however expand the range of conflicts an adversary can conduct, either below or around the nuclear threshold. These can range from covert operations and subversion, to the role of international terrorist groups for striking on Indian homeland, to a short and limited military operation..

Indian nuclear doctrine is designed to make its deterrence stable and safe. New threats of nuclear proliferation and international terrorism, have however expanded the spectrum of conflict. These development challenge the traditional notions of deterrence. The new threats, including catastrophic attacks with non nuclear WMDs, cannot be wholly negated by nuclear deterrence. Notwithstanding some states having qualified their nuclear security assurances through caveats, the possibility of nuclear deterrence being able to effectively deter such threats is not reassuring.

There are two possible approaches to making nuclear deterrence safe and stable. The first is by a declaratory policy which categorizes conditions for use of nuclear weapons. Indian planners believe that No First Use as a doctrine is the best way to make deterrence both safe and stable. Such a doctrinal shift will separate nuclear weapons from the operational plans of armed forces. These will effectively limit nuclear deterrence to strategic weapons. Another declaratory policy is of making the use of nuclear weapons as instruments of 'Last Resort', or, for the 'Sole

Purpose' of deterring the use of nuclear weapons. Abolishing the use of nuclear weapons by an international convention would not only remove the risks but also shift the focus to deterrence by other means. Any or all of these declaratory policies have the potential to significantly lower the salience of nuclear weapons in strategy and their role in conflict scenarios.

The second approach is to move away from the long held beliefs in managing escalation in conflict situations. Escalation dominance is no longer relevant to dealing with the new threats and against new players of the Non State variety. Since established nuclear weapons states, including the new nuclear weapons states, cannot possibly contemplate a nuclear exchange amongst themselves, dismantling the idea of escalation dominance will be a major step forward in making deterrence safe and stable.

Indian planners are alive to the resistance in Europe and the US to the proposals mooted above. The intense debate in NATO on the retention or otherwise of Non Strategic Nuclear weapons and on New Strategy, are pointers to the difficulties in making deterrence safe and stable. Use of nuclear weapons will have consequences far beyond the involved belligerent parties. Employing nuclear weapons can therefore no longer be the option of a single state, notwithstanding claims to sovereign rights. It is time to re-examine the merits of closely linking nuclear weapons to operational plans.

Nuclear deterrence is therefore in need of redefining in its relationship to new threats. Emerging nuclear weapon states, poorly secured nuclear material, catastrophic terrorism, and proliferation, all demand action through international cooperation. The NPT Review Conference 2010 had emphasized the importance of including major emerging powers in efforts to strengthen international disarmament and non proliferation regimes. As Schultz, Perry, Kissinger & Nunn wrote on March 7, 2011 in WSJ, 'Progress must be made through a joint enterprise amongst nations, recognizing the need for greater cooperation, transparency and verification to create the global political environment for stability and enhanced mutual security'. These statements reflect the changed circumstances in which nuclear deterrence will operate in future. Developing a new consensus on the role and relevance of nuclear deterrence will also be in the spirit of the revived course on and calls for global nuclear disarmament.

Speaker – Malcolm Chalmers, Royal United Services Institute

Introduction

Further progress towards improving the NATO / EU relationship with Russia will be needed if aspirations for a more secure global military order are to be realised. Unfolding events in the wider Middle East also pose new challenges for European, and indeed global, security. The main drivers of progress on both fronts will be political and economic. But a confidence-building security policy can help to create conditions in which political reform and economic progress become more likely.

This presentation identifies five opportunities for practical steps over the next 2-3 years, most of which are of particular relevance for Europe. It then highlights two areas of potential risk.

Opportunities

1. Making progress towards NSNW withdrawal from Europe

The future of the remaining US nuclear weapons in Europe is being considered as part of NATO's ongoing Deterrence and Defence Posture Review, established after its 2010 Lisbon summit.

These weapons are often seen to have no added military value, given the capabilities of US strategic forces. But they remain significant, both numerically (probably larger than the total UK force) and symbolically (given their historic role in linking the US to Europe's security).

If removal could take place without weakening the credibility of US extended deterrence, and on the basis of an alliance consensus, this could support wider efforts to show that NATO states are serious about disarmament.

Removal might also bring normative gains, addressing the concern of those who suggest that NATO nuclear sharing is hard to reconcile with the NPT's Article 1 prohibition of nuclear weapons transfer. It might also allow NATO member states to argue for a clearer international norm in this area, raising the political costs involved for other states (such as Iran and Pakistan) that might contemplate nuclear sharing arrangements of their own in future.

But near-term progress on NSNW withdrawal will not only require flexibility from NATO, which has already gone some way to softening its commitment to European basing. It will also require a willingness by Russia to help create the conditions (in relation to its own NSNW) that would make NATO withdrawal politically desirable.

Even without Russian reciprocation, NATO NSNW withdrawal remains a distinct possibility over the next decade, given the likely effects of Germany's insistence that it will not modernise its own capability. But it would be politically divisive within NATO, and would probably add to distrust in NATO / Russia relations. Even if it contributed to denuclearisation, therefore, unilateral NSNW withdrawal might not contribute to the broader objective of demilitarising the Russia / NATO relationship.

2. Reducing US and Russian arsenals

There is growing support for further NSNW reductions to be tackled through the framework of an inclusive successor to the New START Treaty, in which treaty limits would be extended to all non-deployed and 'tactical' warheads held by the US and Russia. But this should not be the sole focus of the next stage in US / Russia mutual reductions. There is a risk that 'all-inclusive' limits could shift attention away from achieving further reductions in high-alert long-range missiles, the systems which remain of most concern for those worried about crisis stability. And the technical difficulties associated with verifying undeployed warheads are not going to be resolved in the short term.

Rather than embracing all-inclusive ceilings as the main focus for the next step in arms reduction, therefore, there may be a strong case for pushing for a further round of verifiable reductions in deployed strategic systems, while using confidence-building measures to reduce concerns over uncounted systems. Stability and feasibility, in this option, would be given priority, in the near-term, over inclusivity. Making further reductions in systems already counted (and verified) under New START might also be attractive to Russians who wish to avoid the modernization costs that it may otherwise soon have to incur in order to avoid falling far below current treaty ceilings.

This is the option that was advocated in April 2011 by Madeleine Albright and Igor Ivanov, when they proposed a successor treaty that reduces deployed strategic arsenals from 1,550 to 1,000, with corresponding reductions in missiles and bombers. They suggested that the two countries accelerate their plans for reducing to New START limits, and argued that ‘at an appropriate time, Washington could announce that, as a matter of policy, it will limit its deployed strategic warheads to 1,300, provided that Russia does not exceed this number.’ They backed early consultations to define what other warheads might fall into the category of ‘non-strategic, and an exchange of information on the number and location of these warheads. This last step, if accompanied by significant Russian NSNW reductions, could also help meet NATO’s call for reciprocal action in response to its own reductions, while avoiding the pitfalls of a premature move towards all-inclusive warhead limits.

3. Developing NATO declaratory policy

Nuclear ‘declaratory policy’ should not be seen solely in terms of legally-binding security assurances. For, as with the NPT itself, there are doubts as to whether such assurances would be valid in times of major war.

Rather, declaratory policy should be seen in a broader context, as an important part of the narrative that NATO member states tell themselves – and tell others – about how they see the role of nuclear weapons. More attention needs to be given to the role of declaratory policy as an instrument of ‘soft power’: a means for making it clear that NATO member states are aware of the dangers involved in any nuclear use, would only ever consider their use in extreme circumstances of self-defence, and are doing all they can to fulfill their commitment to seeking the security of a world without nuclear weapons. In this regard, President Obama’s Prague speech remains the most important declaratory policy step of recent times.

The 2010 US Nuclear Posture Review announced a significant move away from the ‘deliberate ambiguity’ that has hitherto been the central feature of the nuclear declaratory policy of all three NATO nuclear-armed states. NATO could decide to reflect these US changes in its own declaratory policy. Possible steps include:

- A NATO statement welcoming the US commitment not to use nuclear weapons against non-nuclear-weapon NPT states, providing they remain compliant with nuclear non-proliferation commitments.

- A NATO statement that it considers that the ‘fundamental role’ (or ‘main role’ or ‘essential role’) of nuclear weapons in the security of NATO is to deter the use, or threatened use, of nuclear weapons against its member states.
- A statement that ‘the role of nuclear weapons in deterring non-nuclear attacks – conventional, chemical and biological – on NATO member states has declined significantly.’

It would not be fruitful at this stage for NATO to consider making declaratory policy statements – such as ‘sole purpose’ and ‘No First Use’ – that are significantly more restrictive than those announced in the US NPR.

4. Developing NATO / Russia cooperation on BMD

By prohibiting US and Russian possession of intermediate range missiles (500-5500 km), Presidents Reagan and Gorbachev created (24 years ago) the baseline structural condition for cooperation in countering INF threats from third countries. The US’s recent decision to shift to a Phased Adaptive Approach (PAA) to European BMD has now provided a near-term opportunity for making NATO / US /Russian TBMD cooperation a reality.

The gains from such cooperation would be considerable. Missile defence has considerable totemic status in the domestic politics of both sides, and progress in mutual cooperation might, as a result, have political and confidence-building benefits that greatly outweighed purely operational gains.

The key to the PAA is that it is adaptive. If ballistic missile capabilities of Middle East states develop rapidly –for example as a result of technology transfers from North Korea and Pakistan – then it can be used as a basis for intensifying US / Russian cooperation. If threats develop more slowly, later phases of the PAA (especially the anti-ICBM Phase 4) can slip to the right, easing Russia’s concern that the US is undermining its own strategic force, and making further mutual reductions in offensive arsenals more achievable.

BMD cooperation will not give Russia a veto over the use of US missile defence assets, any more than planned NATO arrangements will give one to NATO's European members. Missile defence capabilities – like the bulk of NATO capabilities – will be under the control of the countries which pay for them and operate them. But NATO / Russia cooperation (like intra-NATO cooperation) can allow increasingly detailed consultation on threat assessment, operational planning and planned future developments. Over time, as trust grows, it might also allow increased technology transfer, if Russia and NATO can develop a shared interest in strengthening the military capabilities of each other.

5. Involving the UK, France and China in multilateral disarmament

As the nuclear arsenals of the US and Russia fall in size, there is increasing recognition of the need to bring the other nuclear-armed states into the disarmament process. The five NPT nuclear weapon states have a particular responsibility in this regard. The five nuclear weapon states are meeting in Paris in June to consider what might be done. Possibilities include:

- Formalising and broadening the transparency steps announced recently by France, the US and the UK. The Five could agree to announce the sizes of their deployed and total

nuclear stockpiles on a regular basis, using common definitions of what is meant by different categories of 'warhead'.

- All five nuclear weapon states could agree not to increase their stockpiles for the foreseeable future, and to refrain from further production of fissile material for nuclear explosive purposes. US National Security Advisor Thomas Donilon has indicated that the US is considering taking the FMCT outside the Conference on Disarmament, with a view to removing Pakistan's veto on the current process. Such a move might be a useful way forward, especially if – and probably only if – there are indications of serious interest from China.
- The three smaller nuclear weapon states could agree, on a voluntary basis, to join some of the information exchange and verification processes of the New START Treaty.

The near-term value of this process would be to reassure the US and Russia that, as they build down, others – notably China – do not build up. China is reluctant to take part in such a regime. But greater Chinese participation in such processes, in some form, is likely to become an increasingly important marker of the credibility of its own commitment to be a responsible global power. The UK and France can play an important role in developing informed options for multilateralising the nuclear arms control process.

Risks

1. A Conventional Build Up

Reduced NATO reliance on nuclear weapons might not make Europe more secure if it were to increase Russian concern over US offensive conventional capabilities (especially if this made Russia put more reliance on its own nuclear weapons). Nor would NSNW withdrawal (unilateral or mutual) necessarily be stabilising if it were accompanied by a build-up of conventional forces along the NATO / Russia border.

A new CFE Treaty is not likely to help much, since numbers of heavy weapons are largely irrelevant in determining whether or not states possess effective capabilities for conventional surprise attack. Confidence-building measures can help to increase warning time for a conventional offensive, for example through notification and observation of exercises. Mutual restraint in deployments, especially in times of crisis, will also be important.

The US enjoys a massive global advantage in conventional fighting power, and this is reinforced by its extensive network of capable European and Asian allies. And Russia has emphasised that future disarmament talks must take into account offensive conventional capabilities, for example long-range cruise missiles. But planned reductions in US conventional forces in Europe, together with cuts in NATO European defence spending, may help to reassure Russia that NATO is not engaged in preparing for a conventional offensive.

2. A Transfer of Risks to Asia

In assessing initiatives for greater security cooperation in Europe, potential spill-over effects in others parts of the world need to be taken into account. NATO's support in its Strategic Concept for the movement of Russia's NSNW away from the territory of its member states, for example,

could be perceived as NATO indifference to a transfer of these capabilities to Russia's eastern borders. And NATO enlargement to include Russia, sometimes proposed as a means for unifying Europe, could have undesirable consequences for relations with China. Europe may offer unique opportunities for demilitarisation in the coming period. But any initiatives in Europe need to be constructed so as not to undermine broader global stability.