

Reducing the role of nuclear weapons

Alexei Arbatov

Almost two decades, which have elapsed since the end of Cold War, have demonstrated at least three great paradoxes in the sphere of nuclear weapons. They had not been predicted or expected by those in the end of the 1980's who had been striving for the end of Cold War and hoping for a much safer and better world after it.¹

1. Paradoxes of post-Cold War world.

One paradox is that mutual nuclear deterrence between the United States and the Soviet Union/Russia has smoothly outlived their global rivalry and confrontation, with which it had been closely associated during 1945-1991, and continued in its self-perpetuating momentum even after the collapse of one of the main subjects of deterrence - the Soviet superpower. This inexorable dynamic of mutual nuclear deterrence is acquiring a growing negative “feedback” effect on political relations between former opponents, sustaining a background of mistrust and fear of tacit evil intentions of the “strategic partner” (like presently is happening with the planned US BMD deployment in Europe).

The second paradox: with the removal of the fear of escalation of any nuclear weapon use to a global catastrophe, the United States, Russia and some other nuclear weapon states (NWS) have become much more “easygoing” in contemplating initiation of actual combat employment of nuclear weapons to perform various specific military missions.

Washington started to justify its right to launch pre-emptive selective nuclear strikes, thereby promoting a doctrine of practical nuclear war-fighting, rather than of traditional nuclear deterrence. The United States' nuclear triad was fully upgraded in the 1980's and 1990's and it

¹ This paper borrows from ideas and findings of: Arbatov A., Dvorkin V. *Beyond Nuclear Deterrence: Transforming the U.S.-Russian Equation*. Washington, 2006; *At the Nuclear Threshold: The Lessons of North Korea and Iran for the Nuclear Non-Proliferation Regime* / Ed. by A.Arbatov. Moscow, 2007; *Nuclear Weapons After the Cold War* / Ed. by A.Arbatov and V.Dvorkin. Moscow, 2006 (in Russian, English version will be publish in 2008 by Carnegie Endowment for International Peace, Washington).

will last them for several decades ahead. A serious program had been underway in the United States (stopped in 2005 by Congress) to develop advanced 'clean' low-yield earth-penetrating mini-nukes allegedly designed to destroy hardened bunkers and other installations of 'rogue countries' and terrorists. There is no guarantee that this program will never be revived in the future. Another program to sustain US nuclear posture for the indefinite future, including selective war-fighting capabilities, is the on-going reliable replacement warhead system development (RRW).

This example has been followed by Russia, although with some reservations. After a rather weak resistance, Moscow has, in fact, resigned itself to the treaty-sweeping course of the United States and demonstrated that it cannot oppose it effectively either at a political, diplomatic or military-technical levels. Instead, with relatively scarce funding (20-25 times smaller than that of the US), Russia unwisely attempts to carry out a 'balanced modernization' of all three legs of its nuclear triad, as well as tactical nuclear weapons. As early as 1993, the democratic Russia officially rejected the no-first-use commitment taken by the totalitarian Soviet Union in 1982. In 2000-2001, Moscow reconfirmed this position, and now it says that nuclear weapons play a leading role in insuring its national security and even admits a possibility of 'a selective and limited combat use' of the strategic weapons in order to 'de-escalate the aggression'². This implies accomplishing specific tasks of conducting and terminating nuclear warfare, rather than merely of deterring an aggression by the capability of inflicting "devastating (or pre-designed) retaliation", as previously claimed.

Great Britain, France and China are not going to undertake any limitations of their nuclear forces through arms control treaties, alleging that they lag far behind the two major nuclear powers. They are implementing planned long-term modernization and, in some respects, a build-up of nuclear arsenals.

Now, as never before, the nuclear deterrence looks like a factor that is most likely to remain as long as may be foreseen as part of international relations, at least until another, more devastating or efficient weapon is invented. What is worse, this position is taken by the "nuclear haves" not because of the tremendous technical or political difficulties of achieving "general and complete nuclear disarmament", but because of presumably considerable "inherent advantages" of nuclear weapons as means of sustaining national security, military stability, and 'civilizing' international relations through making the nations more responsible and selective in the use of force.

² Aktualnye zadachi razvitiia Vooruzhennykh Sil Rossiyskoi Federatsii (Urgent Tasks of the Armed Forces of the Russian Federation). October 2003. Moscow, pp. 41-42.

Obviously, the Big Five openly or tacitly treat nuclear deterrence as an indispensable and legitimate instrument of their security and military policies that they are born to have, while claiming that other countries have no right to acquire. Thus, the end of Cold War has actually lowered, not raised the nuclear threshold, to say nothing of abandoning nuclear deterrence and warfare planning altogether.

And the third paradox: the end of Cold War, instead of doing away with nuclear deterrence and eventually the very nuclear weapons, has up to now led to doing away with the regimes of nuclear arms limitations, reductions, and disarmament, as well as transparency and confidence-building. This indirect signal to the world at large indicates an unwillingness of the great powers to reduce reliance on nuclear weapons in their military and security policies.

The victims of this process (primarily at the initiatives of current US policy-makers) have already become the ABM Treaty, START II and START III Framework Treaty, an Agreement on delineation between strategic and tactical BMD systems, CTBT, potentially FMCT and even NPT – at least as it looks by the results of a disastrous NPT review conference of May 2005.

Unfortunately Russia has followed the bad example of the United States in words and deeds, as always with a lag of several years. Showing that it is now also a “tough guy” on the block it has, first, suspended its compliance with the CFE Treaty and, second, actively contemplated| possible withdrawal from the INF-SRF Treaty.

Unilateral parallel reductions of operationally deployed tactical nuclear weapons by the USA and USSR/Russia, emanating from commitments of 1991-1992, have presently come to a stop, with growing confusion and mistrust between the two sides as to what actually has been done and what is the current situation in this aspect of nuclear balance. The whole structure of nuclear arms control is collapsing with most dire predictable consequences of the growth of new threats and risks.

2. Nuclear deterrence and non-proliferation.

Interaction between the two is not linear or simple. No doubt, the states striving for acquisition of nuclear arms have many other motives, besides emulating the great powers. Still, the attitude of the great powers towards nuclear weapons sets the general background to nuclear proliferation or the efforts to stop and reverse it.

If the great powers had followed a consistent policy of negotiating further reductions and limitations of nuclear arms, as well as reducing the role of nuclear weapons in ensuring national and international security, if they had taken stronger action to enhance the general taboo on any direct or threatened use of nuclear weapons - the value of nuclear weapons in the world as a symbol of status, power and prestige most likely would have decreased accordingly. Nuclear

weapons popularity in the internal political life of many countries would also have decreased (as is the case today with the PR appeal of biological weapons and, increasingly, of chemical weapons). This would have greatly improved the general political and military climate around the Nuclear Non-proliferation Treaty (NPT) and the efforts at its fortification.

Just as clearly, the direct opposite policy pursued by the great powers and by the four states outside the NPT has, since the end of the 1990s, been creating a very fertile breeding ground for giving nuclear weapons greater appeal in the eyes of governments and public opinion in a growing number of countries. Nuclear proliferation to new countries and the emergence of nuclear “black market” makes more probable, and eventually inevitable, the access of terrorists to nuclear explosives.

The strategy of nuclear deterrence remains the guiding principle in defence policy even if it has become less noticeable in official documents and speeches in Washington, other NATO capitals and Moscow after the end of the Cold War. But this situation of hostile confrontation still determines the essence of strategic relationship of the USA and Russia. (And how else to describe a situation when thousands of nuclear warheads are targeting each other’s territory and ready to be launched at any minute?) It places strict limitations on developing the international cooperation between the great powers. This applies more directly to non-proliferation, in particular to aspects such as sanctions against third countries, reaching a common position in negotiations with third countries (the six-party talks with North Korea and the negotiations with Iran). It applies all the more directly to the possibility of joint military operations (as part of the Proliferation Security Initiative or in response to violations of IAEA safeguards agreements or plans to leave the NPT without valid grounds), and to the development of joint space warning systems and cooperative missile defence systems (which Russia and the U.S. agreed on in 1998 and 2002 respectively).

Fulfilling disarmament obligations in accordance with Article VI by the great powers, foremost the United States and Russia, would not in and of itself serve as a guarantee against nuclear proliferation given the diversity and complexity of the motives inciting countries to obtain nuclear weapons. Preventing proliferation would require numerous additional measures to strengthen and develop the NPT and its provisions and mechanisms.

But non-fulfilment of the disarmament obligations and defence posture revisions implied by Article VI of the NPT - practically guarantees further nuclear proliferation and makes it extremely difficult to strengthen the non-proliferation regime and system. The only remaining option left open is to resort to armed force to settle problems, often outside the boundaries of international law and the UN SC authority due to mistrust and controversies among the P5. As

the 2003 war in Iraq has shown, this ‘cure’ can be worse than the ‘disease’ and can have the opposite effect to that intended, including with regard to nuclear non-proliferation.

3. Negative security guarantees and nuclear doctrines.

Another consequence of the great powers’ nuclear policy that encourages proliferation is the fact that the official nuclear powers have failed to adopt effective security guarantees to the non-nuclear weapon states (NNWS) of the NPT. These guarantees exist only in the form of ambiguous and controversial individual declarations made by the permanent members of the Security Council. First Russia, and then the U.S., the U.K., France, and China, declared in these statements that they would not use nuclear weapons against any state party to the NPT, but with some “reservations”. Those reservations virtually deprived that pledge of any practical sense, stating that, beside not applying to NWS, they would also not apply to non-nuclear states: (1) if being attacked militarily by such a state, allied by agreement to a nuclear-weapon state; or (2) in the event of joint action by such a state together with a nuclear-weapon state, designed to carry out or support an invasion or armed attack.

Based on a summary of these declarations, the UN Security Council adopted Resolution 984 in 1995, which did no more than duplicate the similar, less developed, Resolution 255 of 1968, and contained no direct security guarantees for the non-nuclear states.

Proposals to conclude a convention that would give legal force to full-scale security guarantees for the NPT non-nuclear states were made before the Geneva Disarmament Conference in 1995, but nothing was done to act on them.

Presently the official nuclear postures of the eight nuclear states, beside DPRK (which has not formalized it in any way) may be systematised as follows:

- All of them envision the use of nuclear weapons in response to a nuclear attack.
- All, except China, plan the first use of nuclear weapons in response to an attack with chemical or biological weapons.
- All, except China and India, imply the first use of nuclear weapons in response to an overwhelming attack with conventional forces against oneself or one’s allies.
- All, except China and India, may initiate the use of nuclear weapons to pre-empt or prevent an attack with missiles or other delivery systems of weapons of mass destruction (WMD).
- The United States envision the use of nuclear weapons in various other contingencies if seen necessary.

- Russia may decide to selectively initiate the use of nuclear weapons to “deescalate an aggression”, or to “demonstrate resolve”, as well as to respond to a conventional attacks on its nuclear forces, C3I sites (including satellites), atomic power plants and other nuclear targets.

In all cases addressees of nuclear retaliation or pre-emption are the states-initiators of an attack; the states from which territories nuclear weapons or other WMD were launched; or states allied with or supporting the aggressors.

China formally has given a no-first-use (NFU) pledge. But due to the vulnerability of its C3I systems and nuclear forces *per se* it is hardly credible. India has taken similar obligations but with “exemptions” relating to “retaliation to attacks with other kinds of WMD”. Besides, its force posture against China and to some extent Pakistan does not support its official obligations due to the same factor of vulnerability and lack of reliable C3I systems. Pakistan has flatly rejected such a pledge and Israel - most probably albeit tacitly – too. DPRK has not qualified its nuclear doctrine either, but if it is not stopped (by a six-party agreement) from developing a limited missile-nuclear capability – it would clearly be a “use-it-or-lose-it” force due to its small size and lack of survivability.

4. Non-first use of nuclear weapons.

Reducing the role of nuclear weapons in the world politics and defence strategies would greatly enhance the prospects of security cooperation among the NWS and the possibilities of fortifying the regime of nuclear non-proliferation. To achieve this it would be necessary, first of all, to address anew the problem of the first use of nuclear weapons.

Although it is difficult to substantiate by historic, mathematical or factual evidence, it would seem that of all the above strategic or operational options the use of nuclear weapons is likely (and the threat of such use would be credible) under present and foreseeable political and military conditions only in retaliation to a nuclear aggression or to a massive conventional attack, which would create a prospect of imminent catastrophic defeat of the victim nation.

Neither of the P5 is presently facing a realistic threat of either of the two types of aggression. However, there are serious discussions in Russia of the growing NATO capability of intensive air-space non-nuclear attacks against its homeland, repelling which has become an element of Russian official military doctrine. This notion has its quite complicated origins, but has very little to do with political or strategic reality. Likewise, it is hard to imagine a large-scale war between the USA and China for Taiwan, which would imply the use of nuclear weapons by either one or the other losing side.

Be that as it may, it is impossible for any of the P5 to contemplate the two above contingencies without the participation of other P5 states on the opposing side. Taking in account

negligible political probability of a large war among the P5, the first, and most important step should be for the P5 to make an unequivocal nuclear non-first-use pledge to all non-nuclear member states of the NPT.

If cooperation of the great powers on various global and regional security issues develops successfully, this NFU commitment could be extended to all NPT member-states, implying nuclear non-first use strategies of the five nuclear powers with respect to each other.

This multilateral pledge would be predicated on some resolution of NATO-Russian controversies over the CFE adaptation treaty and, hopefully, on conclusion of a more radical conventional forces reduction and limitation treaty, opening the way to a joint peace-keeping rapid deployment corps, common air-defence and theatre anti-missile systems, as well as joint missile early warning and monitoring systems. As an option, such a commitment could initially have a bilateral NATO-Russia nature.

Peaceful resolution of the Taiwan problem would open the way to a mutual NFU pledge of the USA and China. Likewise, if Russia and China feel assured about a cooperative nature of their future relations, they would be able to discount a contingency of a conflict around Central Asia, Mongolia or in the area of their common Far Eastern border. This would be conducive to all five NWS taking NFU pledge referring towards each other.

Actually neither of the P5 has to fear large and effective conventional attack by India, Pakistan or Israel. Even the possibility of conventional aggression by DPRK against South Korea seems progressively unlikely. Accordingly, the P5 could make a NFU pledge without any exemptions, rather than only to NPT member-states. However, such a pledge would put on an equal footing members and outsiders to the NPT. It would be politically better to retain NFU role as an incentive to the non-proliferation. It might be extended to the three nuclear outsiders as a reward for their joining all the mechanisms and regimes of the NPT and other WMD disarmament treaties, even though they would be unlikely to join NPT properly as non-nuclear states. The same pledge could be extended to DPRK for its return to the NPT as a non-nuclear state and for elimination of all its military nuclear assets.

Expecting a NFU pledge from Israel and Pakistan is hardly possible in the foreseeable future. But their joining the P5 with such a pledge is not necessary, since they do not present a conventional threat to any of the P5, while the latter would retain a robust nuclear deterrence against nuclear forces of the two mentioned countries.

The option of a nuclear retaliation against attack by chemical or biological weapons is a much more murky business. Capability of such an attack would logically be expected from states not parties to CWC or BTCW or states in tacit violation of those. Such states are mostly small or underdeveloped nations of Africa, Asia and Latin America, which may have very little WMD

capability against any of the P5. Among them a number of Middle East countries produce such a problem against Israel, while North Korea may threaten South Korea and Japan. Nonetheless, the outsiders to the two conventions might use some chemical or biological weapons against US or other P5 armed forces operating in their region. Still it is quite unlikely that they would challenge the great powers with such a provocation regardless of the P5 official military doctrines. It is also unlikely that the great powers would retaliate with nuclear weapons in case of actual chemical or biological attack on their troops.

Hence, the concept of nuclear first use in retaliation to attacks with other kinds of WMD may be safely discarded by great powers. To be on the safe side a nuclear non-first-use pledge could be supplemented by a little more mute WMD non-first-use pledge – to leave potential provocateurs regime guessing about the interaction between the two. Anyway the nuclear NFU obligation is directed not to irresponsible regimes, but to decent NPT member states.

An unequivocal commitment to no-first-use of nuclear weapons by the P5 would considerably decrease the political and military role of nuclear weapons in their foreign and defence policies and this would be generally conducive to further steps towards nuclear non-proliferation and disarmament. The political benefits of NFU for the international security would greatly outweigh some minor strategic and operational discrepancies, which this might create for very unlikely and quite dubious military contingencies. Anyway, the general rule here may be formulated as follows: the actual first use of nuclear weapons may be considered only under the most dramatic circumstances – and then the official pledges or commitments taken in peacetime may no longer operate. At least any addressee of nuclear deterrence would have to very seriously assume such a possibility before provoking a great power with massive conventional, chemical or biological attack.

5. Is a non-first use commitment credible?

Credibility of such a pledge is a controversial issue. It is virtually impossible to substantiate it in a technical way, since any strategic and tactical nuclear weapon, that may be used in a retaliatory manner (second-strike) - may also be used in a first strike.

Among the P5 the concept of first strike is commonly associated with a concept of counterforce (or disarming) nuclear attack. Otherwise a first strike would be a national suicide provoking a devastating retaliation. Russia and the USA do not have a disarming strategic strike capability against each other at present time and for the foreseeable future. Hence, nuclear non-first use between them would be credible not only on political, but also on military-technical grounds. This is all the more so, since in a post-Cold War reality a loss of one or several big cities for the two powers would constitute an unacceptable damage in view of the absence of

political, ideological, economic or military stakes, that would justify the risk of a direct large intentional armed conflict between them.

France and Britain, on the one hand, and Russian – on the other, are essentially in a similar situation. Russian diminishing nuclear superiority over the two states is fully counterbalanced by NATO nuclear security guarantees to its member states.

The same is true for Russian-Chinese strategic relations. Although Russia may retain a disarming strike capability against China's ICBMs at least for a future decade, Chinese medium-range and tactical nuclear forces would present a prospect of unacceptable damage to Russia's Siberian and Far Eastern cities.

The United States would probably retain a disarming nuclear strike capability against China for at least a decade to come. Hence, its potential NFU pledge to China would have primarily a political, not a military, sense. Still, from the military point of view, China would have some guarantee of the credibility of such a US pledge by holding US troops, military bases and major allies in the region hostages to a devastating retaliation. China naturally would not have a first strike capability against the USA for the foreseeable future, so its pledge towards the USA would be strategically credible.

Finally, such a pledge in China-France/Britain set would be credible since they are out of range of their nuclear forces.

Further strategic forces reductions and limitation, as well as de-alerting, beyond the limits of START-1 of 1991/1994 and SORT of 2002, should enhance stable strategic relationships between the USA and Russia, and eventually among the P5, thus supporting technically the NFU/non-first strike commitment at the strategic level. Reaching a new agreement on strategic ballistic missile defence systems and potential space weapons to prevent their possible destabilizing effects – would further enhance non-first strike obligations.

Another version of a first use in P5 strategies (except China, which has not clarified its position) is an employment of nuclear weapons (primarily tactical) to thwart a massive conventional offensive of each other or each other's alliances. As mentioned above such contingencies are almost totally unlikely and should be safely discarded by P5 in favour of NFU pledge.

But at this level an NFU obligation may be only political. However, it may be seriously substantiated militarily if in future the P5 reach an agreement to verifiably withdraw all their tactical nuclear weapons from forward bases to centralized storage sites on their national territories. Still a selective use of strategic nuclear weapons for the same purpose would remain an option (as postulated by current nuclear doctrines of P5, except China), but it could be ignored due to a low probability of a large-scale conventional war among the P5 and their robust

strategic second-strike capabilities. Resolution of Russian-NATO controversies over the CFE Treaty and peaceful settlement of Taiwan and Korean Peninsula problems between the USA and China would be extremely conducive to the withdrawal of tactical nuclear weapons to centralized storages and to downgrading selective strategic strike options from operational planning.

As long as the P5 retain nuclear weapons at all, their NFU pledge with respect to non-nuclear states cannot be substantiated militarily. However, alliance security guarantee of one nuclear power to a non-nuclear state is helpful as an instrument to insure a NFU pledge of an outside nuclear power. Otherwise such a pledge of P5 would primarily have a political importance – but quite a significant one.

6. Further reduction of the role of nuclear weapons.

Going beyond NFU in reducing the role of nuclear arms would imply downgrading nuclear deterrence even in its finite, second-strike version. This might have a much greater positive effect for nuclear non-proliferation but would certainly be still harder for the nuclear powers to accept.

Still, provided a benign general political background, it may be possible to start moving in this direction in a practical way. First and foremost it would be necessary to get rid of the so called launch-on-warning (LOW) strategic concepts and plans.

Although nuclear deterrence does not require sustaining the concept of launch-on-warning attacks that has been adopted by both the United States and USSR/Russia, this concept certainly implies deterrence in its most dangerous and politically least controlled form. In order to take a decision on the launch of missiles on the basis of information from early-warning systems, the national leaders would have only a few minutes at their disposal — therefore, there is always a risk of a miscalculation or technical malfunction, leading to accidental or inadvertent nuclear war.

Only Russia and the United States practice this concept since they are the only two powers that have their own missile early-warning systems and missiles capable of being launched on warning. This US and Russian concept has nothing to do with China's nuclear forces, for its forces are not expected to have a noticeable counterforce capability in the near future. Even in the case of a hypothetical Chinese missile strike, there is no urgent incentive to launch a counterattack. The same is true of Russia's LOW operation in response to British or French hypothetical nuclear strike, until their SLBM forces acquire counterforce capability and (or) deliver a strike in coordination with a massive US missile attack. Of course, there is always the problem of the vulnerability of US and Russian C³I systems to even a limited surprise

nuclear strike, but it is generally believed that a large survivable part of strategic force command and control could be reconstituted sooner or later and devastating retaliation would be inflicted on the aggressor. China, France or Britain, for their part, have neither the missiles, nor C3I systems to sustain their own LOW concept.

While the abandonment of LOW concepts may be verified in a highly reliable way by technical and operational de-alerting of strategic nuclear forces (SNF), before this happens, certain steps to substantiate such an agreement are possible. One is an agreement to invite representatives of the other side to all large-scale exercises to prove that LOW is not the task of training. Another, more far-reaching step is to agree to place permanent liaison officers at SNF command centers (at the US's Offut, and at Russia's Vlasikha) as well as at US NORAD and RF Missile-Space Defense command centers (analogous with Russian-NATO missions, but with the permanent on-duty presence of foreign officers at the sites).

There are a number of quite detailed proposals of alternative technical and organizational procedures for reducing the missile and aircraft launch alert status, as well as systems of inspection and notification on a changed level of combat readiness that could eventually lead to safe reduction of the number of alert warheads to a few hundred, dozen or even to zero. Such radical measures would certainly go a long way beyond mutual removal of LOW concepts and capabilities – towards operational nuclear disarmament and minimal actual role of nuclear arms in states' policies and defense strategies. It would have to involve all nuclear powers.

Going still further in reducing the role of nuclear weapons would entail massive and long-term efforts of nuclear states at physical reduction and limitation of nuclear arms and programs. Moreover, since removal of nuclear weapons from the forefront of international security must not open the way to more efficient employment of conventional forces and arms, or weapons based on new physical principles – those would have to be dealt with in due course and appropriate manner.

Although it is impossible to map all the way towards these goals, some steps for the foreseeable future may be suggested. Such steps would be very useful in and of themselves for enhancing strategic stability, international security and non-proliferation, and this is their great advantage. In particular:

- The United States and Russia should move rapidly to agree on verification procedures and warhead counting rules in implementing the Strategic Offensive Reductions Treaty of 2002. The conflict over the planned US deployment of BMD sites in Poland and Czechia should be settled by an agreement on their joint use of the radar in Azerbaijan (and possibly in Ukraine and Czechia) and on non-deployment of US antimissile interceptors in

Poland until and unless Iran tests medium-range ballistic missiles of its own. In the meantime the infrastructure of the base in Poland may be built.

- The United States and China should ratify the CTBT to bring it into force. Negotiations on FMCT must be retrieved from the deadlock.

- The USA and Russian ought to start preparing for negotiations on SORT-2 with the aim of reducing strategic nuclear arms to around 1,000-1,200 warheads by 2017.

- They should also start in parallel the talks on verifiable lowering of their SNF level of launch-readiness through various technical and operational methods.

- Russia and the United States can begin negotiations on tactical nuclear weapons. These talks should focus above all on agreeing that these weapons not be deployed in Central and Eastern Europe and that they should be subsequently stored only in centralized storage facilities on national territory.

- Moves should be made to expand objectives and technologies for joint reaction to missile threats. With this aim in mind, the Moscow Centre for data exchange on the launches of missiles and space-launchers should be revived and its functions should be further developed and expanded to cover other links in the missile early-warning and information systems. Eventually such a system should become a joint one and eventually involve other missile-concerned states.

- It would be worthwhile to activate the dialogue on long-term development of a common strategic missile defense systems (starting with the radar in Azerbaijan) in accordance with US-Russian official obligations of May 2002.

- The main powers involved in space programmes should begin negotiating a Code of Conduct in outer space (in the medium term) to be followed by negotiations on the prohibition of space weapons.

- Multilateral nuclear consultations should begin on involving the U.K., France and China in nuclear arms reductions and limitations and on adopting some confidence-building measures.

One important final observation is in order. The growing capabilities of long-range conventional precision-guided systems may be presented in the United States and NATO states as a potential substitute for nuclear weapons in performing the expanding range of their missions. This might be an argument in favor of moving more decisively towards nuclear disarmament. However, this card should not be overplayed domestically or internationally, because it is exactly this US capability which is perceived as a potential threat in Russia, China and many other countries and serves as a strong argument against nuclear disarmament or in favor of nuclear proliferation. Resolving this puzzle, as well as that of ballistic missile defenses

and space weapons - may in the long run be the major challenge on the route to drastically reducing the role of nuclear weapons in world politics and military strategies.