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(NUCLEAR CONTROL)

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Editorial

REFORMING NUKES

Debate on ways to reform the strategic nuclear forces has recently intensified, and is widely discussed in Russian and foreign media. Unfortunately, often the commentaries are of a scandalous character. One can only agree with President Vladimir Putin's statement: 'Such complicated issues of military policy cannot be solved under pressure from the media and public opinion'.

Analysis of foreign media coverage, and also active contacts with Western, above all US, experts on disarmament issues, prove that the scandalous character of the debate about strategic nuclear forces reform is weakening Russia's positions in bilateral dialogue with the United States concerning the ABM Treaty and within the START III framework.

At the same time, reform for the strategic nuclear forces is urgent, and one can only welcome that it has been raised in so timely a fashion.

Russia inherited its nuclear status. The nuclear arsenal was built up in the Soviet Union to accomplish specific combat missions to suit a particular world order, which was characterized by the confrontation (including nuclear rivalry) between the two global superpowers. The new model of international relations is different. The world has changed, Russia's position in it has changed, too, and moreover, Russia's perception of its own security and of relations with the rest of the globe has significantly transformed. As a result the question emerges: 'How useful is this Russian nuclear legacy in these new conditions?'

There may be different answers, but any response should be based only on comprehensive analysis of the current role of nuclear weapons, on trends in the development of the nuclear world, and on the characteristics and peculiarities of existing and potential security threats.

It is useful to bear in mind one more factor: Russia's ability to transform its nuclear arsenal, to develop new-generation nuclear weapons and to provide for serial production of such new arms is limited for objective economic reasons. Hence, the state's requirements of its nuclear policy are evermore demanding, since that policy has to take into account existing financial and military-technical constraints.

The term "nuclear policy" itself, which is widely used by Russian and foreign experts, is not mentioned in any official government documents. The only exception was "*The Basic Provisions of the RF Military Doctrine*" (1993), which spoke about 'Russia's policy in the area of nuclear weapons.' However, that document did not define the term. In March 1999, President Boris Yeltsin approved "*The Basic Guidelines for the Russian Policy in the Area of Nuclear Deterrence*". This document was not published and the meaning of the term "policy in the area of nuclear deterrence" was also never clarified.

In 2000, Russia has adopted three documents the *National Security Concept*, the *Military Doctrine* and the *Foreign Policy Concept* that are directly connected with Russian nuclear policy. These documents should serve as a basis for any reforms of the strategic nuclear forces and should determine the country's positions concerning nuclear disarmament and nonproliferation issues. Any military reform plans should follow the approved concepts. Russian foreign policy efforts will succeed only if the policy is consistent, coherent and realistic.

The federal law on START II ratification says that the president 'shall approve the Federal Program of Development of the Strategic Nuclear Forces of the Russian Federation and present it to [parliament] no later than two months after entry into force' of the law. The law on START II ratification entered into force on May 6, 2000. According to our sources, no such document is yet to be approved or submitted to the legislature.

Well-grounded proposals on strategic nuclear forces reform will take into account specific characteristics of nuclear munitions chiefly, the necessary strict requirements to ensure safety and security of a nuclear arsenal during the whole of its service life.

For the foreseeable future, nuclear weapons will remain the key element for providing national security and maintaining international stability. Obviously, reform of the strategic nuclear forces can be carried out only in accordance with Russian nuclear policy.

The Security Council, as a body that 'works out proposals to ensure Russian national security' (according to the *National Security Concept*), should summarize the proposals of the defense minister and the General Staff and submit them to the president, since the latter 'determines guidelines of military policy' (according to the federal law "*On Defense*," Article 4, paragraph 1) and directs 'construction, training and use of the state's military organization and activities' (the *Military Doctrine*, paragraph 18, approved on April 21, 2000).

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Hot Topic

WILL MISSILE DEFENSE SHOOT DOWN ARMS CONTROL?

by Dr. Charles D. Ferguson, and
by Dr. John E. Pike,
Federation of American Scientists

Given the choice of further nuclear arms reductions or missile defense for enhanced security, history dictates that arms reductions can lead to greater security, if due care is taken to ensure crisis stability. Missile defense, at least on the national level, is still a long way from being proven effective and, even if it could be made effective against any missile threat that exists today, it could be defeated and quickly outmaneuvered by offensive missile developments in the future. The 1972 Anti-Ballistic Missile (ABM) Treaty encoded this lesson and helped to ensure that missile defenses would not prevent truly deep reductions, assuming the political will for such reductions comes about.

Except for the period during the Reagan-era *Strategic Defense Initiative* (SDI), most political leaders in Washington have rarely been under the delusion that missile defense could provide effective security against ballistic missile attack, or at least a massive missile strike. While few of these leaders are seriously promoting an SDI or *Star Wars*-like defense, both major American political parties support the development and deployment of limited national missile defense (NMD). They argue that possible long-range missile threats from so-called *rogue states*, now termed *states of concern*, pose challenges that did not exist during the Cold War. In particular, these states could be undeterred by the United States, or more significantly they could deter the USA. The USA looks toward NMD as a means to preclude this turn of events. In moving down the path toward NMD, the USA could be hurting itself even more by damaging its strategic relationship with Russia and China, which could lead to harming the nonproliferation regime. After briefly examining the near term prospects, we will focus on an assessment of missile defense and its impact on the US relationships with Russia and China.

NMD Deployment Decision: Near Term Prospects

On September 1, 2000, President Bill Clinton announced that he would defer the NMD deployment decision to the next president and his administration. The Clinton administration has articulated on numerous occasions the four criteria that it has established for an NMD deployment decision. In one of his most recent statements, Clinton expressed the criteria as '[…] whether I would make a decision to go forward with deployment would depend upon four things: one, the nature of the threat; two, the feasibility of the technology; three, the cost and, therefore, the relative cost of doing this as compared with something else to protect the national security; and, four, the overall impact on our national security, which includes our nuclear allies and our European alliance, our relationships with Russia, our relationships with China, what the boomerang effect might be about whatever China might do in South Asia, with the Indians and then the Pakistanis, and so on.'[1].

In our view and in the view of many other analysts, the evaluations of these criteria do not make a compelling case for missile defense deployment even for the next administration, which will take command in a few months. Presently, the missile threat is far from being manifest. The proposed NMD system requires many more rigorous and realistic tests before technological feasibility, let alone effectiveness, will be demonstrated. Although the financial costs pale in comparison to the Reagan *Star Wars* plan, the cost estimates continue to expand as is typical for complex weapons systems. However, cost will remain the least decisive criterion. Finally, the most important factor -- the impact on arms control and international security - has focused the world's attention on American NMD. As seen from Clinton's statement, he clearly perceives the potential for a *boomerang effect* that would affect the

strategic relations of Russia, China, India, Pakistan, and many other nations. This concern alone should underscore the need for further assessment before committing to NMD.

Despite the lack of justification for meeting the criteria, politics remains a driving force for missile defense, as it has for almost every presidential election cycle for the past four decades. Although the American public finds missile defense a low salience issue as numerous polls indicate, Clinton and Vice President Al Gore, the Democratic presidential contender, evidently believe that they have to utter at least some support for missile defense in order to not appear soft on defense in general.

Before Clinton's recent decision, his choices appeared to be: (1) determining that the USA is ready to deploy the proposed NMD system, despite failures of two out of the first three intercept tests, and awarding contracts to defense firms to begin construction in spring 2001 in Alaska; (2) deciding that the USA is not ready to deploy NMD in the near term, but still supporting more testing and development of missile defense *without moving toward construction*; or (3) deciding that the USA is not ready to deploy NMD in the near term, *while still awarding construction contracts* to try to keep the NMD program on the 2005 goal date for initial operating capability. Many analysts had predicted that he would select the third option in order to signal his support for NMD while also acknowledging the security concerns stemming from NMD (such as lack of agreement with Russia) and the tremendous difficulties in developing an effective system. However, Clinton factored in the other technical difficulties that recently came to light and thus selected the second option and made a strong case that a deferral of a short period of time will not slow down NMD development more than the vexing technical problems already have. In particular, the development of the booster rocket has fallen more than a year behind schedule, thereby delaying the earliest possible system initial operating date until 2006 or 2007.

In the view of NMD proponents, who believe that the technical problems can be overcome given enough money and the American *can-do* spirit, the biggest barrier to developing a NMD system is the ABM Treaty. Concerning the ABM Treaty, Clinton and other senior administration officials have repeatedly said that it remains the *cornerstone of arms control* and that they would not want to abrogate it. Instead, they have been seeking Russia's acquiescence to treaty modifications, which so far have not been forthcoming. In contrast, Republican political leaders, notably the Republican presidential nominee George W. Bush, have stated that they are willing to abrogate the treaty if Russia will not agree to the appropriate changes.

The issue of immediate concern with the ABM Treaty was whether the proposed beginning of construction on Shemya, Alaska in spring 2001 (which has now been delayed for at least a year due to Clinton's deferral) would constitute a violation of the treaty. If so, such activity would have required the USA to give six months notice (sometime in November) that it would leave the treaty, barring Russia's modification of the treaty or acceptance of this start of construction as a non-violation of the treaty. Earlier this year, some Clinton administration officials had suggested that even initial stages of construction, such as clearing of tundra, would constitute a violation of the treaty. However, recently a team of administration lawyers has determined that such preliminary activities would not necessarily constitute a violation of the treaty. The USA may have been counting on Russia's apparently more vested interest in the ABM Treaty in order to bring Russia around to agreeing to this broad interpretation. However, in view of Clinton's deferral, the USA and Russia have more time to discuss the ramifications of this interpretation. Although this issue does not have to be settled immediately because of the deferral, it could come back to haunt both sides a year from now if agreement is not reached sooner.

The recent deferral and the decision to not move ahead with construction were the best decisions that NMD opponents could have hoped for in the present political climate. Too

much political momentum exists for missile defense; thus putting a complete stop to missile defense is highly unlikely in the foreseeable future. At best, opponents could try delaying tactics. Unlike the strong political dissent in the 1980s Congress against the Reagan administration's *Strategic Defense Initiative*, the political opposition in the current Congress is weak to almost nonexistent and has little influence against the much more limited NMD system.

The two leading presidential candidates have both expressed support for missile defense. While Gore wants to proceed cautiously and does not want to abrogate the ABM Treaty, Bush advocates a more grandiose missile defense system and has said that he will not allow Russia to dictate America's missile defense plans.

Assuming that the USA will eventually begin deployment of some form of missile defense, we will assess the impact on arms control and international security.[2]. We cannot predict the international reaction to such a deployment, but we will examine the possible responses of Russia and China.

Arms Control and Missile Defense: The Question of Compatibility

Is arms control compatible with a limited NMD system? The answer depends on who is asked. Recently, Secretary of Defense William S. Cohen presented his views to Congress and answered this question affirmatively. He stated, 'We recognize that our decisions on an NMD system have potential impacts on other aspects of international security -- our relations with our allies and with Russia and China, and on arms control. We do not want in the course of dealing with these limited, but serious, threats from countries like North Korea or Iran, to create new problems with Russia and other nations that we can reasonably avoid. We also place very high priority on preserving, and indeed strengthening, arms control limits, as a means both of fostering strategic stability and of resisting proliferation of dangerous military capabilities. For this reason, President Clinton and this Administration are committed both to protecting the American people from limited ballistic missile threats and to maintaining the ABM Treaty as a cornerstone of strategic stability and a key element in our relationship with Russia. Assessment of the impact of our NMD program on these broader national security interests will be a factor in my own recommendations to the President -- and of course of his other key national security advisers. There is no reason we -- and the world -- should be faced with a choice between defending our population against the emerging threat of attack by limited missile capabilities of rogue states, on the one hand, and preserving arms control on the other.'[3].

In contrast to Cohen, many critics of NMD, including numerous heads of state, have argued that non-proliferation and arms control regimes would be in serious jeopardy if the USA were to deploy an NMD system. Answering this question requires understanding the aims of arms control and missile defense.

Ideally, arms control and missile defense should strive for the same outcome, i.e., greater security. Both should create an international security environment conducive to crisis stability. In other words, both should seek to reduce the likelihood of war. If war should occur, they should limit the damage caused by war. Pursuing arms control and missile defense for their own sakes would, at best, waste political resources (and monetary assets, in the case of missile defense) and could, at worst, weaken security.

A lesson learned during the Cold War still applies today. That is, imperfect defense systems could increase the likelihood of war by raising the incentive for both sides to strike first.[4]. In a crisis, the side without a defense system would fear that its deterrent would be at risk because the side with a defense system could, depending on the effectiveness and size of the defense system, launch a first strike at the other side attempting to destroy as much as its forces as possible and then use the defense system to try to shoot down all or a significant portion of the other's second strike force. To ensure

the survivability of its forces, the side without a defense system would tend to keep its forces on high alert, ready to be launched on warning of an attack. This fear cuts both ways. The side with a defense system, knowing that the other side has its forces on high alert and that the defense system is not perfect, would adopt a similar posture. By trying to preserve the viability of their forces in response to defenses, both sides have increased the risk of war.

If both sides have imperfect defenses, a similar calculus pertains. Each side could not rely on its defense to provide complete protection, but would fear that the other would be tempted to be the first to launch its forces in a crisis. Therefore, both sides would keep their forces on high alert. As in the situation above, there would be pressure for a strengthening of offensive weapons, such as a buildup of more missiles, use of countermeasures to penetrate defense systems, and development of multiple warheads, leading to an offensive-defensive arms race.

Humans have never been able to construct perfect defenses. Nonetheless, history is replete with attempts to build impervious defenses. Hand-in-hand with these pursuits of folly has been the development of effective means of defeating these defenses. For example, the German Army in World War II simply maneuvered around the *Maginot Line*. We presume that this situation will continue to hold, especially for something as complex as missile defense.

Of course, a defense system is not the only impetus for raising the risk of a first strike or an accidental war. Despite the end of the Cold War, Russian and American nuclear forces remain on high alert without national missile defenses in place. Bureaucratic inertia, anachronistic nuclear guidance, and the nature of many of the weapons along with other factors contribute to perpetuating forces on high alert.

Proponents of missile defense proclaim that the USA is in a new era in which traditional deterrence does not hold for certain *states of concern*, which, until recently, had been called *rogue states*. While a full discussion of this aspect of missile defense is beyond the present scope,[5] we find it sufficient it to observe that the deterrence failures that have occurred have been failures to seek deterrence rather than failures to achieve deterrence. Moreover, the US concern is not so much that these states are non-deterrable; it is that the USA could be deterred by these states, thus constricting the US military's freedom of action.

The ABM Treaty in a Post-Cold War World

Russia and China have broadcast their support for strict compliance to the ABM Treaty on several occasions. In a July 18 joint statement, the two heads of state President Vladimir Putin and President Jiang Zemin stated in part, 'The 1972 Treaty on the Limitation of Anti-Ballistic Missile Systems […] remains the cornerstone of global stability and international security, and constitutes the basis for a framework of the key international agreements designed to reduce and limit offensive strategic weapons and to prevent the proliferation of weapons of mass destruction. The maintenance of and strict compliance with the ABM Treaty is thus of paramount importance.'[6]. Previously to this statement, they employed the world's highest stage and jointly sponsored, along with Belarus, a United Nations resolution, which originated in the First Committee on Disarmament and International Security last year. The resolution, which was approved with the US voting against, calls for 'continued efforts to strengthen the Treaty and to preserve its integrity and validity so that it remained a cornerstone of global strategic stability and world peace and in promoting further strategic nuclear arms reductions.'[7]

Despite the demise of the Cold War and the Soviet Union and the implausibility of a massive nuclear exchange with Russia, the statements above reflect the enduring significance of the ABM Treaty. Although some proponents of missile defense have made the specious argument[8] that Russia is not a Party to the ABM Treaty because the Soviet Union no longer exists and the September 26, 1997 Memorandum of Understanding[9] has not been ratified by or

even submitted to the US Senate, the fact remains that Russia has inherited the nuclear arsenal of the former Soviet Union, and the USA cannot deny that Russia still relies on hundreds of nuclear-armed ballistic missiles for its strategic deterrent. Undeniably, China is not a Party to the ABM Treaty; however, it likely bases its nuclear planning partially on the predictability encoded in the treaty.

In 1972, the ABM Treaty along with its companion SALT I treaty initiated an era of negotiated arms control between the two superpowers and established the Parties' strategic equality. While the geopolitical equality between Moscow and Washington departed with the Cold War, the rough equality of their nuclear arsenals remains and influences the relations between the two nations. The relaxation of tensions between the USA and Russia since the Cold War must surely have brought a concomitant relaxation of the tight coupling between offensive and defensive forces that drove the offense-defense reaction cycle checked by the ABM Treaty. Nevertheless, the ABM Treaty still serves to engage the USA and Russia in arms control and fosters cooperative threat reduction measures. Further, the treaty represents a key signifier of Russia's important stature in the world.

Deployment of American NMD would fundamentally oppose the premise of the ABM Treaty, that is, to prevent the establishment of a nationwide defense against strategic ballistic missiles. In contrast, the administration has been trying to make the case that the limited nature of its proposed NMD system would not upset the strategic balance between the USA and Russia. It has argued that Russia can defeat a limited NMD even with 200 interceptors as long as Russia maintains upwards of 1,000 warheads on alert[10].

The initial deployment of NMD, which would include 20 to 100 missile interceptors, would at least require the following specific changes to the ABM Treaty:
1) Elimination of the Article I ban on nationwide defenses.
2) Revision of the Article III limitations on permitted deployment areas to allow deployment of interceptors in Alaska instead of the permitted deployment in North Dakota, which would be the location of a second site.
3) Revision of Article III to allow deployment of large phased array X-band battle management radars in Alaska. Article III requires such radars to be co-located with the interceptors.
4) Relief from the Article IX ban on the deployment of ABM components on other countries. The current NMD plan calls for deployment of radars at Thule, Greenland (controlled by Denmark) and Fylingdales, United Kingdom. Both in Denmark and the United Kingdom, prominent political leaders have raised concerns about the use of these facilities for American NMD. These concerns center around providing support for a *Fortress America* while Europe would remain unprotected.
5) Elimination of the Article V ban on space-based ABM systems or components and the interrelated Article VI ban on giving non-ABM systems capabilities to counter strategic ballistic missiles or their elements in flight. These bans affect the various elements of the proposed Space Based Infrared System (SBIRS) satellite networks.

Later phases of NMD would require further modifications to the treaty. Russia is concerned about the breakout potential. In particular, once the initial NMD system is in place, Russia worries that the USA could increase the number of interceptors and this activity could escape detection.

Although there have been some hints that Russia would consider changes to the treaty, by and large, Russia has been ruling out changes to the treaty and does not appear ready to bargain with the US. Similarly, the American and Russian positions on START III are deadlocked. Russia seeks to lower the START III strategic arms level to 1,500 or fewer warheads, whereas, the USA holds to the 1997 Helsinki Protocol on START III that set a level of 2,000 to 2,500 warheads. The USA is holding firm on this level because of nuclear targeting requirements. In May 2000, the Joint Chiefs of Staff testified before Congress that although deeper cuts are possible, further analysis of the implications

is required. With Clinton soon to leave office, an order to conduct this analysis will not take place soon. However, when the next administration takes command, it is required to perform a *Quadrennial Defense Review*, which could include a reassessment of the nuclear guidance.

Getting to START III will be difficult as long as START II stays in limbo. Even though Russia ratified the long overdue START II in April 2000, this treaty needs to jump over additional hurdles before being implemented. The Duma linked implementation of START II to compliance with the ABM Treaty. Because many Republican leaders in the Senate have called the whole ABM Treaty into question and are opposed to the September 1997 amendments on ABM/Theater Missile Defense Demarcation and the Memorandum of Understanding specifying the Successor States to the treaty, these amendments will probably not be ratified as long as the Republicans control the Senate, thus potentially further blocking START II implementation, if this Senate intransigence leads to non-compliance with the ABM Treaty. Some analysts have suggested bypassing START II implementation and proceeding to a START III agreement. While such a maneuver could achieve deeper cuts, it is unlikely to occur while questions about the ABM Treaty amendments and Memorandum of Understanding remain unresolved.

Deeper cuts in Russian and American nuclear arsenals appear unlikely to occur especially if the USA begins deployment of NMD. Proposals to go significantly below the level of 1,500 strategic warheads would probably encounter stiff resistance. Russian military planners would undoubtedly have to assume the worst-case with American NMD. They would determine that at some point below 1,500 warheads, a 250-missile interceptor system (the final phase 3 configuration of the proposed NMD system) could jeopardize Russia's second-strike capability. Although the world basked in the statement that the nuclear-weapon states committed themselves to an 'unequivocal undertaking […] to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament,'[11] issued at the end of this year's Non-Proliferation Treaty Review Conference, such well-intended pronouncements will not come true as long as security issues such as missile defense linger.

Russia's Reactions to NMD

The first Russian-American presidential summit between Putin and Clinton in early June 2000 led to mixed results from the American president's perspective. Both leaders agreed that there is an emerging missile threat, but Putin did not agree to modifications of the ABM Treaty, as desired by Clinton. A few weeks later, Clinton described the meeting as '[…] everybody talked about how we didn't reach an agreement, Mr. Putin and I, when I was in Russia. And that's absolutely true, we didn't. But we did get a document out of there which I think is quite important, because the Russians acknowledged that there are new and different security threats on the horizon. That is, that it's quite possible that in the next few years, countries not part of the arms control regimes of the last three decades could develop both long-range missile delivery capability and weapons of mass destruction which they could put on warheads, and that none of this would be covered by, essentially, the mutual deterrence structure of the ABM Treaty and all the things we've done since then.'[12].

Soon after the summit, Putin launched a major diplomatic effort to convince European leaders that some form of cooperative short-range missile defense would be preferable to the American plans. The exact form of this proposal remains unclear, but could possibly involve boost-phase defense that would attempt to shoot down ballistic missiles at an early stage of flight before they have released warheads and when they perhaps present easier to hit targets. The US response has been guarded. Cohen replied that the proposal is worthy of consideration when more details are forthcoming, but that it could at best complement, not substitute for, American NMD plans.

A more promising development for curbing the stated principal reason for NMD occurred on July 19, 2000. Putin and North Korean supreme leader Kim Jong-il proposed ending North Korea's long-range missile program in return for help in launching North Korean satellites and possibly other civilian space ventures. This initiative resembles the "*Rockets for Peace*" proposal, first promoted by the Federation of American Scientists in the early 1990s, under which civil space cooperation would be developed in exchange for curtailing missile programs[13]. In practice, this approach has essentially restricted the transfer of Russian missile technology to other nations and could resolve concerns over North Korea's missile programs.

In contrast to the possible carrots of cooperative missile defense with the US and assistance for North Korea's space program, Russian officials have specified possible sticks that could be pointed at NMD. For instance, on June 22, 2000, General Vladimir Yakovlev, commander of the Strategic Missile Force, stated that Russia could decide to abrogate the 1987 Intermediate-Range Nuclear Forces (INF) Treaty, which banned US and Russian medium and intermediate-range ballistic missiles (IRBMs)[14]. Modified intermediate-range Pioner RSD-10 (SS-20) missiles with multiple-independently targetable re-entry vehicles (MIRVs) could go into production. Such missiles would be directed at America's European allies, thereby indirectly putting pressure on the US. Other sticks include MIRVing the newest Russian ICBM, the Topol-M RS-12MR (SS-27) and using the technology of the aging, three-stage Topol RS-12M (SS-25) ICBMs to produce newer, two-stage IRBMs with MIRVs[15]. On July 24, the Norwegian press reported that Russia has targeted nuclear missiles against Norway's *Vardo* X-band radar site, which is allegedly part of the US NMD system.[16] The site is 25 kilometers from the Russian border. General Leonid Ivashov, head of the Defense Ministry's Military Cooperation section, warned that Russia could take other unspecified measures[17]. Furthermore, Russia could continue to stretch out the service lives of its decaying nuclear forces.

Russia's China Gambit: A Moscow-Beijing Axis?

A potential alliance between Russia and China has sounded an alarm among many American analysts, especially conservatives[18]. While Moscow and Beijing are probably a long way from a strong defensive alliance, they have certainly made known their views against American missile defense. On July 18, Putin and Jiang stated, 'The nature of the [American missile defense] plan is to seek unilateral military and security advantages. Implementing this plan will have the most grave adverse consequences not only for the security of Russia, China and other countries, but also for the security of the United States and global strategic stability [...] Therefore China and Russia are firmly opposed to such a system.'[19]. A Beijing senior official tried to downplay any implied threat to the United States by characterizing the Sino-Russian partnership as 'non-aligned, non-confrontational, and non-threatening to any third party'[20].

This latest round of meetings between Putin and Jiang follows on the heels of eight previous meetings between Jiang and former Russian President Boris Yeltsin, during which the leaders have sought to establish a strategic partnership based on a multi-polar world. Although this partnership may fall short of a strategic alliance under which both nations would come to each other's defense, it has spawned more ties than just a common opposition to American dominance, in general, and American missile defense plans, in particular. For instance, Russia has increased arms sales to China over the past decade and has promoted enhanced trade with China. The former activities could eventually serve as a counterbalance to American military influence in East Asia. Such military assistance could strengthen China's hand against Taiwan. However, Russia's political influence in opposing possible enhanced American military assistance to Taiwan is less than what Beijing would like. The latter trade activities, such as a proposed Russian sale of two nuclear reactors to China, could bring the two nations closer together as trading partners, but might do little to lead to closer military ties. However, cooperation in the military and security arenas could some about through an agreement in principle to fight ethnic separatism and terrorism in Central Asia.[21] A Sino-Russian strategic partnership could lead to further diplomatic and political cooperation that could constrain the US. For instance, China and Russia could form a voting block in the United Nations Security Council against any US

sponsored resolutions. They could also apply this type of pressure in other security forums.

China Decries US Hegemony and Missile Defense Plans

Not even a week goes by without a vociferous Chinese condemnation of American missile defense. Over the past year, the rhetoric has become more heated. Chinese expressions of disapproval are not limited to missile defense. This issue is symptomatic of larger concerns. Although the political pronouncements of China's leadership are not as monolithic as during Chairman Mao Zedong's time, the current leadership's views of the United States can verge on the perception, at the risk of simplification, that the United States tends to act unilaterally and to meddle in the internal affairs of other nations. As an example of this view, Jiang in a speech condemning the American bombing of the Chinese Embassy in Yugoslavia stated, 'Relying on its economic, scientific, technological, and military prowess, the United States continues to practice hegemony and power politics and wantonly interferes in the internal affairs of other countries. What it has done has heightened the vigilance of more and more countries and people.'[22]. In contrast, America's leadership generally sees itself as needed more than ever by the world. Again at the risk of simplification, American leaders perceive the United States as a force for the greater good rather than as a global hegemon.

Returning to the present concern of missile defense, China faces the problem that the Republicans by and large (although George W. Bush's foreign policy advisers, especially Condoleeza Rice, the head of this advisory group, generally take a more cautious stance) target their missile defense plans against China and the Clinton administration's plan is the right size to defend against the Chinese long-range nuclear forces in spite of the administration's declared intentions that its missile defense proposal is not directed at China.

American NMD plans have emerged concurrently with Chinese military planning on how to modernize its nuclear forces. China will surely take into account the effect of NMD on its deterrent. Presently, China reportedly has about 400 nuclear warheads with about 20 or so dedicated to intercontinental ballistic missiles that could strike the USA[23]. Chinese leaders have done the math and realized that NMD, if it works as planned, would nullify China's minimal deterrent. The Clinton administration saved them from doing that relatively simple calculation when the January 2000 Talking Points with Russia came to light. This document stated, 'The first phase of deployment will be limited to 100 interceptor missiles. Ultimately, when a second deployment position is added, there will be 200 or so interceptor missiles. This will be enough to knock out several dozen warheads accompanied by advanced defense penetration aids, but inadequate to counter a larger Russian counterstrike.'[24]. Fearing that this could be true, China's leaders would be inclined to ignore the Clinton administration's recent statements that NMD is not intended for China. Intentions aside, capability is what matters.

China could respond to NMD through some combination of military and diplomatic initiatives. Although China's leaders have still not revealed their precise response, they have left little doubt that they will do what is necessary to guarantee their security. According to Ambassador Sha Zukang, Director General of the Chinese Foreign Ministry's Department of Arms Control and Disarmament, 'Instead of [national missile defense] enhancing your security, your security policy will be further complicated. The United States will play the role of a fire brigade rushing from one place to another to extinguish fires. […] It is too early to say what we will do. All I can say is that China will do everything possible to ensure its security, and the measures it will take will be in proportion to the success of [national missile defense].'[25].

While China's military reactions against NMD are probably still being formulated, China is certainly capable of strengthening its arsenal. China's nuclear modernization plans have recently attracted Washington's attention. An American Intelligence Community's *National Intelligence Estimate*, partially revealed in August 2000, foresees that China may decide to deploy up to 200 ICBM warheads by 2015[26]. In May 1999, the *Cox Report* alleged Chinese spying on the USA would result in a more technically sophisticated and larger arsenal. Recently, NMD proponents along with some senior administration officials have downplayed NMD's influence on Chinese modernization plans. They claim that China will continue to modernize its nuclear forces

regardless of NMD. However, they typically fail to distinguish between China's historically slow rate of modernization that has been ongoing for more than three decades versus an accelerated rate that could occur as a reaction to NMD. They also tend to ignore the modernization options facing China. It is in the process of replacing its aging, liquid-fueled, cave- and silo-based missiles that require several hours to make launch-ready with newer, solid-fueled, mobile missiles that would not require a long launch preparation period. While a more modern missile force could appear more menacing, it could more significantly increase the survivability of China's deterrent, thereby promoting crisis stability.

In reaction to NMD, China may decide to increase the number of deployed warheads by either producing more missiles with single warheads or developing and deploying MIRVs and other penetration aids, such as missile defense countermeasures. While China, a developing nation, would probably be reluctant to spend the money to strengthen its nuclear arsenal, it would do so if necessary. As Sha has pointed out, 'To defeat your defenses we'll have to spend a lot of money, and we don't want to do this. But otherwise, the United States will feel it can attack anyone at any time, and that isn't tolerable […] We hope [America] will give this up. If not, we'll be ready.'[27]. Building 200 ICBMs would cost about $2 billion, could be spread over several years, and would expend less than two percent of China's current foreign currency reserves[28].

In addition to a possible nuclear weapons buildup, China has linked missile defense to other arms control and proliferation concerns. In the Conference on Disarmament (CD), China has already blocked talks on the Fissile Material Cutoff Treaty. Instead, China wants to direct the CD to focus on preventing an arms race in outer space (PAROS). China's strong stance on PAROS goes beyond stopping missile defense from being deployed in space. As a new member of the commercial space community, China wants to protect its economic interests in this arena. Perhaps China could be signaling its willingness to consider a grand compromise on limiting NMD deployment in return for US backing on PAROS.

Finally, an issue that so far escapes Chinese compromise is the status of Taiwan, which China considers a renegade province. China has recently enlisted Russia to issue a statement condemning US assistance of advanced theater missile defense (TMD) to Taiwan. While China may be somewhat concerned that advanced TMD could have some effectiveness against the growing Chinese missile force, armed with conventional warheads, opposite Taiwan, it is primarily worried that such US aid would strengthen military ties between the USA and Taiwan, impeding China's reunification goals.

Conclusion

While Russia's and China's ultimate responses to an American NMD deployment are uncertain, these states have clearly made their opposition known and have launched initiatives on many fronts. If NMD stays truly limited, Russia may be willing to accept some modifications to or flexibility in interpreting the ABM Treaty in exchange for possible lower levels in a future START III in possible conjunction with other American assistance. If NMD grows into a large defense system, Russia will likely do everything in its power to maintain a large nuclear arsenal. Regardless of the size of an NMD system, the USA will most likely find itself in a small, with respect to the size of the US arsenal, but heated, arms race with China that would be cause for alarm among those in Congress who view China as a strategic rival. Aside from some more Chinese missiles being targeted at the US, the more serious concern is a probable worsening of Sino-American relations. Already, some American politicians in Congress are clamoring for sanctions against China in response to alleged nuclear and missile proliferation. China, while not a member of the *Missile Technology Control Regime* (MTCR), a cartel that seeks to prevent the proliferation of offensive missile systems, has promised to not transfer complete missile systems and has taken full membership under consideration. If NMD deployment occurs, the USA will find convincing China to join the MTCR even harder. Moreover, NMD deployment could spur Russia and China into closer ties and a possible alliance. However, China, as a developing state, and Russia, as a state in economic and political transition, would be unlikely to purposefully stay isolated from the USA and suffer economically as a result.

Russia and China should continue to engage with the USA on this issue. They should also seek to promote diplomatic and cooperative

measures to prevent the development of a long-range missile threat from *states of concern*. Further, they should refrain from exacerbating the problem by refraining from activities that contribute to proliferation.

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[1] Excerpt from President Bill Clinton's press conference, 2000, June 28, available at http://www.fas.org/spp/starwars/program/news00/000628-nmd-wh1.htm.

[2] In other publications, we have written on the various aspects, including all four deployment criteria, of national missile defense. For example, see J. Pike, "Ballistic Missile Defense: Is the U.S. 'Rushing to Failure'?" *Arms Control Today*, 1998, April, pp. 9-13; J. Pike, "National Missile Defense: Rushing to Failure," *F.A.S Public Interest Report*, 1999, November/December, pp. 3-10; C. Ferguson, "Bait and Switch – Is Anti-North Korean Missile Defense Designed for China?" *F.A.S Public Interest Report*, 1999, November/December, pp. 10-12; C. Ferguson and J. Pike, "National Missile Defence: Developing Disaster," *Disarmament Diplomacy*, 2000, March, pp. 3-5; C. Ferguson, "Sparking a Buildup: U.S. Missile Defense and China's Nuclear Arsenal," *Arms Control Today*, 2000, March, pp. 13-18; and John E. Pike, "The 'Rogue States': No Clear and Present Danger," *F.A.S. Public Interest Report*, 2000, July/August, pp. 3-12. All of these articles are available online and hyperlinks to them can be found at http://www.fas.org.

[3] Secretary of Defense William S. Cohen, Excerpt from Testimony on National Missile Defense before Senate Armed Services Committee, 2000, July 25, available at http://www.senate.gov/~armed_services/statemnt/2000/000725wc.pdf.

[4] For a fuller discussion of this principle and the other principles of arms control, see, for example, T. Schelling and M. Halperin, *Strategy and Arms Control*, Pergamon-Brassey's Classic, 1985.

[5] See J. Pike, "The 'Rogue States': No Clear and Present Danger," *F.A.S. Public Interest Report*, 2000, July/August, pp. 3-12 and J. Pike, "National Missile Defense: Rushing to Failure," *F.A.S Public Interest Report*, 1999, November/December, pp. 3-10.

[6] From the Joint Statement on Anti-Missile Defense signed by Russian President Vladimir V. Putin and Chinese President Jiang Zemin, 2000, July 18, available at http://www.fmprc.gov.cn/english/dhtml/.

[7] United Nations General Assembly Resolution 54/54 A, "*Preservation of and compliance with the Anti-Ballistic Missile Treaty*." It passed the General Assembly on December 1, 1999 with 80 in favor, 4 against, and 68 abstaining. The full text can be found at http://www.un.org.

[8] For example, see D. Rivkin, Jr. and L. Casey, "Six Reasons Why Arms Control Advocates are Wrong: The ABM Treaty is Not in Force," Heritage Foundation Backgrounder, No. 1375, 2000, June 7.

[9] This document specifies the 'Successor States' to the ABM Treaty. Article I states, 'The United States of America, the Republic of Belarus, the Republic of Kazakhstan, the Russian Federation, and Ukraine, upon entry into force of this Memorandum, shall constitute the Parties to the Treaty.' The full text of the Memorandum is available at http://www.fas.org/nuke/control/abmt/text/ad-mou.htm. The Clinton administration has not submitted it to the Senate because Senator Jesse Helms, the Chairman of the Senate Foreign Relations Committee, which is the starting point for Senate ratification of treaties and other international agreements, has warned that he will work toward the Memorandum's defeat. The US Executive Branch will have to wait for a more opportune time before sending the Memorandum to the Senate.

[10] ABM Treaty "Talking Points," http://www.thebulletin.org/issues/2000/mj00/treaty_doc.html.

[11] For the complete text, see, for example, http://www.basicint.org/nuk_00revcon_indx.htm.

[12] Excerpt from President Bill Clinton's press conference, 2000, June 28, available at http://www.fas.org/spp/starwars/program/news00/000628-nmd-wh1.htm.

[13] *F.A.S. Public Interest Report*, 1992, May/June, available at http://www.fas.org/faspir/pir0592.htm.

[14] Simon Saradzhyan, "US NMD Effort Fueling Russia's New Missile Plan," *Defense News*, 2000, July 10, p. 1.

[15] Ibid.

[16] T. Valasek, "Russia Threatens Norway Over Radar Base; Says Base Targeted with Nuclear Missiles," http://www.newsmax.com, 2000, July 24; "Russia Threatens Nuclear Attack on Radar," *Jane's Defence Weekly*, 2000, July 26, p. 6.

[17] Ibid.

[18] For example, see Testimony of Professor Stephen J. Blank of the Strategic Studies Institute of the US Army War College, Full Committee Hearing on Military Capabilities of the People's Republic of China, House of Representatives, 2000, July 19, available at http://www.house.gov/hasc/testimony/106thcongress/00-07-19blank.html.

[19] From the Joint Statement on Anti-Missile Defense signed by Russian President Vladimir V. Putin and Chinese President Jiang Zemin, 2000, July 18, available at http://www.fmprc.gov.cn/english/dhtml/.

[20] *London Times*, 2000, July 18.

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[22] "Text of Jiang Zemin 13 May Speech," FBIS-CHI-1999-0513, 1999, May 13.

[23] R. Norris and W. Arkin, NRDC Nuclear Notebook, "Chinese Nuclear Forces, 1999," *The Bulletin of the Atomic Scientists*, 1999, May/June, also available online at http://www.thebulletin.org.

[24] ABM Treaty "Talking Points," 2000, January 20, available at http://www.thebulletin.org/issues/2000/mj00/treaty_doc.html.

[25] *The Washington Post*, 2000, July 14, p. A1.

[26] *The New York Times*, 2000, August 10, p. 1.

[27] *The New York Times*, 2000, May 11, p. A1.

[28] Shen Dingli, talk given at the Carnegie Endowment for International Peace's Non-Proliferation Conference. 2000, March 17.

Analysis

NUCLEAR POLICY: STRUCTURE AND KEY ASPECTS[1]

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Nuclear policy is the system of views and practical measures that determine long-term and short-term prospects of nuclear weapons. Such a system is reflected in official documents of states, their foreign policy, doctrines, and concepts of the development of nuclear weapons and the nuclear weapons complex.

Before the late 1990s, Russia practically had no coherent nuclear policy in the aforementioned meaning of the word: international agreements, declarations, statements, national security demands and plans of weapons development contradicted each other.

These contradictions resulted from subjective and objective factors: the trend for general and complete nuclear disarmament and forming the nuclear-free world; the attitude towards nuclear weapons as the primary means of preventing the large-scale war and to preserve Russia's international status; and the difficulties of maintaining the required level of the nuclear arsenal in the conditions of economic crisis.

The first trend is aimed at solving radically the problem of maintaining global nuclear security to the benefit of the international community; the second trend indicates a willingness to provide national security; the third trend is connected with the process of stabilizing the Russian economy and ensuring economic growth. The rational correlation of these three objectives should become the core of activities to shape the state nuclear policy under the current circumstances.

The significant impact on the emergence of the aforementioned contradictions was caused by a shift in the attitudes of senior political leadership towards nuclear issues in the early 1990s. It became the bargaining chip for achieving compromises with the West and the USA in other areas, which seemed more important for Russia at that time.

However, since the mid-1990s, the policymakers and the public have come to a single conclusion: nuclear weapons play a vitally important role in defending Russia's independence and integrity and in pursuing Russia's national interests. The 1996 *Presidential National Security Address* to the Federal Assembly stated that 'the Russian Federation preserves the status of nuclear power in the foreseeable future to prevent a nuclear attack or large-scale aggression with the use of conventional arms and forces against Russia or its allies, as well as to provide the newly independent states (NIS) of the Commonwealth with the nuclear guarantees as one of the components of military agreements.'

In 1998-1999, the work to prepare a number of documents concerning the development of some nuclear weapons and nuclear weapons complex was under way. In 2000, Russia approved the amended *Concept of National Security* and the *Military Doctrine*.

Unfortunately, a number of decisions concerning nuclear forces' development have not been implemented due to the lack of appropriate funding[2]. The delayed tests of new weapons systems and late modernization of existing arms have led to the growth of required expenditure. The unique technologies and specific materials start to vanish. As a result, in the nearest future, the state of the nuclear arsenal will depend not on military-political decisions, not on requirements of strategy and tactics, but on the state of scientific, production, and technological basis.

Structure of Nuclear Policy

To concentrate the funding for maintaining the key components of the nuclear arsenal, it is necessary to practice a comprehensive approach to nuclear weapons as the means to ensure foreign policy activities of the state in the world arena. The elaboration of such an approach became possible after the approval of the *Concept of National Security* and the *Military Doctrine*.

Along these lines, it is quite important to solve the problem of formulating the nuclear development strategy and scientific basis for the structure and level of the nuclear arsenal in a new geopolitical situation, at the stage of actual and deep reduction. The current situation has given rise to some negative factors, which emerged as a result of poor decisions in the area of nuclear weapons made during the arms race period and veiled by the excessive might of the US-Soviet nuclear arsenals. There is no methodology for the nuclear arms reduction process. All this ought to become an issue of grave concern and thorough research in the course of shaping modern nuclear policy of the state. At the same time, it is worth mentioning several aspects of nuclear policy, which determine the prospective development and fate of nuclear weapons in Russia:

- international legal;
- military-political;
- military;
- military-technical;
- technological.

This division is relative, since all aspects are intertwined, but the suggested classification enables us to take into full account all necessary tracks of shaping Russia's nuclear policy.

The *International legal* aspect covers existing and negotiated international agreements and unilateral commitments determining the fate of nuclear weapons in Russia and assesses their impact and their practical implementation nowadays and in the distant future.
The *Military-political* aspect links plans of nuclear weapons development with the military-political situation in the world and a strategy for maintaining international security and Russian national interests. The major factors to be analyzed are as follows:

- the scope of potential military threats to Russian national security and the measures necessary to neutralize them by taking practical steps in the area of nuclear weapons;
- the officially declared functions of nuclear weapons and possible military-strategic terms of their employment;
- strategic missions of various types of nuclear weapons.

The purely *military* aspects of nuclear policy are singled out to take into account the major ways of providing Russian military security, which requires a further detailed description of military strategies and concepts. These are:

- the list of combat missions for different kinds of nuclear weapons;
- the plans of nuclear weapons use, the list of probable targets for different strategic situations, the requirements to the level of inflicted damage;
- decision-making concerning different nuclear weapon types;
- the priorities of the employment of nuclear weapons and the sequence of their use depending on the character of threats and forms of armed conflicts.

The *Military-technical* aspects affect the concept of nuclear weapons development and their qualitative and quantitative parameters. The work being done about these aspects of nuclear policy is the focal point linking all other components. Military-technical policy should correspond to the character of potential threats and the nation's capability to respond to them with the help of nuclear weapons. It is also important nowadays to take into account the economic and productivity capacity of the Russian nuclear complex. The key elements of the military-technical component of nuclear policy are the following:

- the structure, qualitative and quantitative levels of nuclear weapons;
- the requirements to improve nuclear weapons by enhancing their efficiency and ability to counter different steps taken by a potential enemy;
- trends in the development of nuclear arms, including efforts to diminish the environmental hazard of their use;
- endeavors to ensure their combat viability in typical combat situations;
- activities to ensure the required level of safety and security of nuclear weapons;
- the necessary momentum of commissioning new nuclear weapon systems and equipment.

The majority of the above-mentioned factors are closely connected with the fourth group – the *technological* (military-industrial, internal policy, etc.) aspects of nuclear policy. Their thorough elaboration is indispensable due to the difficulties of the transition economy in Russia, including its nuclear complex. The task of the technological component is to work out the strategy aimed at maintaining the required

sectors and elements of the nuclear complex. The key technological factors of nuclear policy are:

- the process of decommissioning different types of weapons;
- the capability of producing nuclear weapons, which depends on the amount of funding;
- the terms and scope of eliminating nuclear weapons and munitions to be dismantled and with expired service life;
- the ability to increase the output in case of an unfavorable development of the military-political situation;
- budgetary policy in the area of nuclear weapons.

The interconnection of these five components of nuclear policy is evident. On the one hand, the required qualitative and quantitative level of nuclear weapons should be maintained with the help of the appropriate technological basis and should contradict neither international agreements nor foreign policy. On the other hand, to maintain such industrial levels in the face of financial restrictions, it is useful to define priorities within the development of nuclear weapons stated in the relevant military-political decisions. Only rational and balanced nuclear policy can determine and ensure the sufficient level of the nuclear arsenal.

Below we study in detail the international legal, military-political and military-technical aspects of the Russian nuclear policy. The military and technological aspects may become the topic for separate research, as they differ from country to country, and thus are not examined in this article.

International Agreements and Nuclear Policy

The ultimate goal of the agreements concerning nuclear weapons is to reduce the nuclear threat to the world community and to provide an atmosphere for the safe and peaceful development of a nuclear energy sector. International consultations and discussions lasted for 15 years and resulted eventually in the NPT's entry into force in 1970. The essence of the NPT is the voluntary refusal of the non-nuclear weapon states to acquire nuclear weapons (Articles I and II). At the same time the nuclear weapon states pledged to promote the spread of nuclear technologies for peaceful use (Article IV) and to commence the process of nuclear disarmament (Article VI). The NPT with all its protocols and supplements contains global guidelines for the nuclear activities of participating states.

Beside the NPT, there are a number of global agreements placing certain restrictions on the development and maintenance of nuclear weapons in general. One of these agreements is the CTBT, which was open for signature in 1996, but is yet to become effective. The CTBT is a disarmament treaty, since its provisions call for the reduction of nuclear arsenal size and hamper the creation of a new generation of nuclear weapons. The intensity of the cutbacks will differ from state to state. The nuclear weapon states are forced to invent the technology for maintaining their nuclear arsenals without testing. If there is enough political will and resources, this problem can be successfully solved. This nature of the treaty was confirmed somehow by the very US Senate's refusal to ratify it.

It is worth mentioning a number of other agreements concerning the limitation on natural nuclear tests and the process of consultations on banning the production of weapon-usable fissile material.

This system of international treaties has more and more influence on the process of nuclear weapons development and the maintenance of existing nuclear arsenals. This is why preparation of new agreements should become one of the substantive elements of a systematic approach towards solving the complex problems of nuclear weapons and be the most important aspect of nuclear policy.

The area of special focus should be the idea of nuclear disarmament, which is realized nowadays in the form of bilateral agreements between Russia and the USA concerning nuclear arms control and reduction. The developments in this area depend on a number of factors.

First among these is the commitment of the nuclear weapon states to implement the NPT requirements related to nuclear disarmament.

Second is the lack of adequate international systems to ensure the required level of security; this accounts for perception of nuclear weapons as a cornerstone of strategic stability.

Third is the willingness of the nuclear weapon states to use their nuclear status and nuclear

weapons themselves to pursue their own national interests. This desire was a crucial argument for signing the bilateral agreements such as the INF Treaty, START I, and START II.

The analysis of the negotiation process related to the SNF enables us to conclude that START I and START II only follow the objective process of reducing excessive nuclear arms, which was exacerbated by a difficult economic situation in Russia.

To strengthen its security in the process of elaborating the treaties, the USA strove not only for quantitative reduction of the nuclear arsenals, but also for obtaining as much information as possible about Russian nuclear weapons and to create additional problems, including economic, to impede maintenance and development of Russian nuclear arsenal. Thanks to the perfect use of the tactics of political decision-making, the USA managed to procure the agreements, which are quite beneficial to Washington. The two treaties do not diminish parameters of strategic stability, but they are not equal by nature, infringe Russia's national interests, and weaken its military security because of the large reverse potential of the US nuclear arsenal.

The negative aspects of these agreements have been studied in detail and widely discussed in open and classified publications[3]. The objective of analyzing the ratified treaties is to rule out possible mistakes in the course of preparing new arms control agreements and hence, to make them more sustainable and viable.

At present, the START III consultations are under way and they take into account the provisions of the 1997 Helsinki statement made by the US and Russian presidents. The analysis of the consultations indicates a real chance for fixing and further exacerbating inherent START I and START II mistakes. Publications on the matter mostly discuss the level of nuclear forces sufficient for deterrence, which, as a rule, is devised without any correct estimates and without examining the structure of the treaty.

The existing treaties (INF, START I, and START II), framework agreements and unilateral statements concerning nuclear arms limitation and reduction are based on the principle of controlling the *movement* of nuclear weapons and deal chiefly with delivery systems. It is easier to supervise reduction and elimination of launchers, whereas the production of new delivery systems require time and is quite difficult to conceal.

Through the process of START III negotiations, Washington seeks the reduction of, limitation of and control over nuclear arsenals and the transparency of Russian activities in the course of strategic offensive arms elimination. At present, it is not a matter of control over the *movement* of nuclear weapon systems any more, but of monitoring nuclear activities of the states. This gives a new meaning to the problem of nuclear disarmament. We believe that this approach may be possible only when the international community adopts the concept of general abolition of nuclear weapons.

There are a number of circumstances that determine the attitude to the process of nuclear arms reduction and control and that should be taken into account in the process of negotiating START III.

Practically each international agreement concerning nuclear weapons provokes certain negative processes in the nuclear weapon complex. These processes become more and more intense as the parties move from eliminating excessive nuclear arsenals to reducing the arms required for maintaining the state military security. In principle, the nuclear arms reduction will eventually result in a situation where one of the parties is not able to accomplish a combat mission with an equal number of warheads. This will happen because of the structure of the treaties, which impose restrictions on the composition and organization of the SNF and the characteristics of the nuclear weapon systems (START I and START II are based on this concept). Such an approach leads to the infringement of national interests of either party and has no future.

The world needs a new ideology of nuclear disarmament, which will limit only the total number of nuclear warheads attributed to deployed launchers. There should be no restrictions concerning the structure of the SNF and the characteristics of the missiles (heavy, light, single-warhead, MIRV, etc.). It will be up to the parties to choose the best parameters to ensure deterrence. After these parameters are selected, they are declared in a memorandum to the treaty to provide for verification.

The major goal of the new START treaty should be to equalize quantitative parameters of strategic nuclear arsenals without hampering the maintenance of the most efficient structure of the SNF as possible. The treaty should state the basic principles of nuclear arms reduction to the agreed upon level and exclude the possibility of creating any opportunity for reversal. These guiding principles should mainly affect delivery systems, since elimination and production of nuclear munitions is more dynamic and more difficult to control. Such a concept of the treaty would: enable each party to compensate for the difference in qualitative parameters of the SNF, ensure an early response to the US NMD deployment plans by allowing for the selection of an optimal structure and characteristics of the strategic forces, eliminate the problem of reverse potential, and encourage other nuclear powers to join the arms reduction process without affecting their national interests. Moreover, this structure of the treaty would be more flexible and would facilitate negotiations.

Experts have been recently discussing transparency issues. According to START I and START II, excessive warheads are downloaded from deployed launchers to ensure the required level of nuclear arsenal. At the same time, the gadgets for mounting warheads on heavy bombers and the launching pads of the MIRVed ICBMs are not dismantled, which causes the problem of reverse potential. This problem is aggravated by a wide use of aircraft to carry dual-use cruise missiles. The solution to the problem is the elimination of dismantled munitions and openness of this process.

As far as the sub-strategic weapons are concerned, this situation is typical due to the dual use of the majority of weapons systems, i.e. the possibility of arming them with conventional and nuclear warheads. Hence, to reduce the nuclear component of sub-strategic weapons, it is necessary to eliminate nuclear munitions.

Thus, efficient nuclear disarmament can exist only if there are appropriate verification measures in the nuclear area. In general, this is a fundamentally new - *technological* - level of international arms control efforts, which has not been studied yet.

In order to decide what to control and how to verify, special research is required. One can set up the reliable system of control over the elimination of nuclear munitions. Such system in conjunction with the process of deactivation of nuclear weapons will provide the parties concerned with sufficient information about the elimination of decommissioned warheads.

However, the amount of munitions depends on a correlation between production and elimination of nuclear weapons, i.e. the balance between commissioned and decommissioned munitions. Therefore, the need for verifying existing nuclear arsenals emerges. Such control can take the form of an information exchange of the number of disposable nuclear warheads, annual production and dismantlement. As a result, verification would cover the mobilization capability of the nuclear weapon complex. When may this verification emerge and how possible is it? On the whole, this problem can be identified as the problem of transparency of the military-nuclear activities of the state.

Military-Political Aspect of Nuclear Policy

The military-political component of nuclear policy depends on the military-political situation in the world, international security strategy, Russian national interests, and role of nuclear weapons in pursuing these interests.

Some results of our research in this area make us come to the following conclusions. The Russian Federation is a nuclear weapon state. Nuclear weapons contribute to sustainable and independent foreign policy, which ensures the realization of its long-term interests at the global and regional levels, maintains Russia's role as one of the world leading centers and a guarantor of international stability. Presumably, the Russian Federation will strive to preserve its nuclear status until other nuclear weapon states exist and until there is a threat of nuclear and other WMD proliferation. The nuclear arsenal is a powerful military-political instrument for pursuing national interests in the void of an efficient system of global and regional security, which well describes the forming geopolitical situation today.

The key function of nuclear weapons is maintaining strategic (global) stability: to prevent wars and armed conflicts by deterring potential enemies against waging nuclear war or conventional aggression (whose scale will exceed the capability of Russian conventional forces) against Russia or its allies. Nuclear

threats are contained by the ability to inflict assured damage on an aggressor in response. The deterrence against large-scale non-nuclear aggression is based on the ability to hit the enemy with limited counter-force and counter-value strikes, thus forcing him to stop the hostilities.

The second variant of deterrence works only if the state possesses the right for the first use of nuclear weapons in response to the enemy's WMD attack or large-scale conventional aggression, which can be critical to the security of the state. The right for the first use of nuclear weapons is stated in the *Military Doctrine* of the Russian Federation.

It is noteworthy that the Soviet Union didn't believe in the strategy of mutually assured destruction and didn't recognize the concept of nuclear deterrence for political reasons. All research and theories in this area were conducted abroad. According to the NATO experts, who participated in studying the problem of deterrence in 1986 at the request of the UN, military deterrence means deterring the enemy against hostilities by convincing him that such actions will fail or will not be cost-efficient, since they will provoke military counteraction[4]. Nuclear deterrence is deterrence by threatening to use nuclear weapons.

So far, nuclear deterrence has been based on the concept of mutually assured destruction. The viability of this concept was accounted for by the motivation of the parties to make a nuclear missile strike. Recently, approaches to the concept and to its contents have been evolving. The reason for that is the development of partnerships among the states possessing nuclear and missile technologies. Moreover, the parties realize that it is impossible to gain something or to improve one's positions as a result of large-scale nuclear war. The deterrence concept has also been expanded to cover conflicts with irrational actors, i.e. ethnic, religious, clan strife, and conflicts with terrorist regimes.

The essence of the changes is the "maintenance of mutual deterrence at the maximum lower level meeting the requirements of preserving stability"[5]. We believe that the implementation of multilateral minimum nuclear deterrence is possible only after detailed analysis of the conflict potential among the parties and the levels of unacceptable damage, as well as the wider use of the psychological aspects of nuclear deterrence. The extra influence of psychological aspects is increased by quantitative parameters of the assured damage. The most important factors are the ensured possibility of a retaliatory strike, uncertainty about the results of this strike and plans of using nuclear weapons against the targets, which are the most precious for political elite of the enemy.

At the end of the section, let us formulate the major principles of nuclear deterrence in the current conditions:

- the credibility of the combat use of nuclear might;
- the wide knowledge of key provisions of the nuclear policy to pursue national interests and maintain military security;
- the resolution of the top military-political leadership to use nuclear weapons if necessary;
- the uncertainty about the results of the nuclear strike;
- the maintenance of qualitative and quantitative characteristics of the strategic and tactical nuclear arsenal to ensure its efficient combat use, i.e. at the level, sufficient for accomplishing combat missions.

Military-Technical Aspects of Nuclear Policy

The major military-technical problems emerging at the current stage of nuclear weapons development are as follows:

- to ensure reliable and efficient combat use of nuclear forces in the conditions of their deep reduction;
- to provide a scientific basis for devising the minimal required level and rational structure of nuclear forces.

The existing level of the nuclear arsenal and corresponding combat missions, which were adequate to the period of tough ideological confrontation, call into question the credibility of the combat use of nuclear weapons under new circumstances and, hence, their deterrence characteristics. One cannot preclude the escalation of conflict to the global scale, despite the availability of nuclear weapons. Nowadays, one of the most urgent issues is the revision of norms and criteria for unacceptable damage. This evaluation includes correctly understanding the consequences of nuclear strikes, taking into account both the values of

the parties and the significance of certain facilities and army units.

The problem can be solved by providing a sufficient foundation for calculating and devising minimal required levels and structure for a nuclear arsenal as well as the characteristics of weapons systems. There are plenty of publications concerning nuclear weapons and the above-mentioned issues[6]. However, one can rarely meet well-grounded solutions to the problem. Most of the proposals are based on expert assessments and often have a biased character. Without giving sufficient arguments, the experts either oppose the development of the air-force component of the triad, or speak about low efficiency and high costs of developing the sea-based component of the SNF. The efficiency of nuclear weapons is normally studied at the average level and of certain weapons systems only. Such simplified approaches towards analyzing the system of strategic weapons (SSW)[7] emerged in the times of the arms race. The approximate assessments of the weapons systems' efficiency at that time were compensated by an excessive number of nuclear forces: a combat mission was accomplished by practically any group of nuclear forces independently and completely. This accounted for the *assured* accomplishment of combat missions: the enemy would have been destroyed three times.

As the nuclear arsenals are reduced, the situation will emerge when the combat task cannot be performed or is not fulfilled with a 100% guarantee even if the entire triad is involved in its accomplishment. Hence, it is necessary to set aside the present-day abstract *assured* assessments and to get down to estimating correctly the level of damage, taking into account fundamental characteristics of the SSW:

- the SSW is a unique system, which can be used only once; the decision-making concerning its employment is connected with high risk;
- the efficiency of the SSW is determined by the inter-dependable characteristics of its components; the system contains no independent elements and is indivisible.

If these characteristics are taken into consideration, it is possible to assess the efficiency of deterrence not only from the point of view of damage, but from the perspective of risks depending on the level of damage and the possibility of its infliction. This may also enable us to provide a scientific basis for the concerted development of all SSW's components. The risks may also intensify the psychological effects of deterrence and to maintain the deterrence at the minimal level of nuclear arsenal.

The minimal levels of the nuclear groups differ and depend on various factors. The key factors determining these figures are:

- the deterrence damage: the set of combat missions designated according to possible scenarios of hostilities, types of targets, their number, their vulnerability, etc.;
- the counter-force potential of the enemy's weapons systems;
- the combat potential of the enemy's defense systems;
- the balance of offensive, defensive, command and control components of the SSW and the characteristics of appropriate weapons;
- the planned scenario of the SSW combat employment.

In general, the analysis and the solution of the aforementioned problems lie within the framework of providing a methodological foundation for a comprehensive nuclear arms reduction process.

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[1] The authors would like to express their gratitude to Anatoly Akimov, Ivetta Bystrova, Alexander Getmanets, Vladimir Dyachenko, whose assistance and comments were extremely helpful to the authors in the process of preparing this article.

[2] *Nezavisimoye voennoye obozreniye*, 2000, No. 16, p.1.

[3] See: L. Volkov, G. Voronin, START II: Problems and Opinions. *Voenny Parad*, 1997, July-August.

[4] Research on Deterrence: Compilation of Opinions. UN Fact Sheet No. 51, 1987, p. 5.

[5] R. McNamara. *Through Mistakes to Catastrophe. Survival in the First Century of Nuclear Age*. M., 1988, p. 106 (Russian edition).

[6] See: V. Stepanov, Destabilizing Factors of the Strategic Offensive Arms. *Voennaya mysl*, No. 3, 1999.

[7] The system of strategic weapons (SSW) is the combination of weapons systems assigned to offensive (SNF), defensive (missile defense, air defense, anti-submarine warfare) and C3I (early warning system, command and control system) sub-systems designated for accomplishing deterrence missions.

Analysis

REGIONAL THREATS TO RUSSIA: THE NUCLEAR FACTOR

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The breakdown of the bipolar world in the early 1990s and the shift of military threats from the global to the regional level resulted in dramatic changes in assessing the role of nuclear weapons in repelling these threats. One can say that a transformation of the very principles of nuclear deterrence has occurred.

In the situation where the political aspects of military construction contradict the military-strategic and military-technical aspects, the problem of *weak force* emerges. The essence of this problem is that the use of nuclear weapons significantly increases combat capabilities of troops but leads to huge political costs.

Along these lines, it is worth remembering that the nature of nuclear deterrence is to achieve political goals, not with military victory in nuclear war, but with the threat of war. However, the mechanism of implementing such a threat that was clear in the context of bipolar confrontation (when superpowers extrapolated their nuclear might to ensure regional stability) is called into question in the post-bipolar world. For instance, this ambiguity concerns specific combat missions and stages of their accomplishment, which, in fact, determine quantitative and qualitative characteristics of nuclear forces and provide the basis for the SNF's development.

The Transformation of Nuclear Threats

After the disappearance of traditional military threats, which the USA and the USSR confronted for the last 50 years, the threat of global nuclear war has been replaced by the danger of regional nuclear wars. These conflicts require new concepts of nuclear weapons employment and new nuclear means. Therefore, the US nuclear strategy has acquired a new aspect - scenarios of nuclear war against the Third World and even against non-state actors.

After the end of the Cold War and the Soviet defeat, the USA has begun to shape the system of international relations to ensure Washington's supremacy. However, some experts believe that this approach is not absolutely convenient for the USA, since the *burden of responsibility* and some *parts* of it in particular are too heavy[1]. At the same time, the 1999 NATO aggression against Yugoslavia demonstrated the USA made a choice in favor of being the *only superpower* and the *leader of free world*[2].

Therefore, it is useful to emphasize failed attempts to attribute to the concepts of nuclear weapons employment the characteristics of non-provoking, non-aggressive, fair, and preventive defense. The USA constantly demonstrates its willingness to skip from conventional hostilities to the nuclear phase. Obviously, such a step is possible only if nuclear weapons suit the political goals of the war, since the political objectives are the final result of resorting to force. Political objectives are the key issue to that effect. Nonetheless, under certain circumstances, strategic requirements and the urgent problem of selecting the direction of military construction may serve as independent factors determining the political objectives of the war and the ways to achieve such goals.

Moreover, combat missions should take into account a potential enemy. Hence, nuclear planning not only envisions the image of the enemy, but its perception of the world. It is not only the transforming world that contributes to the re-formation of nuclear forces, but also the US, Russian, and other declared nuclear weapons states' strategy for constructing nuclear forces helps to shape a new world order.

Russia stands against a uni-polar world and points out the need to form a multi-polar world order contrary to the US efforts. New divisions into power centers implies[3] the existence of European, Asia-Pacific, Middle Eastern, and Eurasian (based on the territory of the former Soviet Union) regions, whose borders have yet been defined. The debate about *regionalism* received a new impetus, thanks to a key assumption concerning the *qualitatively new situation* in the post-Cold War world. These changes are allegedly of a radical character and indicate the vanishing of old poles (the USSR) and the emergence of new ones. At the same time, according to the RF *Concept of National Security* (Presidential Decree No. 24 of January 10, 2000), 'the state of the domestic economy, the system of power and civil society, the sociopolitical polarization of society and the criminalization of social relations, rising organized crime and the increasing scale of terrorism, the straining of inter-ethnic and international relations generate a wide range of internal and external threats to state national security'. Thus, Russia not only confirms US conclusion about the deformation of the global nuclear confrontation, but also emphasizes that these threats often originate from non-state actors.

Under these circumstances, modern Russian theory and the practice of military construction are more and more incline to maintain that Russia's geo-strategic situation leaves Moscow only one way out - to provide for its national security by using its Great Power status. Required military balance and time-out to leave the lists of world economic outsiders are ensured chiefly by nuclear deterrence. However, Russian military strategy, unlike that of the USA, has so far been based on a disputable and speculative assumption that nuclear deterrence, appropriate for the bipolar world, will ensure Russian regional security in the recent conditions of expanding threats. Russia presumed that to deter other international actors, beside the USA, it is necessary to lower the threshold for using strategic nuclear weapons.

Combat use of strategic nuclear weapons was left as a last resort, if a threat to the very existence of Russia emerges. This condition can be applied only to conflicts with the USA, NATO or China (with some reservations and specific situations). At the same time, in case of large-scale war with other international actors, a threat to the existence of Russia may not emerge. Hence, nuclear deterrence is not effective against such states and non-state actors, since they do not take into account the Russian SNF in their estimates of Russian military might.

This conclusion is true not only for Russia. Let us remember that in the course of a large-scale war against the USA in the Gulf, non-nuclear Iraq did not take into consideration the fact that it was trying to gain military victory over a great nuclear power.

Presumably, this is one of the reasons why the new Russian Concept states that the use of military force, including nuclear weapons, may occur 'to repel armed aggression if all other measures to resolve the crisis have been exhausted or have turned out to be ineffective.' The need to repel armed aggression does not always coincide with the very fact of aggression. Therefore, Russia does not exclude preventive actions, including the use of nuclear weapons. Moreover, the term "*critical situation*" is quite vague.

Thus, the shift of global nuclear confrontation to a regional level in the conditions of deep economic and sociopolitical crisis has led to certain changes in strategy: now it is not a matter of nuclear deterrence, but combat use of nuclear weapons in a wide range of situations, proceeding from advisability and without any political or other restrictions.

The European Region

The nuclear factor in the European region was traditionally connected to the policy of nuclear deterrence, whose roots reach back to the era of NATO's *flexible response*. The latter implied the use of nuclear weapons to contain the Soviet conventional forces, which enjoyed superiority at that time. After the Cold War, Europe began to feel the discrepancy between nuclear confrontation

between the blocs and the national interests of the majority of European countries.

Bearing in mind the existing economic, political and military unity of Europe and the USA, NATO dominates regional policy (NATO unites three out of five declared nuclear weapon states). The alliance admits that it has overwhelming military superiority over Russia in conventional arms and supports the US statement that US fundamental interests cannot be defended without the ability to use nuclear weapons. NATO keeps the right to change the disposition of its nuclear forces depending on the circumstances[4]. Even officials from Central Europe show their willingness to deploy NATO's nuclear weapons on their territory if necessary. Therefore, the geopolitical organization of European territory conforms to the well-known scheme of nuclear balance, which is applied now not at the global, but at the regional level.

Although French and British nuclear arsenals have always served national missions (e.g. the French concept of *all-azimuth defense*), they were also designated to complement the US nuclear might. In the void of bloc confrontation, Great Britain plans to commission US-made Trident II missiles for its sea-based nuclear forces and to modernize the computer system controlling its SSBNs. Meanwhile, at the regional level, London intends to use both tactical nuclear weapons and their SNF, which are charged with tactical missions[5]. France has started to pay more attention to the development of a new generation of sub-strategic nuclear missiles[6] and to apply nuclear strategy to regional conflicts, calling this "*la dissuassion du fort au faible*" [deterring the weak and the strong - **Ed**.]. For that purpose, France proves the need to maintain: its Hades missile system (with a range of 480 km), which is now in reserve at a base in northern France, re-deploy Mirage-2000N aircraft to the south of France, examine the possibility of arming SLBMs with nuclear warheads with *regulated yield*, and move the zone for SSBN patrolling to the Indian Ocean[7].

Official Russian policy in the European region proceeds from the assumption that nuclear weapons should provide an adequate response to unpredictable changes in the status of NATO expansion to the East. Russia believes that the criteria for unacceptable damage that underpins its concept of nuclear deterrence can be applied to the new conditions[8]. However, Russia does not take into account NATO's existing superiority in conventional arms (Russia has no realistic chance to overcome this superiority in the foreseeable future), which enables the western bloc to choose any strategy of coercion in case of conflict[9].

Along these lines, we have to point out that the very notion of *unacceptable damage* can be applied to global confrontation only[10]. In conflicts on a smaller scale and when the aggressor has a large field for maneuver, it is impossible to calculate *unacceptable damage*, since one cannot define an acceptable *price* for achieving certain military-political goals even for himself, let alone the enemy. As NATO military superiority in conventional forces grows and the threat of large-scale war for Russia diminishes, this should be a matter of resisting limited combat actions. For that purpose, it is useful to maintain a level of combat potential for non-strategic forces that would prevent the enemy from conducting operations with a low and safely calculated risk and would make it difficult to gain a military victory in its classical meaning.

Such uncertainty can be arranged with the possibility of using TNW not in response to inflicted *unacceptable damage*, but in response to the *unacceptable fact* of waging the war itself. As far as regional conflicts in Europe are concerned, it is easier to speculate about the criteria for the *unacceptability* of conflict rather than for the *unacceptability* of damage. This is why, as the threat of large-scale war becomes more and more hypothetical, debate in Europe and the USA focuses on the possibility of making preemptive nuclear strikes.

Some experts believe that it is impossible to find the rational for the need of making a first (even limited) nuclear strike. However, such an approach is not quite correct.

Firstly, before the process of deep strategic arms reduction started, the most common possible deployment for the weapons in combat was their use in a first (preemptive) nuclear strike. Only when the parties recognized the excesses of their nuclear arsenals, did they began to think about different types of retaliatory strikes. Deeper arms reductions may lead to the opposite conclusions again.

Secondly, the aforementioned approach does not take into account the undeclared nuclear weapon states, which possess or may soon acquire nuclear weapons and have their own visions for the combat use of nuclear weapons.

Thirdly, the USA is strongly against committing itself not to use nuclear weapons first and merely changed its terms for making the first strike.

Under these circumstances, it was quite correct of Russia to state in its *Concept of National Security* the right to use nuclear weapons in a first strike, taking into account military security considerations. However, because of the existing economic, political and military unity of Europe and the USA, Russia should simultaneously accomplish two missions: to deter the USA against direct armed conflict with Russia and to use nuclear weapons in the European theater of war (TOW). The first task requires the SNF for conducting one massive operation in a global war. The second mission requires TNW to enhance the fire capabilities of conventional forces in conducting quick and protracted wars of different scales. In this context, one can hardly agree with numerous attempts to charge the SNF with making limited nuclear strikes, due to the fundamental difference in using nuclear forces at the global and regional levels. One of the possible solutions is to re-deploy TNW and assign them to the conventional army groups acting in the European TOW.

Far East

The US experts, who assess the Chinese military doctrine which names three types of enemy (major - Russia and the USA; actual - India and Vietnam; and potential - Japan, South Korea, the Philippines and Malaysia)[11], believe that there is a growing trend of self-isolation in China. At the same time, China has the third (after the USA and Russia) largest nuclear arsenal, which contains all kinds of strategic and tactical weapons, and is becoming the world's largest military power[12]. Taking into account that China is the most populous nation, whereas Russia has the largest and least populated territory, Western experts predict an inevitable military conflict between Russia and China in the near future[13].

At the same time, Russian analysts, who are studying China, have divided. The first group is comprised of those who believe that China will pose the key military threat to Russia[14]; others presume that Russia has no alternative to strategic cooperation with China in the 21st century[15] to resist the US hegemony[16].

The dominating opinion is that any armed conflict between Russia and China is possible only in the distant future. The experts also bear in mind an extremely negative US and Japanese attitude to the possible domination of Russia or China in the Asia-Pacific and conclude that any unprovoked aggression against Moscow or Beijing will make the latter resume their alliance[17].

Under these circumstances, the modern Russian system of military security with respect to China should be based on deterrence with the help of nuclear arms, since Russia has no other means to provide adequate deterrence in this region. Meanwhile, an important question is who should be the target for deterrence.

Nuclear deterrence based on the principle of *unacceptable damage* can be efficient only against a strong centralized power. However, in this region the threat to Russian national security can be caused by the large number of people who will start conquering low-populated districts of the Russian Far East. As a result, there may emerge a *de facto* national Chinese autonomy, which will sooner or later initiate the process of *de jure* secession from Russia. As far as official Beijing is concerned, Russia may apply the traditional approach to nuclear deterrence and nuclear weapons use in case of the negative development of the strategic situation. But this is completely impossible in the case of migration, which is not officially controlled by China. These new developments will require new concepts, since millions of people can be involved in an actual guerrilla war. In the first case, Russia can hit an unlimited number of targets to cause

unacceptable damage. In the second case, the war will be aimed at restoring the *status quo*, which significantly limits degree of escalation and affects the character of the hostilities.

The situation with Japan is different since Tokyo demonstrates its willingness to maintain its strategic partnership with the USA, which provides Japan with political and economic dominance in the Asia-Pacific. The USA and Japan have a close military partnership; the Japanese islands host large US military bases. Since deterrence of Japan must be regarded in the context of the US-Russian nuclear balance, to deter Japan, Russia needs a different approach.

Although the ASEAN nations signed the Bangkok Treaty establishing a nuclear-weapon-free zone (NWFZ)[18], implementation of the agreement has proven quite complicated. The major reason for the difficulties is US and Chinese opposition to the nuclear-free status of the region. There is an idea of establishing a limited NWFZ in North-East Asia, which could comprise Japan, Korean peninsula, Taiwan, north-eastern districts of China, south-eastern part of Russia and part of Mongolia. The border of the NWFZ would be a circle with a radius of 19,000 km and with its center in the middle of the demarcation line between North and South Korea.

Nonetheless, nuclear weapons have become a traditional instrument of high politics in the region. A recent example is the program of theater missile defense (TMD) deployed jointly by Japan and the USA. The parties are considering the possibility of deploying low-altitude sea-based and land-based systems (with participation of US warships) to protect US troops, Japan, South Korea and Taiwan. These systems are to be deployed in the early 21st century[19]. The defensive weapons will serve to protect Japanese territory from a possible missile attack launched by North Korea, China, or Russia. US spy satellites will fix the missile launches from the territories of these three countries and *hit-to-kill* sea-based and land-based interceptors will be employed. Russia is more and more concerned about these plans[20], which will involve the region in the US-Russian nuclear debate.

Thus, the principles of nuclear deterrence against Japan have begun to correlate with the principles of global nuclear deterrence, which requires additional means from Russia.

Middle East and South Asia

Pakistan's nuclear tests and the possibility of nuclear arms procurement by Iran and Iraq are interpreted by many states as the emergence of an *Islamic nuclear bomb*, which raises grave concerns[21]. In connection to this, some researchers have made dire predictions about the possible alliance of Arab states and Muslim republics of the former Soviet Union to resist the influence of *Christian* Europe and the USA[22].

At the same time, armed conflicts in the Middle East have demonstrated that high strategic mobility (ability to mobilize required resources for preparing and conducting war) is no longer an advantage of developed states only[23]. Sufficient mobility can enable the country to conduct large-scale combat operations with the use of conventional arms and material against a better-equipped enemy[24].

The nuclear factor, in conjunction with strategic mobility, dramatically changes the entire system of regional military security. At the same time, according to some US military experts, contemporary armed conflicts in the Middle East have moved far away from the traditional forms of conflict that existed before[25]. The reasons for that are often interpreted in the context of Samuel Hungtington's concept described in "*The Clash of Civilizations?*"[26] and arguing that the core of future global conflict may become the total confrontation between the Western civilization and all other civilization ("*the West against the rest*").

Such confrontation adds new features to the development of nuclear policy. For instance, so far, the principles of nuclear deterrence have been based on the Western liberal-protestant perception that well-being is the only and natural imperative of social life. However, other civilizations have completely different visions of absolute social values. Hence, the criteria for nuclear deterrence should be different.

Besides, the subjects of war (i.e. the subjects of future peace processes) in this region are not only states with their institutions, but also non-classical actors - transregional and international ethnic, religious, political and criminal organizations and movements.

Eurasia

Eurasia is moving more and more away from united post-Soviet territory, which has plenty of territorial-state entities instead of good old *near abroad*.

To a certain extent, this sad conclusion for Russia is confirmed by the problem of forming the CIS security system on the basis of the Tashkent Collective Security Treaty signed on May 15, 1992. The agreement united Armenia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. Later Azerbaijan, Belarus and Georgia acceded to the treaty. However, in recent years, there has been a growing trend of reviewing this agreement or even withdrawing from it. This change of mind is a result of, not only the problems in Russia's relations with the aforementioned states, but also the vague character of the enemy to be *collectively* resisted. The problem of establishing the CIS security system is becoming more and more a problem of motivation.

In 1992, the key motivation for signing the agreement was the fact that the Armed Forces of all CIS states were formed on the basis of the single Soviet Army. This understanding made the leaders of the FSU states make the political decision to preserve the *single defense space* of the CIS. However, further developments showed that this motivation was not enough and there existed a serious difference in the views of the ruling elite of new states concerning common defense policy.

In these conditions, possible additional momentum in favor of the treaty might have been culled from the existence of common external military threats, threats to internal regional stability requiring joint military efforts of all states of the region, or military-economic factors not directly connected with internal or external military challenges but determined a common approach to maintaining national security in a broad sense of the word.

As far as external military threats are concerned, one should emphasize the existing uncertainty about specific and common military challenges to all CIS members. This ambiguity impedes practical steps to establish a collective security system. For instance, NATO enlargement raises no concerns in Central Asia, whereas Ukraine cares less about the problem of Afghani Islamic militants. As far as the nuclear factor is concerned, this uncertainty results in equivocal perceptions of a Russian nuclear umbrella for the CIS, since it does not ensure the military security of the states but, on the contrary, threatens to involve them in conflicts.

As for internal stability factors within the CIS, it is noteworthy that all FSU states have to face the problem of separatism in one form or another. Nonetheless, struggle against separatism is a strictly internal problem and is connected to collective security only because of peacekeeping operations. Obviously, it would be strange to link the nuclear factor and peacekeeping.

The least vague concept is military-economic cooperation in tandem with national security, since Russia, Ukraine, Byelorussia and Kazakhstan used to compile the single nuclear complex of the Soviet Union. Military-economic nuclear cooperation, however, requires an appropriate legal basis, which is still undeveloped.

Hence, experts presume that Russian nuclear declaratory policy in Eurasia indicates to the world community that nuclear weapons are not regarded as a way to form alliances within the CIS or as means to contain conflicts. Russia constantly stresses that their combat use is possible only at some advanced phase of armed conflict if conventional means fail to terminate an already unleashed aggression[27].

Along these lines, we have to emphasize that armed conflicts in Eurasia may fall victim to a *domino effect* if they are not stopped at the very beginning. This inevitability is accounted for by the fact that the participants of such conflicts are both the regular army and a guerrilla gang. Such guerrilla war with mass support from the local population inevitably will lead to a full-scale war. Thus, it is quite natural that the nuclear factor is regarded (although in a quite abstract form so far) as the means to prevent separatism. At the same time, the very fact of discussing nuclear issues in conjunction with combating separatism, even in the context of denying any plans of combat use of nuclear weapons in North Caucasus, indicates that such a possibility is being considered by the top military-political leadership.

These circumstances give new meaning to the provision of the *Concept of National Security* allowing for the use of military force inside the

country if there is a threat to people's lives, the territorial integrity of the state, or the stability of constitutional order.

Conclusion

When military threat originates from outside states or coalitions, the problems of preventing war or resolving conflicts peacefully are solved by an internationally recognized political elite. However, there are no chances for dialogue if the war involves a state or coalition against some non-state actors, who are not recognized by the world community.

In the past, practically all armies of the world learned to fight against similar structures, which made military struggles a coherent system of relationships between military organizations of the states. Recently, the situation has changed. The armed forces have to accomplish a two-fold mission: (1) combat and destroy bandits and (2) help the public in the enemy state in its efforts of political self-organization (in the case of sufferings and difficulties of war) to ensure the start of peace talks.

Under these circumstances, the nuclear factor acquires new and poorly studied aspects that should be taken into account in the process of practical military reconstruction within Russia.

It is noteworthy that the regional context of nuclear issues has resulted in many states ending their approval of total nuclear arms control in its previous form, since it does not correspond with reality and runs counter to their national interests. The most vivid example is the US Senate's refusal to ratify the CTBT. At the same time, the developed states which possess nuclear technologies but do not have nuclear weapons, have begun to regard their scientific and technological potential as a sort of virtual nuclear arsenal; and the very threat that this virtual arsenal could be made real is used to maintain national security.

These examples demonstrate that the shift of nuclear confrontation to the regional level has resulted in a new phase of development for the international system, including its legal dimension.

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Analysis

NUCLEAR PARITY AND NATIONAL SECURITY IN NEW CONDITIONS

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After the breakup of the Soviet Union and the demise of the Warsaw Treaty Organization (WTO), the post-World War II bipolar system of international relations ceased to exist. We have to admit that, despite all the shortcomings typical of a tough confrontation model, nuclear deterrence provided for the quite stable and relatively calm development of the world during several decades. Obviously, one should appreciate the actions of the US and Soviet leadership, which sought and found peaceful solutions to crises. However, the main factor mitigating the tension between the parties was the existence of nuclear weapons, which, if used to solve the differences, would have led to mutually assured destruction.

When the USSR collapsed, Russia and the USA lost the basis for military-political confrontation, i.e. irreconcilable ideological contradictions. The disappearance (or perhaps the drastic weakening) of one of the poles ended the bipolar world. The Cold War concepts of bilateral deterrence were no longer topical and require revision and, presumably, replacement. One of such concepts is nuclear parity and its role in maintaining state security. This theory was vitally important in rigid confrontation but is not suitable for the situations when there are no irreconcilable ideological differences between the former adversaries and when the key task in the area of nuclear weapons is their balanced reduction. What is the current role of nuclear parity? Should this concept be followed or be replaced?

The Nuclear Parity Concept: Its Emergence and Evolution

Immediately after World War II, the USA, which was the first to develop nuclear weapons and, thus, left behind the rest of the world, began to build up its nuclear arsenal to ensure its superiority in this area. This course of action was aimed at achieving military superiority over the USSR so that the USA could dictate *the rules of the game* and destroy the USSR, under certain circumstances, at least, as a developed state. The USA had such an opportunity for several years before the USSR constructed its own nuclear weapons and delivery systems.

As soon as the Soviets acquired nuclear arms, and hence the ability for retaliatory strike, the USA accelerated the pace of nuclear build-up. In the mid-1960s the US nuclear arsenal reached its peak and amounted to more than 30,000 warheads. The possession of such a huge nuclear arsenal was necessary to *disarm* the enemy with a nuclear strike. At the same time, nuclear weapons were supposed to play a decisive role in resolving armed conflicts. The US nuclear superiority in the 1960s implied that an exchange of counter-force strikes (i.e. strikes against military targets only) during a limited nuclear conflict would have led to the US victory. Hence, any retaliatory counter-force strikes of the Soviet Union would have only deteriorated its situation because of the remaining US nuclear arsenal. Thus it was only natural that the Soviet nuclear concept, approved in the early 1960s, was based on the principle of unlimited retaliatory strike, i.e. any US counter-force strike would have resulted in the Soviet counter-value strike to inflict *unacceptable damage*. This concept met the interests of nuclear deterrence but, evidently, the decision-making barrier for a total retaliatory strike was quite high, since one could hardly compare the damage from the first strike with the damage inflicted by the second strike. This balance of power affected the entire system of political relations and weakened the position of the USSR.

Obviously, Moscow was not satisfied with the situation that a total retaliatory strike, and hence unlimited nuclear war (equal to suicide), was the only response in the case of an escalating limited conflict. Thus, the USSR made titanic efforts and achieved relative nuclear parity with the USA in the early 1970s. The system of strategic nuclear weapons created a state of strategic balance in which each party possessed the capability to inflict *unacceptable damage* in a retaliatory strike – the essence of the concept of mutually assured destruction. At the same time, at this stage, neither party, theoretically, had the ability to gain superiority after exchanging counter-force strikes. However, the USA continued to seek such superiority. The most vivid example was the US forward deployment of nuclear forces in Europe and the Reagan doctrine of limited nuclear war.

The concept of mutually assured destruction provided for a strategic balance and each party was interested only in maintaining the ability to inflict *unacceptable damage* in a retaliatory strike. This situation implied that the parties would not strive to obtain the ability of making a first *disarming* strike, since such a change would have destabilized the balance and provoked the other party to make a preemptive strike.

Nonetheless, the balance concerning total nuclear war did not ensure a balance concerning lower-scale conflicts. Such conflicts included the aforementioned exchange of counter-force strikes and conventional arms conflicts. When TNW emerged, the conflict with the use of TNW joined this group in an intermediate position.

TNW were, in fact, NATO's response to WTO's conventional superiority in Europe. For European NATO members, TNW guaranteed US participation in defense of an armed conflict. Meanwhile, the USA, making plans to use TNW in conventional conflicts, believed it could contain the conflict within Europe. The USSR rapidly deployed its TNW in response (the adequacy of this response can be called into question). Thus, the unstable situation concerning conventional forces in Europe transformed into a nuclear balance. However, this balance was asymmetric, since TNW deployed in Europe belonged to the USA and were targeted at the USSR. The US territory, at the same time, could not be reached by the Soviet tactical nukes. Nonetheless, stability concerning conventional and tactical arms in Europe played a positive part in achieving and maintaining global balance.

One of the most important instruments for achieving strategic balance (or unilateral superiority) is strategic defense. Strategic defense is known for its paradoxical nature: the concept of mutually assured destruction implies that the protection of valued facilities (cities) is a destabilizing and aggressive act, since it deprives the enemy of inflicting *unacceptable damage* with a retaliatory strike. At the same time, activities to enhance the viability of offensive nuclear means are stabilizing and defensive by nature, since they help to preserve the potential for retaliatory strike.

The development of missile defense systems is an expensive action with unpredictable results. The creation of such a system would have provided an impetus for an arms race in this area and in adjacent spheres, i.e. the modernization of offensive means (equipping them with gadgets to penetrate the defense), the build-up and development of anti-defense systems, anti-anti-defense systems, etc. Moreover, the development of missile defense systems to counter a massive nuclear strike implies the commissioning of means that have been tested in conditions significantly different from the would-be situation of their deployment and hence, have an unknown efficiency. Therefore, the parties lose stability factors as important as certainty about the efficiency of its own means and information about the capabilities of the enemy. This understanding resulted in the 1972 ABM Treaty with indefinite term.

However, in the mid-1980s, the USA made another attempt to gain superiority with the help of SDI (whose co-lateral damage was the Soviet involvement in a new extremely expensive arms race). If one presumes that the USSR had survived in this arms race and the parties had implemented all measures

relating to the deployment of such systems (development of the systems, modernization of offensive means, development of counteraction means, etc.), the planet would have found itself at a new higher, more unstable, and far more dangerous level of nuclear stockpiles.

The changes that have occurred during the last 10 years have significantly changed the military-political situation in the world and have had a positive impact on the strategic balance. Some of these changes can be regarded as positive (e.g. the end of ideological confrontation); others are negative (the collapse of the Soviet Union and the disintegration of one of the poles). However, all these changes inevitably result in a number of complicated and dangerous transitions to a new system of international relations.

The New International Situation and Nuclear Weapons

The demise of WTO led to dramatic changes concerning conventional arms in Europe and turned the world situation upside down. Nowadays, NATO, whose expansion to the east is under way, has superiority in conventional arms. At present, Russia assigns to TNW those missions that NATO used to speak about until the late 1980s. With the lack of ideological confrontation, the transition to a partnership between Russia and Western nations should have resulted in the complete elimination of TNW in Europe. However, the USA still sticks to the concept of the past implying that nuclear weapons will help to involve the USA in European defense. It is noteworthy that NATO states also consider the US nukes in Europe to be an important political factor contributing to the unity of the Alliance. Taking into account the manifold conventional superiority of NATO and the absence of ideological contradictions between Russia and the Western countries, this concept looks obsolete.

As the geopolitical situation in the world has changed (from a stable bipolar world to an unstable uni-polar or multi-polar world) and as Russia's role has diminished to the level of a regional power, the role of nuclear weapons in the state strategic concept has transformed. During the Cold War, nuclear arms helped to deter the parties from escalating a potential armed conflict. Nowadays, nuclear weapons serve to maintain national security and are the core of the defense concept. Soviet superiority in conventional arms no longer exists. In the next few years, there may emerge some other regional powers or coalitions, whose conventional might will exceed Russian potential. Under these circumstances and before mighty conventional forces emerge (which requires economic growth), its nuclear arsenal will be the most significant factor in maintaining Russia's national security.

We have to emphasize that deep strategic nuclear arms reduction in accordance with START I and START II does not contradict the new security concept. According to the theory of mutually assured destruction, the USA and Russia will still maintain a strategic balance, even if the reduction process goes beyond START II limits. We cannot rule out, however, that natural aging of warheads and delivery systems will make Russian arsenal decrease faster than is provided in START treaties. Nonetheless, this arsenal will be enough to maintain a balance with the USA under the concept of mutually assured destruction and *all-azimuth defense*.

The changes in the qualitative and quantitative parameters of nuclear arsenal have some inertia. This is why it is necessary to elaborate as soon as possible the concept of the further development of Russian nuclear arsenal.

We believe that this process can take either of two directions: maintain parity with the USA or stick to the concept of minimal deterrence.

Parity will mean preserving relative equality between the US-Russian nuclear arsenals - in the number of warheads and launchers, which implies a symmetric structure of the SNF. In a broader sense, parity will mean equal opportunities, i.e. equal chances to use nuclear forces; whereas the development of arsenals will depend on the preferences of either party.

Since the early 1970s, the USSR and the USA have established a parity of opportunities - chances to exchange limited counter-force strikes without breaking the limits of sustainable balance and to destroy each other and the Earth several times over. START II enhances the symmetry of the structure of the US-Russian nuclear arsenals and hence, helps parties reach a relative quantitative parity. However, the main burden of changes, necessary to achieve this symmetry, lies on the shoulders of Russia. Besides, this symmetry can be actually noticed only at the level of limits, since, due to economic reasons, Russia will not have an opportunity to use the allowed number of warheads in full.

The concept of minimal deterrence envisages maintain a nuclear arsenal that would ensure the deterrence of any aggressor by inflicting assured *unacceptable damage* in a retaliatory strike. At first sight, this concept corresponds with the Soviet approach at the early stage of the arms race and US nuclear superiority and has the above-mentioned disadvantage – a high threshold for using the nuclear arsenal in response to a counter-force strike, when the damage from the first attack is not comparable to the results of the second counter-value strike.

However, it is worth pointing out that an irreconcilable ideological confrontation no longer dominates modern international system. As a result, military confrontation has diminished or disappeared. Hence, the scenario of counter-force strikes to achieve a unilateral superiority is no longer used in military planning, at least, as far as the *N-5* are concerned.

Prospects for the Russian SNF in the Near Future

Adoption of this or that concept of nuclear forces development depends on the situation of the SNF and the real economic capabilities of the state.

In early 2000, Russia possessed about 6,000 nuclear warheads, most of which were allotted to MIRVed ICBMs which are to be eliminated if START II enters into force. The majority of these systems were deployed in the 1980s and their service life will soon expire. The *Program of SNF Development* approved by the RF Security Council in July 1998 was not published, but Russia's capabilities in this area are quite limited and the ways of the nuclear forces' development are quite predictable. Although, at that time, the fate of START II was not clear, the program was based on the assumption that the treaty would sooner or later become effective. This is why, presumably, the program did not provide for extending the service life of MIRVed ICBMs or developing a new multi-warhead ICBM. Instead, the program could contain a new schedule for developing missile systems which would meet START II restrictions.

The key strategic missile for the near future is the single-warhead Topol-M system. Due to insufficient funding, work on this missile was delayed and it is quite difficult to assess the pace of its production. Russia plans to gradually increase the pace of production, which may reach about 40-50 missiles per year. By late 2008, Russia may possess about 300 Topol-M missiles.

As far as sea-based forces are concerned, construction of the first SSBN of a new type - *Yury Dolgoruky* - started in 1996. According to the initial plan, such submarines would have been armed with SS-N-20 missiles. The latter would have also replaced SS-N-20 missiles of the *Typhoon*-type submarines, since the service life of SS-N-20 had expired and their production had stopped. However, after a series of failed test launches, Russia canceled the program of SS-N-20 development and decided to design a new SLBM for *Yury Dolgoruky*-type vessels (because of this, the construction of the submarine was suspended). This decision left *Typhoon*-type submarines without missiles. Three out of six Typhoons have already been decommissioned and the rest will be decommissioned in two or three years. Moreover, the decision to develop the new SLBM means that the new SSBN will be commissioned no sooner than 2007-2008. Optimistically, the new submarine will be built before the service life of *Delta IV*-type submarines expires.

Strategic Air Force units seemed to survive the reforms without huge casualties. Despite demands to eliminate this component of the nuclear triad, the Air Force is strengthening its armament. The aforementioned program for the SNF must envisage the development of a new long-range ALCM to be mounted on strategic aircraft. Russia acquired from Ukraine eight Blackjack and three Bear H bombers, carrying more than 500 ALCMs. These weapons, plus several more aircraft under construction at the *Gorbunov* Aircraft Production Association in Kazan, will enable Russia to deploy a complete regiment of Blackjack aircraft and to reinforce the air-based nuclear forces. Practically all deployed strategic bombers were manufactured no later than the late 1980s and will be operational until 2010 and beyond.

Thus, by 2008, Russia will have about 1,300 warheads (attributed to 300 Topol-M missile systems, seven Delta IV submarines and 80 bombers). This means that Russia will not be able to reach the level of START II (3,000-3,500 warheads) or even the level of START III (2,000-2,500 warheads) mentioned in the 1997 Helsinki agreements.

The situation will change only if START II does not enter into force and Russia does not have to comply with its provisions. In this case, Russia will preserve its MIRVed ICBMs. Though the service life of most of these missiles will expire by 2005, Russia will be able to maintain its land-based SNF at a level exceeding that of START II, thanks to its SS-18 missiles. Deployment of these missiles started in 1988 in Kazakhstan, the last missiles produced were delivered to Russia from Ukraine in 1992 after the demise of the Soviet Union. According to some sources, at present, 56-58 such missiles are deployed. Their total number is even higher, since 104 missiles withdrawn from Kazakhstan belonged to the SS-18 type. They can be deployed in Russia to replace the previous modification of this missile. Russia may also deploy about 30 SS-19 missiles withdrawn from Ukraine, whose service life will last for nearly 20 years from the date of deployment. Besides, SS-19 missiles were manufactured in Russia unlike Ukraine-made SS-18.

According to our estimates, if Russia makes the decision to maintain its MIRVed ICBMs it may deploy up to 90 SS-18 missiles (with 10 warheads allotted to each system) and about 30 SS-19 missiles (with 6 warheads each), whose service life will not expire until 2010. Moreover, Russia may test Topol-M missile to see if it can carry three re-entry vehicles, enabling Moscow to increase the number of warheads attributed to land-based forces and to reach the level of 3,000 warheads.

It is noteworthy that these activities will not require serious effort or expenditure in addition to what has been already planned. The Soviet experience demonstrated that service life could easily be extended. All other projects, such as the development of the new SLBM and the construction of the new SSBNs and heavy bombers, will not be affected by the aforementioned activities. The key problem will the development of a new MIRVed ICBM to replace the SS-18 missiles after their decommissioning in order to ensure the level of 3,000 warheads. Taking into account the economic situation in Russia, the prospects for the design and deployment of such missiles are quite uncertain. However, Russia has a number of possibilities to investigate in the next five years. One of them is the development of a new missile on the basis of the SS-24 and SS-N-20 (which have a common first stage and whose production moved to Russia following the breakup of the Soviet Union). Another more realistic prospect is to accelerate the production of the triple-warhead Topol-M missile. Thus, Russia will, presumably, be able to maintain its SNF at a level of 3,000 warheads even after 2008; an increase in arsenal above this level is hardly possible.

The ABM Treaty and Stability

The deterrence potential of a nuclear arsenal depends on many parameters, such as the viability of the means for a retaliatory strike, efficiency of their usage against enemy targets, etc. As we have already mentioned, one of the reasons for signing the 1972 ABM Treaty was the parties' willingness to be sure of the capabilities of their strategic forces and the forces of the enemy, in order to maintain strategic stability. In fact, the treaty fixed the *rules of the game*, following which any party

could be confident that the enemy would not make useless its offensive potential by deploying a missile defense system.

Nowadays, the USA is persistently promoting the idea of modifying the treaty and justifies itself by proclaiming a need to ensure defense against the missiles of *rogue states*. Russia believes that there is no such threat and that missile defense is not an adequate response to such challenges, if they are realistic. Moscow also presumes that the main US objective in this area is not to defend itself from unauthorized or individual launches but to develop a strategic missile defense system, which will deny Russia of the opportunity to make a retaliatory strike.

We will leave aside the debate about realistic or unrealistic character of the threat to the USA. Let us just mention that in case of START II implementation Russia will have about 1,000 warheads for retaliatory strike. If nuclear arms reduction continues jointly with the USA to the level of 2,000-2,500 or even 1,500 warheads, there will be several hundreds of warheads left to ensure Russia's response to any US aggression. Development of the missile defense system to intercept several dozens of warheads (which would be enough to ensure protection against all *rogue states*) will have no impact on the Russian retaliatory might, even if bilateral reduction reach the level of 1,500 warheads.

Thus, it would be reasonable to approach the ABM-NMD issues by taking into account concerns of both states. These apprehensions include the problems of the transparency of the characteristics of the systems to be developed and the verification of their deployment to rule out the possibility for their sudden enhancement, which would affect the retaliatory strike potential of Russia. As provisions of the modified treaty are negotiated, the parties could involve other *nuclear club* members, whose concerns may be even more acute than Russia's.

It is useful to emphasize that the depreciation of the Russian response potential (which is not realistic in the near future) would not meet the US national security interests. As we mentioned above, the strategic stability of nuclear deterrence is based on the certainty of each party in the capabilities of its own retaliatory strike and the retaliatory might of the enemy. Hence, in critical situations, the parties would refrain from making the first strike. But if either party believes that it has lost its retaliatory potential, it may resort to preemptive strike. Thus, while benefiting from a strategic missile defense system, the USA would add uncertainty to the SNF of both states and would undermine its own security.

NATO Enlargement

It is known that the reason for the US forward deployment in Europe and for developing and deploying TNW was apprehension about WTO conventional superiority. This accounted for the development of the concepts of *flexible response*, limited nuclear war in Europe, and specific plans for nuclear arms deployment, including NATO members' consent to have nuclear weapons deployed on their territory.

The collapse of the Soviet Union and WTO helped NATO to gain manifold superiority over Russia in conventional arms. After the enlargement of NATO, the Russian position has been even more exacerbated. In this situation, the official consent of the new NATO members to have nuclear weapons deployed on their territory and the ambiguous answers of the US officials to that effect look strange. From the military point of view, it is senseless for NATO, since the organization enjoys conventional superiority. Moreover, such an attitude of the NATO states to TNW calls into question the implementation of the unilateral initiatives set forth by Presidents Bush, Gorbachev and Yeltsin. Some Russian experts call for returning ground-based and sea-based TNW to the troops to neutralize NATO's superiority in conventional arms and to prevent further pressure on Russia.

Thus, the scenario of nuclear weapons deployment in Europe, as it was during the Cold War, may be repeated, though these developments can be avoided if the parties demonstrate good will.

Conclusion

While selecting this or that concept of nuclear forces' development, one should take into account a number of different factors, including the economic situation. As far as the Russian SNF are concerned, this factor significantly limits the field for maneuver and the scope of opportunities. However, the conclusions below are not based on economic considerations only.

The concept of nuclear parity is no longer necessary for Russia from a military point of view. It was vitally important during tough ideological bipolar confrontation but nowadays, it is redundant and gives no extra security assurances in forming a multi-polar world, unlike the concept of minimal deterrence and *all-azimuth defense*. Nuclear weapons are still playing a leading role in maintaining Russian national security. For a number of economic reasons, Russia cannot maintain relative quantitative parity with the USA. There is no need for this equality - Russian security can be provided with fewer means. At the same time, to ensure strategic stability in nuclear arms reduction, one should pay particular attention to the viability of the deterrence potential. Meanwhile, it is impossible to continue an equal dialogue on further arms reduction without maintaining a relative quantitative parity of all states involved in the process. Thus, we can say that the refusal to maintain quantitative strategic parity with the USA will not affect Russian military security but will make it impossible to continue bilateral nuclear disarmament.

The existing problems, such as the fate of the ABM Treaty or NATO expansion to the east, are directly connected with the issue of providing Russian national security and selecting a concept for SNF development. Two aforementioned problems have political solutions, which can be found if Russia and the West develop real partnership.

It would be reasonable to approach the ABM-NMD issues, taking into account the problems of the transparency of the characteristics of the systems to be developed and the verification of their deployment to rule out the chances for their sudden enhancement, which would affect the retaliatory strike potential.

The problems of NATO enlargement and the security of Russian borders can be solved within the framework of new negotiations on conventional arms limitation in Europe, similar to those solutions resulting from in the 1990 CFE Treaty. Russia should put forward an initiative to sign a new CFE treaty, which would meet new military-political conditions. Such a treaty should provide for the withdrawal and non-deployment of nuclear weapons beyond national territories.

Review

THE US PROGRAM FOR COUNTER-PROLIFERATION SUPPORT

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The willingness of a number of states to acquire nuclear, germ, or chemical weapons and their delivery systems presents a significant challenge to the US interests in the world, since Washington has assumed the role of a global leader that can shape the post-Cold War world order.

In August 1994, the US DOD approved the program to support counter-proliferation which is aimed at enhancing specific military capabilities to counter the WMD proliferation through the implementation of the following set of measures:

- conducting relevant R&D within the framework of existing programs of the Armed Services and agencies related to the DOD, the DOE, and the intelligence community;
- focusing on solving the problems defined as priorities that require the enhancement of the military capabilities of the Armed Forces;
- increasing funding for the respective programs in order to facilitate the supply of the required equipment to the troops;
- selecting and intensifying those cost-efficient technologies that will promote the emergence of new military capabilities;
- determining and promoting other key initiatives to complement technological achievements;
- prompting the transfer of projects implemented within the counter-

proliferation program's framework to the appropriate programs of the Armed Services.

The final objective of the activities under the counter-proliferation program is to develop a new military potential. This process should follow the directions mentioned below:

- attributing an offensive (force) character to the combat of global WMD proliferation, including the elimination of arsenals and WMD delivery means belonging to the potential enemy;
- using military measures to prevent the transfer of materials and technical means for carrying out the WMD development programs;
- arming the Armed Forces with new types of weapons and military equipment capable of resisting the use of WMD; and improving the passive means of defense, including individual protection;
- updating the strategic concept of Armed Forces employment in regional conflicts and the plans for conducting combat operations, taking into account the changing character of threats. Such measures should include the elaboration of tactics to minimize personnel casualties in case of WMD use;
- concentrating the efforts of all intelligence agencies to detect the production facilities, WMD arsenals, and delivery systems;
- international cooperation, above all, with the NATO states, to prevent WMD proliferation.

The US military-political leadership is paying growing attention to counter-proliferation programs. In FY95, the US DOD expended $1 billion on nonproliferation and counter-proliferation programs and $3 billion on the programs closely related to counter-proliferation. In FY96, the budget for the counter-proliferation programs amounted to $3.8 billion; in FY97, the DOD spent $4.3 billion, and in FY98, the expenditure reached $4.9 billion. The overall expenditure of the DOD and DOE on counter-proliferation programs amounted to $5.4 billion.

As far as qualitative changes in the US military potential are concerned, the most interesting are the activities carried out within the counter-proliferation program (CPP) framework, which are supposed to enhance the operational capabilities of the Armed Forces as envisaged by the US military-political leadership.

The CPP's mission is to provide extra funding for the R&D programs conducted by the Armed Services, the agencies related to the DOD, and DOE and intelligence in the most sensitive areas in order to facilitate the development of new military equipment and their supply to the Army.

In FY98, the program received $104.7 million, accounting for approximately 2% of general R&D expenditure. About 80% of these funds were spent on promoting the development of long-distance detection means, systems to track biological agents, and systems of early warning of biological attack (priority 1), as well as the equipment to detect and destroy underground facilities related to the WMD and their delivery systems (priority 2, 3). Eight out 15 priority projects within the CPP received additional funding in FY98.

Among the WMD-tracking systems being developed under the CPP and related projects, it is worth mentioning the Navy system of detection and surveillance of vessels suspected of transferring WMD-related materials and delivery systems. 32 ships of the US Navy have already been equipped with the prototypes of such system.

The Air Force and the DOE are developing systems for tactical automated ground sensors and tactical air infra-red sensors for surveillance, defining the characteristics of WMD facilities (including underground facilities), and assessing the level of damage and collateral effects of hitting such targets. To detect mobile targets, the US military is working at upgrading air intelligence radars with a system of automated target identification. The US Air Force also implements the project of detecting and obtaining pictures of underground facilities using the high-frequency electromagnetism emanating from the source. Moreover, the Air Force, together with the DOD Intelligence Division, fulfils the program of creating air optical sensors to detect and

determine the characteristics of the signature of WMD production facilities.

To develop the means for destroying highly-fortified and underground WMD facilities the program funds the testing of prototypes of promising munitions, sensors, and tools to assess and predict the damage and collateral effects of hitting the corresponding facilities. The projects include the development of the following equipment: prospective unitary penetrator to hit well-protected and underground facilities; sensors delivered by munitions; intellectual fuse for systems for destroying fortified targets; prospective warheads and equipment with enhanced effects against WMD targets; inertial all-weather guidance systems using the profile of the ground and compatible with the existing types of munitions; systems for selecting and assessing the efficiency of hitting a target. This equipment is tested at the models of WMD facilities. The USA has conducted a successful test of the HTSF fuse and tested the technology of mounting it on GBU-24/HTSF air bombs for F-15E and F/A-18 aircraft. The Pentagon also is developing a version of the tactical army missile system (TACMS) with deep-penetrating munitions mounted on M270 launchers as well as on launchers of surface ships and submarines.

The majority of the work on passive defense means within the framework of the DOD's program on chemical and biological defense rests upon the development of tracking and identification systems to determine the characteristics of chemical and biological agents, as well as the development of warning systems (priorities 1 and 3). Other equipment includes systems for individual and collective protection (priority 9), methods for enhancing the efficiency of detoxification (priority 9), and a wide range of medical means and methods for prevention, protection, and treatment. In addition, within the program on chemical and biological defense, the US DOD is developing new production facilities to manufacture, store, and supply vaccines against biological agents. In the area of passive defense, the CPP focuses on promoting the development and commissioning of rapid remote detection and warning systems against biological attack to be installed at such key transport points as seaports and airports. Moreover, the CPP supports the accelerated deployment of long-distance systems to detect germ agents, whose prototypes were deployed in 1997, and provides for the testing of short-range detection systems. CPP funding is also spent on the rapid deployment of portable detectors and sensors mounted on unmanned aircraft for the remote tracking of biological agents.

To promote the struggle against paramilitary units and terrorism, the CPP coordinates and finances the development of a variety of technical devices adapted for use by the special operations forces. These systems serve to detect, impair, neutralize, and restore (if necessary) the critical components of WMD systems. Such devices include: a non-intrusive acoustic system to detect chemical agents, a drill-extractor to take samples of chemical and biological agents without disturbing the hermetic atmosphere of the containers, special detectors for rapid identification of biological and chemical agents, special equipment for penetrating the WMD facilities, special equipment for disrupting the work of such facilities, etc.

Commentary

ABM/NMD AND THE START PROCESS

by Amb. Roland Timerbaev,
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START II

On April 14, 2000, the State Duma ratified START II. This was a long-awaited decision in Russia, in the USA, in Europe, and around the world. However, the way out from the nuclear deadlock between Moscow and Washington is yet to be found. The ratification vote was only the first step in facilitating further negotiations and, despite its importance, will hardly carry much weight without further intensive efforts.

START II was ratified by Russia on terms which make its prompt entry into force very complicated, if at all practically possible. The ratification law adopted by the Duma states that the Treaty can enter into force only after a 1997 protocol to START II and a package of amendments to the ABM Treaty are ratified by the USA. Moreover, the law contains specific parameters which should be included in START III. If START III is not concluded soon after START II ratification this would also, according to the law, be a reason for Russia to withdraw from START II. The clear understanding in Moscow is that START II makes sense only if START III negotiations follow and are swiftly concluded. The latter treaty, if concluded, must compensate for some of the disadvantages of START II.

START III

Important discussions on the likely shape and scope of START III have already taken place, leading in 1997 to the Helsinki accords establishing a framework and parameters - including a provisional target of reductions to 2,000-2,500 strategic warheads per side - for the treaty. There are also the above-mentioned provisions of the Russian ratification law, laying out concrete conditions for the agreement. Both sets of documents involve a substantial extension of the START negotiation process, providing for the inclusion of weapon systems, including sea-launched cruise missiles (SLCMs), tactical nuclear weapons, etc., which were not considered by either of the first two START agreements.

The official Russian attitude to maintaining and developing its nuclear arsenal is based on the paramount importance of preserving nuclear parity, if only virtual, with the United States. There are different reasons for the identification of parity as a strategic priority, not least among them the sense - theoretically undefined but politically quite powerful - of the non-military importance and utility of nuclear weapons in the security relationship. Given the grave doubts harbored by many in the Russian political elite over NATO expansion, particularly in the wake of the Kosovo conflict, and US NMD plans, which are widely regarded as a bid for strategic superiority, the importance attached to nuclear weapons in this broad sense of status and influence, as well as in the narrower sense of security and deterrence, is unlikely to diminish in the foreseeable future, however short-sighted this may seem to a number of Russian analysts. The new administration of Vladimir Putin has not yet clearly defined its approach to these crucial issues.

For reasons of available financial resources, there is only one way for Russia to preserve parity - to proceed with deeper cuts in its strategic arsenal under new agreements with the USA. The Russian government would now like to see START III take the level of nuclear warheads for each side down to between 1,000-1,500, considerably lower than the Helsinki parameters to which the USA still appears determined to adhere.

NMD

US plans for NMD deployment obviously have an impact on the Russian perception of the strength of its nuclear forces. This impact is such that, for Moscow, further progress in nuclear disarmament is possible only if the issue of the preservation or modification of the ABM Treaty can be resolved. Were the

USA to abrogate or withdraw from the Treaty, Russia would, in all probability, walk away from the entire START, and broader arms control, process.

The ABM Treaty was based on the logic of nuclear competition between the two sides. The lack of a shield, meaning that each party was equally vulnerable to attack, set the climate for negotiations on nuclear reductions. If this logic is reconsidered, then all its consequences should also be re-assessed.

The USA argues that its NMD plans do not undermine Russia's deterrence potential. According to the official statements of the US administration, this system is not directed against Russia. Russia officially dismisses this claim. However, in informal discussions many Russian military experts admit that some aspects of the US NMD plan - at least in its initial form - would not affect Russia's deterrence potential.

The US eagerness to provide security for itself against new threats is not always understood in Russia, where most experts believe that those threats adduced by the USA as justifications for NMD deployment will not emerge within the next 10-15 years. However, the US perception of threats, after all, is its own business and it has the right to formulate and protect itself from these challenges. The only important condition is mutual respect for the other party's vision of national defense. And if the USA wants Russia to take its concerns into account, Washington should do the same.

The deployment of a limited missile defense system doesn't undermine Russia's deterrence potential in the current circumstances but does hamper the full implementation of START II. Russia needs not only US pledges that the NMD system will not be targeted against it, but appropriate technical assurances that this could not happen at a later date. These assurances should include clearly stating the scale of the NMD system and a commitment not to expand it while the ABM Treaty is in force.

The core of such technical guarantees is the availability to Russia of MIRVed ICBMs - intercontinental ballistic missiles armed with multiple, independently re-targeted re-entry vehicles, providing the capacity for a single missile to strike more than one target. The START II provision prohibiting MIRVed ICBMs is unlikely to survive any agreement with the United States to modify the ABM Treaty to allow NMD deployment. To compensate for any such return to MIRVing, Russia could confirm elimination of heavy missiles and may be even limit MIRVing to mobile ICBMs and restrict the maximum number of MIRVs per missile, for instance, to three. Moreover, there could be a special sub-ceiling for the number of MIRVed ICBMs. This reconsideration of START II obligations would be sufficient to enforce deterrence capability while NMD becomes operational and to leave open the chance for further quantitative and qualitative reductions in nuclear arms.

The decision to return to MIRVed ICBMs needs a lot of will, first of all on the US side. The ban on this type of missiles was deemed to become a big step towards greater crisis stability. However, experts in Moscow believe that the drive to de-MIRV ICBMs didn't pay back as much as was expected.

The problem is that crisis stability doesn't increase automatically with the elimination of MIRVs. The key element of crisis stability is the overall scheme of nuclear decision-making: is it based on launch-on-warning or launch-under-attack? Presumably, the ban on MIRVs was intended to serve as an incentive to shift to a launch-under-attack posture. However, the intention of the Russian leadership is now to maintain the launch-on-warning option even under START II limitations. Without the shift to launch-under-attack, de-MIRVing in practice changes not the scheme of decision-making but the concept of targeting, leading to a greater concentration on counter-value strikes to compensate for the loss of multiple-strike capable missiles.

The effort to increase crisis stability should underpin the logic of future talks on strategic nuclear reductions. However, crisis stability

can be enforced only through cutting the counter-force capacity of both parties, which needs to include a ban on MIRVing ICBMs but cannot be limited to it. Moreover, the START II ban on MIRVed ICBMs is thus far only virtual, as the treaty is not yet in force and is unlikely to become so in the near future.

The decision to retain MIRVed ICBMs is not an easy one. However, the nature of the choice involved has to be clearly understood. The choice is not between good and bad disarmament, but between disarmament and deadlock. Seen in this context, the retention of MIRVs are a modest price to pay, in particular because the increase in crisis stability which it was hoped de-MIRVing would bring about is not likely to happen, given Russia's present nuclear stance. The *return* (virtual, given the status of START II) of MIRVs should be regarded as a tactical step backwards designed to preserve a chance for further more significant steps forward, which should certainly include a ban on MIRVs later on. However, to really produce an increase in crisis stability, such a ban should be implemented in the context of the development of other means to maintain deterrence while the *nuclear umbrella* remains in place.

The quantitative parameters of the new START treaty should be reduced to at least 1,000-1,500 deployed warheads. It will not be necessary to insist, within this overall total, on sub-ceilings for different parts of the nuclear triad (land-, sea-, and air-launched weapons). The treaty should provide - over a term of perhaps 7-10 years - for general quantitative limitations for the nuclear forces, whilst each party should decide by itself how many deployed warheads it will require in each branch of triad.

Broader Context

Nuclear disarmament can't always be a bilateral US-Russian process, since the provisions of such agreements now affect the interests and power-capabilities of other states. In the last 10-15 years, the world has dramatically changed and, in the process of discussing nuclear arms reduction issues, Russia and the USA can't take into account only the positions of each other. A number of states and non-state actors striving to raise their influence in the international system are accumulating power and becoming potential threats to both Washington and Moscow. Moreover, they may try to use this force not only in regions where the interests of the two superpowers lie, but against the territory of the two states themselves.

Under these circumstances, Russia and the USA would have to review their attitude towards certain aspects of the nuclear balance. The US dreams of the new technological-military shield of NMD; Russia speaks about increasing the role of tactical nuclear weapons or deterring regional and local menaces with the help of strategic offensive arms. Such different approaches may become a source of serious contradictions and heated debate in START and ABM discussions. Each party is yet to determine the role of nuclear weapons in the modern world and their significance. At this point, we can neither preclude nor presume the possibility that they will end up with different visions of the problem. In such conditions, it is quite difficult to seek any fundamentally new agreements and elaborate a new logic of nuclear disarmament.

At present, the parties, probably, need some kind of provisional agreements, which won't infringe on their interests and will enable them to get out of the nuclear blind alley and will allow them to preserve the major treaties and negotiation mechanisms and to enjoy a *timeout* by maintaining the nuclear balance so that in the future they may conclude new agreements.

This logic calls for the modification of the ABM Treaty in such a manner that defines a limited missile defense system, which won't undermine Russia's deterrence potential.

The provisional character of such agreements doesn't mean that the parties can't now agree on the basis for new qualitative nuclear arms limitations. For instance, it would be reasonable if START III provided for the verified withdrawal and storage of nuclear material from the warheads attributed to the

launchers to be eliminated. This procedure will be an important first step in ensuring the irreversibility of nuclear reductions.

Restructuring of the Russian Armed Forces
A heated debate has been going on for some time in the Ministry of Defense (between Minister Igor Sergeyev and Chief of the General Staff Anatoly Kvashnin) about two alternative approaches to the future development of the Russian Armed Forces. The debate, which is, certainly, quite relevant to Russia-US dialogue on START and ABM, specifically addressed the strategic missile force. Now it constitutes a separate armed service, and thus the armed forces of Russia consist of four services – Army, Navy, Air Force and Strategic Missile Force. General Kvashnin proposed the transfer of the strategic missile service under the command of the air force which would reduce the number of armed services from four to three. He argued that such a move would result in substantial savings of financial resources, which are needed to modernize conventional forces, necessary to deal with many challenges that Russia is facing today. At present the Russian Defense Ministry budget for 2000 is approximately $5 billion – compared to about $268 billion in the United States. (The draft budget for 2001 recently approved by the government before its submission to the State Duma would provide for defense less than $7 billion).

As to Russia's present nuclear arsenal, which is estimated at 6,000 warheads (and is to be cut down to 3,000 to 3,500 under START-II and further down to 2,000 to 2,500 under START-III), Kvashnin reportedly proposed to unilaterally reduce it to 1,400 warheads.

The Russian Security Council presided by President Vladimir Putin met on August 11 to discuss the issue. Though decisions reached by the Council were not made public, Russian media citing '*unidentified sources*' reported that it was decided to retain the Strategic Missile Forces as an independent service until at least 2005 or 2006. Space missile defense, currently a branch of the rocket forces, would be put under the air force command by 2002.

The SMF will be gradually reduced by the year 2010 to 1,500 warheads (800 ground-based and 700 air- and sea-launched) as their service life has expired and they are to be decommissioned. As the Russian press reported, a '*balanced decision*' was reached and both Sergeyev and Kvashnin retained their jobs, and neither of them has emerged as a clear winner.

Modern Topol-M missiles will continue to be produced. However, most of the resources allocated to strategic forces reportedly will be spent on developing weapons based on new physical principles, on air-launched cruise missiles for the air force and navy, as well as on a new generation of sea-launched ballistic missile. The co-relation of spending on strategic forces and conventional forces would be approximately one to three.

Unilateral alternative to bilateral arms control negotiations ?
On May 23, 2000, Texas Governor and Republican presidential candidate George W. Bush warned President Bill Clinton against concluding a deal with Russia that would limit any future NMD. In addition to advocating a more robust missile defense, Bush said he would ask the secretary of defense to conduct 'assessment of our nuclear force posture and determine how best to meet our security needs.' Bush added that he would cut weapons levels unilaterally if necessary.

This raises a crucial question about the future of arms control, especially if the Republican candidate wins the presidential race, - would the 30-year old pattern of arms limitation by negotiations and agreements survive in the new geopolitical environment characterized by the existence today of a single superpower or would it be replaced by a different model? Perhaps, replaced by unilateral steps, as was the case with Bush-Gorbachev precedent of September-October 1991?

Many Russian experts, including some military (as has been demonstrated by the Sergeyev-Kvashnin debate), believe that the present economic conditions in Russia deliberately place it in a disadvantageous position in strategic arms control negotiations. Russia would be able to maintain nuclear balance with the United States only by concluding with it further START agreements. However, any new agreement, in essence, is an agreement for

unilateral reductions of US strategic weapons. This is well understood in the US (hence, the proposal of Bush Jr.). But to compensate for quantitative reductions the US would require from Russia serious qualitative concessions, which may be totally unacceptable to Moscow.

In fact, today Russia maintains nuclear balance with the US only formally. In reality, the US enjoys unilateral advantages embodied in the existing treaties (both START-1 and START-II). What is the way out for Russia from such a situation?

According to some experts, the solution could be a transition to a completely independent (non-treaty) type of a nuclear posture, similar to a French or a Chinese model). Under such a model, Russia should have a cost-efficient strategic nuclear arsenal which would make it possible to conduct an effective independent nuclear policy that would fully guarantee its national security and interests and its great power status.

And, perhaps, a rigid position of Russia with regard to proposals for the ABM Treaty modification and demonstrative statements about its readiness to withdraw from every existing arms control agreement fit well in the context of the above concept? Since the worst case scenario of developments with regard to the ABM Treaty may be used as a convenient pretext to realize such a concept. Of course, another important reason for such a tactic is to elicit a wider support from those states including some NATO and other US allies which feel uneasy about US plans of NMD deployment.

At this time, it appears that the predominant view in the Russian establishment is to continue the US-Russian dialogue on ABM and START (yet another round of discussions between John Holum of the USA and Yury Kapralov of Russia took place in Geneva in mid-August, though without any tangible results). But the dire economic situation in Russia, the continuing debate about restructuring of the Russian armed forces, as well as policy changes that are to take place in Washington as a result of presidential elections next November would almost inevitably have an impact on Russian strategic thinking in not too distant future. And the tragedy that took place in the Barents Sea with the *Kursk* nuclear-powered submarine can only accelerate this process.

PIR Center News

Fall 2000

2000, June 14. The PIR Center held a meeting of its Research Council on "*The Current Problems of the ABM Treaty*".

In the course of the meeting, the participants discussed the latest Russian initiatives on developing joint US-Russian and European-Russian missile defense systems as well as other problems concerning US NMD deployment and Russia's possible response in the form of withdrawal from all disarmament treaties signed in the last 15 years. They also examined the results of the US-Russian summit held in Moscow on June 2-5, 2000, and concluded that there was no breakthrough achieved in Moscow. Special attention was drawn to the issues of modification of the ABM Treaty and the 1997 Demarcation Agreements. Most of the experts stated that the US NMD plans were targeted against Russia, taking into account the technical characteristics of the proposed missile defense system. However, the system will not undermine the Russian deterrence capability in the foreseeable future. The majority of the participants agreed that the NMD deployment would not lead to the full collapse of the disarmament process, since both countries remain interested in further reduction of nuclear weapons, what is especially true in the case of Russia. The debate, which took place at the meeting, proved to be essential for further elaboration of the policy recommendations to Russian executive agencies concerned.

The keynote speaker was PIR Research Associate Ivan Safranchuk, Director of the Project "*Nuclear Weapons and Their Future*". Other speakers were Lt.-Col. Leonid Chumenko, Leading Research Associate of the 27th Central Scientific Research Institute (TsNII) of the Defense Ministry (MOD) and Ass. Prof. Yevgeny Sirotinin, the Military University of the Air Defense Forces of the MOD based in Tver.

The participants to the meeting were Russia's leading experts and representatives of the Russian executive bodies and agencies

concerned Among them were Major Andrei Borisenko, 27th TsNII; Mikhail Vinogradov, Chairman of the Committee of the Scientists for Global Security and Arms Control; Vladimir Zakharov, Vladimir Novikov, and Grigory Tishchenko, the Russian Institute for Strategic Studies (RISI); Lt.-Gen. Vasily Lata, Amb. Roland Timerbaev and Col.-Gen. Yevgeny Maslin, PIR Advisors; Lt.-Gen. Vladimir Medvedev; Victor Moskal, Department of Missile and Space Defense, the *Tsiolkovsky* Russian Space Academy; Yevgeny Myasnikov and Pavel Podvig, the Center for Environment, Security and Disarmament; Vadim Osinin, Advisor to the Government Office; Gennady Khromov, *Rosaviakosmos*.

2000, July 6. The PIR Center held a press conference "*Export Controls: Legislation and Beyond*" in the National Press Institute.

The speakers were PIR Director Vladimir Orlov and PIR Senior Research Associate Dmitry Evstafiev.

At the press conference, the PIR Center presented its collection of articles "*Export Controls in Russia: Policy and Practice*" published in May 2000.

The conference was attended by *Krasnaya Zvezda*, *Nezavisimaya Gazeta*, *Inostranets*, *RIA-Novosti*, *Mir Novostei*, the Federal Agency of Governmental Communication and Information, and the officials of the US embassy.

2000, August 1-11. PIR Research Associate Ivan Safranchuk visited Japan where he attended a seminar on the ABM/NMD issues in Hiroshima and the international conference in Hiroshima and Nagasaki devoted to the 55th anniversary of nuclear explosions.

Among other participants of the seminar in Hiroshima were George Lewis (MIT Security Studies Program), Stephen Young (Coalition to Reduce Nuclear Dangers), Sharon Riggle (Center for European Security and Disarmament), Keun Park (South Korea), Shuzo Kimura (*Himeji Dokkyo* University).

In the course of the visit, Ivan Safranchuk also met with representatives of the Japanese Ministry of Foreign Affairs, Japan Institute of International Relations, Center for Promotion of Disarmament and Nonproliferation, the Tokyo Foundation, and the National Institute for Defense Studies. During these meetings he discussed the problems of the ABM/NMD deployment, START III and positions of certain states on these issues.

2000, August 23-31. PIR Research Associate Ivan Safranchuk and PIR Junior Research Associate Dmitry Kovchegin attended the 12th *International Summer Symposium on Science and International Relations*.

The meeting was organized by the Union of Concerned Scientists (USA) and the Center for Disarmament, Energy and Technology at the MPhTI. The *W. Alton Jones* Foundation and the *Ploughshares* Fund provided financial support for the symposium.

The major objective of the symposium was to attract technical expert to work in the area of arms control and disarmament. Participants of the meeting represented Russia, the USA, Canada, China, France, Germany, India, Iran, Israel, Italy, Japan, Kazakhstan, Norway, and Pakistan and discussed a broad range of arms control and nonproliferation issues, including weapons-usable nuclear material management, regional proliferation challenges (Middle East, Far East, South Asia), verification procedures, transparency, de-alerting, missile defense, etc.

2000, August 27-29. PIR Senior Advisor Amb. Roland Timerbaev attended the International Workshop on Nuclear Nonproliferation and Disarmament held by the Japan Institute of International Affairs – one of the Japanese Foreign Ministry think-tanks.

Among participants of the seminar were Celso Amorim, head of the Permanent Mission of Brazil to the UN Offices in Geneva, Seiichiro Noboru, Japanese representative at the UN Conference on Disarmament, William Potter, Director of the Center for Nonproliferation Studies of the Monterey Institute of International Studies, Jozef Goldblat, Vice-President of the Geneva

International Peace Research Institute, Brahma Chellaney, Center for Policy Research in New Delhi, and others. The seminar was chaired by President of the JIIA Hisashi Owada. Roland Timerbaev made a report on "*The ABM/NMD and the START process*".

Discussions were attended by the representatives of the Japanese academic circles and public, as well as numerous mass media. Information support was provided by the largest Japanese newspaper *Asahi Shimbun*, which gave a detailed coverage of all reports and speeches at the seminar.

The seminar was to brainstorm for practical ways of implementing the 2000 NPT Review Conference decisions and to increase awareness of the Japanese public in the area of arms control and nuclear nonproliferation.

2000, September 1. The PIR Center announced new information projects: "*Nuclear Russia Today*" and "*Nuclear Russia Database*".

Electronic newsletter "*Nuclear Russia Today*" is a compilation of materials from various Russian mass media and documents concerning nuclear weapons, nuclear policy, nuclear security, MPC&A and nuclear material safety, spent nuclear fuel, nuclear export and export controls, unauthorized access to nuclear material, nuclear terrorism, dual-use technologies. The newsletter will come out twice a week.

The "*Nuclear Russia Database*" contains information and analytical material from Russian national and regional mass media, public sources of the State Duma and the Council of the Federation, certain ministries and agencies, etc. The topics covered by the database are reflected in its title. It will contain material directly or indirectly relating to Russia and various nuclear issues, above all (but not limited to) nuclear arms issues, nuclear policy, nuclear safety and security, etc. The database will include material on Minatom, closed nuclear cities, Russian Strategic Missile Forces activities, the situation regarding the Russian nuclear fleet as well as matters relating to nuclear weapons delivery systems.

2000, September 7. The PIR Center presented *Nuclear Nonproliferation Handbook* to the Russian academic and expert community.

The Nuclear Nonproliferation Handbook is a unique book, since it is the first attempt in Russia and in the world to create a comprehensive manual concerning nuclear nonproliferation issues.

This study covers the whole range of issues concerning nuclear nonproliferation. It deals with the history of nuclear weapons development, the evolution of the international nuclear nonproliferation regime, international law aspects, details of the diplomatic struggle, and peculiarities of the nuclear programs and nuclear policy of certain states. The book contains numerous facts, figures, and quotations from the documents, all of which facilitate the work of students, researchers, journalists and all other specialists, who have normally to collect such information from dozens of sources, which are not always easy to access.

Director of the PIR Center Vladimir Orlov, who was co-editor of the book, and Deputy Director of the Institute for World Economy and International Relations Vladimir Baranovsky addressed the audience.

According to Dr. Baranovsky, the book has proved once again that Russia has a strong expert community in the area of arms control and nonproliferation. This will obviously ensure high demand for this edition, which not only gives a systematic assessment of nonproliferation processes but also contains a number of useful reference materials, including review of literature and glossary.

The presentation was attended by government officials, representatives of research institutions and nongovernmental organizations studying international security issues, higher school, diplomatic officers and media. Among them were Director of the Department on Security and Disarmament Affairs of the Russian MFA Yury Kapralov; Deputy Head of the SMF Military Academy

Nikolai Emelin; Rector of the International University Gennady Yagodin; as well as representatives of the Defense Ministry, Minatom, Foreign Intelligence Service (SVR), Security Council, Gosatomnadzor, Diplomatic Academy, MGIMO, research institutes of the MOD and Minatom, diplomatic officers from Netherlands, Norway, Great Britain, the USA, Italy, Japan; representatives of the Moscow Science and Technology Center and such media as *Nezavisimoye voeynnoye obozreniye*, *Itogi*, *Obzhaya gazeta*, etc.

2000, September 14. The PIR Center staff held a meeting with Gen. Thomas E. Kuenning, Director of Cooperative Threat Reduction for the Defense Threat Reduction Agency (DTRA).

Gen. Kuenning was accompanied by Col. Bill Smith, Chief, Defense Threat Reduction Office (Moscow), and LCDR Gary Tabach, Cooperative Threat Reduction Division of the DTRA Moscow office.

The PIR Center was represented by Director Vladimir Orlov, Deputy Director Dmitry Polikanov, PIR Advisor Lt.-Gen. (res.) Vasily Lata, and PIR Research Associate Ivan Safranchuk.

The parties discussed a broad range of issues concerning the CTR program implementation in Russia and the NIS, financial prospects for the CTR development. The matters of particular concern were elimination of strategic offensive arms, CW and BW dismantlement and transparency, safety and security of Russian nuclear facilities.

Summary

Yaderny Kontrol (Nuclear Control) Journal of the PIR Center for Policy Studies Volume 6, No. 4, July-August, 2000

The *Editorial*, entitled "*Russian Missile Defense Initiative: Well-Thought Solution or Another Diplomatic Move?*", states that 'July 2000 was a busy month for the US-Russian dialogue on nuclear disarmament. The parties held a summit in Moscow, on the eve of which Vladimir Putin had put forward an initiative on joint US-Russian missile defense system. Soon after the negotiations with Bill Clinton, i.e. during Putin's visit to Italy, the Russian president proposed that the European nations (NATO) develop a joint missile defense system. This latest Russian initiative was the most remarkable event in the recent years of ABM-START talks.

'The background for Putin's sensational statement in Italy was an unproductive summit in Moscow and the US refusal to consider the possibility of deploying joint US-Russian missile defense.

'In Europe opinions were divided. The majority of states (especially after their consultations with US Defense Secretary William Cohen in mid-July in Brussels) made some cautious statements about the Russian initiative. Meanwhile, Greece's response was quite positive (Greece, however, has its own reasons for that).

'Nonetheless, none of the European leaders dared to ignore or reject at once the Russian initiative, since they did not want to spoil their relations with the new Russian president (with whom they will have to coexist for several years). However, one cannot rule out that this was one of the objectives of their intense consultations with William Cohen.

'So, what was the Russian proposal? According to Foreign Minister Igor Ivanov and Defense Minister Igor Sergeyev, Russia was speaking about a joint non-strategic missile defense. However, the technicalities

of the initiative are still vague. Some experts believe that it is a matter of boost-phase interception, others argue that now and in the foreseeable future it will be impossible to intercept a missile during the three to five minutes of the boost phase, due to technological difficulties. The Russian military and diplomats continue to keep in secret the details of the Russian initiative, which has given birth to various interpretations and gossip. After meeting his counter-part in Brussels, the US Defense Secretary said that the Russian proposal was not clear to him. Even those who have to explain it to the public in Russia call the details of the program into question as well.

'It is difficult to say who generated this initiative and what agencies approved and prepared it. One can only guess what the presidential and MFA's idea was. One can only assess the results of the statement, i.e. Russia has put forward an ambiguous initiative, which no one dares to reject. Hence, the initiative should be explained. The USA had to discuss issues for which it was neither prepared nor wished to discuss. Washington presumes that the ABM-NMD dialogue should be limited to modifications of the 1972 ABM Treaty. At the same time, the United States has to negotiate with Russia plans for a European non-strategic missile defense system. This topic has now been fixed in the agenda of the NATO-Russian Permanent Council. Thus, Russia has managed to change (or to substitute) the agenda for the US-Russian missile defense dialogue. Hence, Russia has an opportunity to win some time, while there is a rising criticism of Clinton's NMD plans in the USA. At the same time, Russia has involved in the NMD dialogue those US allies in Europe who were against the US plans (i.e., France, Canada, and Great Britain) but were *hiding* behind Russia, arguing that the ABM Treaty was bilateral and its fate could be solved by Moscow and Washington only.'

The *Editorial* concludes, 'The Russian initiative was a successful diplomatic move. But the USA has already recovered after the first *shock* and has maintained that the Russian initiative can be discussed but will not substitute discussion of the US limited missile defense plans. This means that the USA is trying to separate the two issues and confine the ABM Treaty modifications again to bilateral dialogue. Russia can only respond with announcing the specific technical details of its European initiative.'

Vladimir Orlov and Roland Timerbaev in "*The 2000 NPT Review Conference: Implementation Check - OK, What's Next?*" maintain, 'An important positive contribution to the work of the conference was made by the joint statement of the delegations of the N-5 (France, China, Russia, UK and US) which was presented to the conference on May 1. The statement, *inter alia*, welcomed the ratification of the CTBT by the Russian Federation; declared that 'none of our nuclear weapons are targeted at any state'; and said that 'ratification of START II by the Russian Federation is an important step in the efforts to reduce strategic offensive weapons and is welcome. Completion of the ratification of START II by the United States remains a priority. We look forward to the conclusion of START III as soon as possible while preserving and strengthening the Anti-Ballistic Missile Treaty as a cornerstone of strategic stability and as a basis for further reductions of strategic offensive weapons, in accordance with its provisions.'

'The combination of words (*preserving and strengthening*) reflect the true sense of the debate: the USA recognized the need to preserve the ABM Treaty, whereas China and Russia approved its strengthening - a vague term, which might mean modification, as well as slight changes. These statements were suitable to postpone the discussion until after the conference.'

William Potter and Nikolai Sokov in "*Tactical Nuclear Weapons: The Nature of the Problem*" argue that 'Tactical nuclear weapons (TNW) are the category of US and Russian nuclear arsenals which is the least regulated by arms control agreements. Though the 1991-1992 unilateral initiatives resulted in significant tactical nuclear arms reduction, the fate of the regime is doubtful. This lack of attention to TNW is dangerous given their large number, the risks of early and/or unauthorized use,

and their vulnerability to theft. The regime itself is increasingly precarious since it is not legally binding, does not provide for data exchanges, and lacks a verification mechanism. As such, it is poorly equipped to withstand increasing challenges. The situation is difficult and requires prompt concerted efforts. Given the renewed interest in TNW in Russia, and to a lesser extent in the United States, other states will have to take an active role in devising and promoting TNW arms control and disarmament. To do so will require considerable political courage, creativity, and perseverance.'

Dmitry Polikanov in his review "*Illicit Arms Trafficking in Africa and Mechanisms to Curb It*" states, 'The problems of curbing illicit conventional arms trafficking have become increasingly topical in recent years. Conventional arms, mostly small arms, contribute to the escalation of armed conflicts, the spread of criminality, and general instability in various regions of the world. One of the regions where the arms trade raises the largest concerns is Africa. According to a US Department of State report, Africa has, since the end of the Cold War become a major destination for superfluous weapons from manufacturers in developed countries eager to empty warehouses and arsenals of those arms no longer needed due to post-Cold War political and technological advancements. The UN Secretary-General, the UN Security Council, the Organization of African Unity (OAU) and many prominent African politicians urge that a mechanism be established to control the trafficking of conventional arms, since they are the most frequently used types of weapons in armed conflicts throughout the continent.'

Lt.-Gen. (ret.) Vladimir Medvedev in his analysis "*Ten Years of The INF Treaty*" points out that 'The INF Treaty signed by the former Soviet Union and the USA is now observed by Russia and plays a leading role in the disarmament process on the whole. The contents of the treaty are simple and clear, quite rational and understandable to the public. Unlike prior agreements concerning nuclear weapons, the INF Treaty required tense organizational efforts and substantial costs from the parties since it was necessary to eliminate a large share of their nuclear arsenals. The treaty established the structure of practical cooperation between the military experts of the two states and promoted confidence-building.

'In the late 1980s and early 1990s, the INF Treaty contributed to the successful elaboration of further disarmament agreements - the CFE Treaty, START I, and others.'

Yaderny Kontrol (Nuclear Control) Journal of the PIR Center for Policy Studies Volume 6, No. 5, September-October, 2000

The *Editorial*, entitled "*Russian Foreign Policy: From Reactive to Offensive*", states 'In 2000, Vladimir Putin paid much attention to foreign policy issues. He held meetings with heads of the world's leading powers and made a number of visits abroad. He also approved the strategic doctrine of the Russian foreign policy – the Foreign Policy Concept of the Russian Federation.

'The intensity of Putin's foreign policy statements and contacts and his primary areas of concern contradict some of the pre-electoral public expectations that contributed to his success in the election. During the parliamentary and presidential campaign, Russian public opinion was dominantly occupied with anti-Western (above all, anti-American) and isolationist sentiments. Vladimir Putin had to take these emotions into account. This necessity to give the voters what they want in order to be elected elucidates the reasons for the difference between his statements made before the elections to foreign and Russian media.

'Putin's foreign policy contacts are traditional for Russia. There was no surprise about his itinerary – the CIS, Germany, China, Japan, India… The only exception was North Korea. This regularity has enabled some experts to conclude that on the whole, Putin's foreign policy is following Yeltsin's course and even style. Peculiar features of this manner are

attempts to benefit from global contradictions, to reassert Russian Great Power status, and to put forward *new* initiatives (or make threats, depending on the situation). Foreign observers assessing Putin's foreign policy proposals become more and more cynical, returning to the bitter irony of the times of *historic* Yeltsin's initiatives.

'The continuity of Russian foreign policy is one of the indispensable conditions for its success and efficiency. One can hardly expect any fundamental changes when Russia has to face the same problems on the world arena – NATO expansion, modification of the ABM Treaty, efforts to continue nuclear disarmament, the response of the international community to developments in Chechnya, etc. The prospective position of Russia's major foreign policy partner (rival), i.e. the USA, are vague. Election of a new administration will result in the significant transformation of US foreign policy guidelines. Presumably, this will, above all, affect the Russian policy of Washington.

'Putin uses the foreign policy patterns of the past. He has to deal with his legacy, solve the problems left to him by his predecessor, and not go beyond rules of the game previously set. Putin's continuation of past foreign policy is also caused by the fact that President Yeltsin did not leave him a field for maneuvering. The only way out is to revise completely the foreign policy of the recent years. Nowadays, President Putin is not ready for such dramatic changes for a number of obvious reasons.

'Foreign policy guidelines are stated in the *Foreign Policy Concept of the Russian Federation*. Generally, they can be characterized as a follow-up to the Primakov doctrine. Russia should maximally benefit from its international status to ensure the success of domestic reforms. Hence, maintenance of its status remains one of the key missions of Russian foreign policy. To that purpose, Russia has to use international mechanisms and the system of international law established in the post-World War II period to fix the Great Power status of the Soviet Union. By the way, Yevgeny Primakov was strongly criticized by liberal experts and politicians for his particular attention to Russia's Great Power status. However, it turned out that the pragmatics of economy and business (none the less liberal), who had worked out the presidential economic strategy, also realized the role of Russian world status (prestige) in succeeding at negotiations on a broad range of issues, including purely economic matters.'

'Thus,' concludes the *Editorial*, 'the steps of the Russian president are quite justified and logical in the environment in which he must act. We believe that changes in the course of Russian foreign policy will occur, since it is a matter of time and staff. The continuation of prior foreign policy has already posed a number of potential threats to Russia. Presidential initiatives on missile defense, North Korea, and relations with NATO have started to stagnate, lose momentum, and not develop. Nowadays, when the US administration is about to change and President Putin is listened to in global politics, Russia has a chance to move from reactive foreign policy (when it acted in response to the steps of its partners or rivals) to offensive foreign policy.'

Elina Kirichenko in her review "*A Comparative Analysis of National Export Controls in Russia and the USA*" states that 'The foremost task of modern export control policy in Russia and in the USA is to prevent WMD proliferation and to maintain international stability. This article analyzes export control regimes in this area.

'Both states actively participate in major multilateral export control regimes. However, restrictions provided by these agreements and sanctions against violators are applied in accordance with national legislation. Thus, the compatibility of national export controls is extremely important, since they make integral part of the international WMD nonproliferation regime.

'The present study is aimed at providing a comparative analysis of some key components of the US and Russian export control systems, placing special emphasis on the legal basis,

decision-making, licensing, liability, and interaction between the state and business circles in the area of export controls. Analysis of these elements helps to understand better the attitudes of the two states towards shaping export control policy and improving existing procedures.'

Vladimir Chumak, Sergei Galaka in "*The CTR Program in Ukraine*" argue that 'Since nuclear disarmament issues are topical for Ukraine, the CTR Program is considered to be one of the state's priorities. Both military and civil experts engaged in the *Nunn-Lugar Program* unanimously regard it as the only possible way out. If the USA stopped funding the program, Ukraine would have to face a difficult dilemma: either find the finances to continue the disarmament activities on its own or abandon its START I commitments.

'A peculiar feature of the program is that each recipient country has its own list of priority tasks and the most rational forms, methods, and technologies of their implementation. Thus, it is obviously useful to ensure mutual exchange of experience.'

Ivan Safranchuk in "*The SMF Reform Conflict and Russian Nuclear Policy*" maintains, 'On July 12, at the meeting of the Defense Ministry's Board, Chief of the General Staff Anatoly Kvashnin put forward some proposals concerning reforms in the Strategic Missile Forces (SMF) and their significant reduction. Defense Minister Igor Sergeyev (former Commander-in-Chief of the SMF, who had served all his life in this Armed Service) and Commander-in-Chief of the SMF Vladimir Yakovlev strongly criticized the aforementioned plans, which implied radical reduction in the strategic nuclear forces in general and the SMF in particular, as well as dramatic changes in the SMF status making it a branch rather than an Armed Service. However, neither Igor Sergeyev nor Anatoly Kvashnin speak about the essence of the debate. This is not a conflict between two commanders but, rather, the contradiction between two concepts of military construction and nuclear force development: the Defense Minister believes in maintaining nuclear parity with the USA, whereas the General Staff presumes that it is not reasonable to keep up with the USA and it is necessary to turn to an independent nuclear policy beyond the framework of the disarmament treaties.'

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