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RUSSIA–U.S.: LIMITED LIABILITY PARTNERSHIP

Russia and the United States have learnt how to deal with each other. And this is in some ways a new experience. During a one-day summit held by President Dmitry Medvedev and President Barak Obama on June 24, 2010, the seventh such meeting in the 17 months since Obama took office, both sides made concrete progress in a number of very important and substantive areas. One of those important areas of Russia–U.S. relations appeared to be the field of nuclear disarmament.

One must say that the past decade has been time wasted for the cause of nuclear disarmament. However, on April 1, 2009, during their first meeting in London, Presidents Medvedev and Obama declared that Russia and the United States would lead the world towards a nuclear-free future. It now turns out that the statement was not a Fools' Day joke. Only five days after the meeting with Dmitry Medvedev, President Barack Obama expounded on his nuclear-weapon-free ideas during a speech in Prague. Both presidents then agreed to launch bilateral talks on further reductions and limitations on strategic offensive weapons. Less than a year on, Obama and Medvedev have agreed that they are happy with the draft of the new treaty, and that it is ready for signing.

The talks themselves were painful, sometimes even excruciating—a clear demonstration that the *reset* of bilateral strategic relations is only progressing in fits and starts. It was the deeply ingrained lack of trust rather than any actual reductions figures that posed the biggest problem. Obama's successful visit to Moscow last July and the U.S. decision last September to abandon plans to station missile defense elements in the Czech Republic and Poland helped to clear the path towards a new deal. But even those moves could not completely *reset* bilateral dialogue and overcome the deep mutual suspicions and mistrust that had accumulated over the years and decades. Another problem is that over the two decades since the signing of the START I treaty, the skills of the negotiators on both sides had become somewhat rusty. But, luckily, the two negotiating teams were led by top professionals in the field, Anatoly Antonov and Rose Gottemoeller.

There were two large practical hurdles on the way towards reaching an agreement. The first was the verification mechanisms—those have become much less cumbersome and expensive compared with the provisions of the START I treaty, which has now fulfilled its purpose and peacefully expired. The second was the linkage between strategic offensive and defensive weapons. Russia insisted that the two should be linked, arguing—quite reasonably, in my view—that even the United States itself has not yet fully defined the true nature and purpose of the missile defense system it is developing (now in a new format). Obamas come and go, but Russia will always have to face the United States as the biggest military power in the world. Predictability of U.S. policy on missile defense is a vital necessity for Russia.

The new treaty addresses both of these concerns, though only very modestly and thus insufficiently in the case of missile defense. This agreement really is a product of a compromise. The alternative was to walk away from a deal in a huff, which was not part of the plan for either the Kremlin or the White House.

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The treaty signed on April 8, 2010, has marked the beginning of a *new Prague Disarmament Spring*. The new ceiling of 1,550 deployed warheads represents a reduction of about a third compared with the previous Russian–U.S. agreement, the SORT treaty (which actually looked more like a protocol of intentions than a proper treaty). The new limit on deployed missiles and bombers—700—is less than half of the previous figure. There is also a new ceiling for the combined number of deployed and non-deployed missiles (800 for each side). This approach was quite predictable—in essence, all the bargaining over the fine details never had any real chance of derailing the deal. Neither is the new treaty too radical—the cuts could have been much deeper, and the ceiling for the number of deployed warheads could have been lowered all the way to 1,000 without any damage done to security. But the terms actually agreed can best be described as quite measured and acceptable to both sides (as well as their respective legislatures).

The two countries sent an important signal to the rest of the world: Russia and the United States really are making progress towards nuclear disarmament, not just paying lip-service to it. The deal also came just in time for the NPT Review Conference. That is why the negotiators were in quite a bit of a hurry. And the haste was well worth it—both sides arrived at the NPT Conference with heads held high, with no need to prevaricate about their nuclear intentions. As a result on May 28, 2010 this international forum has adopted the outcome document that is to make a practical contribution to strengthening the NPT regime.

So, from the experts' point of view, Prague 2010 was not an unexpected breakthrough but a long-awaited, well-polished, and rather modest compromise. The most interesting bit is yet to come.

It is not enough simply to sign the treaty—it will then have to enter into force. Russia's previous experience with the U.S. in that respect is not very reassuring: neither SALT II nor, most recently, START II treaties were ratified by the U.S. Congress, in contrast to Soviet (Russian) ratification. There is a saga of the U.S. senators insisting on linking the ratification of various agreements with Russia to other, sometimes completely unrelated things (one example from just two years ago is the deal on cooperation in nuclear energy and the war in the South Caucasus). Of course, the best approach would be a simultaneous ratification in both countries. The fact that President Obama has managed to ram the healthcare reform through the Senate is a proper reason for cautious optimism about his lobbying talents. After all, the new START Treaty should become his first tangible foreign policy trophy.

It would be premature to talk about any further steps towards nuclear disarmament before this agreement enters into force. The International conference held by PIR Center on June 25, 2010 – dedicated to the new START Treaty – demonstrated one more time the significance of the speed of enforcing the new treaty for both countries. Nevertheless, politicians in both Moscow and Washington are already plotting the road map for their next steps.

Sooner or later, Russia and the U.S. will still have to dive deep into negotiations on radical cuts of their nuclear arsenals. And that is where the negotiators will face a veritable obstacle course. First, cuts will have to be made not just in strategic but in sub-strategic weapons as well. The United States will have to begin by unilaterally withdrawing all its tactical nuclear weapons from Europe. There have already been signals that Washington understands this (see the article by the Deputy Secretary of the Security Council of the Russian Federation **Yury Baluyevsky** concerning this point). Second, dialogue will have to be launched on banning the placement of weapons in space. So far, the Americans have demonstrated little appetite for such dialogue. Third, the two sides must not allow the effects of nuclear cuts to be offset by ramping up the numbers of strategic systems armed with conventional warheads—something President Dmitry Medvedev has described as a *nonequivalent exchange*. Fourth, Moscow and Washington will have to decide when to invite the UK, France, and China to join the nuclear reductions talks. Meanwhile, Paris and Beijing would rather prefer not to receive such an invitation at all, so as to avoid the need to disrespectfully decline.

The issues I have listed are only the tip of the iceberg. The agenda will be so massive that the two delegations will have to settle in Geneva for quite some time—possibly for years. But here at least there is no real rush—neither America nor Russia is going to abandon its nuclear arsenal in the next few decades. It is, however, high time to rethink the role of those arsenals, especially in view of the new generation of high-precision non-nuclear weapons that have become available. The U.S. has already made a start here in its new Nuclear Posture Review Report, released only a few days before the signing of the new START treaty.

In order to keep track of the dynamics of the Russian–U.S. strategic dialogue, to understand what is holding back the process and why, the PIR Center has teamed up with the Ploughshares Fund from the United States to set up the Sustainable Partnership with Russia Group (SUPR). This *council of wise men* will hold informal meetings to develop recommendations for the two governments. We hope that this initiative will contribute to further improvement of the U.S.–Russian strategic relations and will help to create a common security vision.

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The nuclear disarmament itself has a varied history. Nevertheless Russia (or the Soviet Union) and the United States always played their determining role. In this issue of our journal we will dive into the history of nuclear disarmament in ''Historical Pages''. First of all, there is an article by the Russian leading expert in the sphere of nonproliferation and arms control Ambassador **Roland Timerbaev** on the history of the London Subcommittee of the UN Disarmament Commission (1954–1957). In his article ''First Attempts to Move towards Arms Limitation'' Ambassador Timerbaev provides his own assessment of how and why the talks at the London Subcommittee ended with no results.

Secondly, the article ''Trust Building and Nuclear Disarmament'' by **Vladimir Gorbulin** concerning the Ukrainian nuclear disarmament will no doubt attract your attention. In 1994, Ukraine made an important political decision to renounce its strategic nuclear weapons and join the NPT as a non-nuclear-weapon state. The author, who was the Secretary of the National Security Council under the Ukrainian President at the time, and who now serves as the Director of the Institute of National Security (Ukraine), took part in the negotiations and knows all the background of the decision made in Kiev.

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What is the future of the Comprehensive Nuclear Test Ban Treaty (CTBT)? This is another question we would like to answer on our pages. This question concerns not only the sphere of Russia–U.S. relations, but all of the world society. Being a significant part of the nonproliferation regime this treaty still did not came into force. We addressed this question to the person who knows about the CTBT more than anyone – **Tibor Tóth**, the Executive Secretary of the CTBT Organization. Estimating the possibility of the CTBT ratification by the U.S. and some other countries, the Ambassador also speaks about the current development of the International Monitoring System and a mechanism of on-site inspections.

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A highlight of this issue is the publication of an article by **Bilyana Tsvetkova**, a Bulgarian expert and research assistant at the Small Arms Survey Program (Geneva) on the nuclear security situation in Russia and the possibility of the Russian arsenals to be used by terrorists. The Nuclear Security Summit in Washington in April 2010 demonstrated once again the urgency of addressing the vulnerability of nuclear materials and preventing them from falling into the hands of terrorists. The general opinion since the end of the Cold War has been that the huge Russian nuclear arsenal is one of the possible sources of nuclear weapons and materials sought by terrorists. It is believed that the risk of theft of Russian nuclear materials is especially high. However, the author comes to a different conclusion, providing an in-depth analysis of this view in her article ''Disproving a Conventional Wisdom: Why Nuclear Terrorism Originating from Russia is a Myth'' for *Security Index*. She offers a number of recommendations for addressing the problem. We invite our readers to join the debate.

Vladimir Orlov

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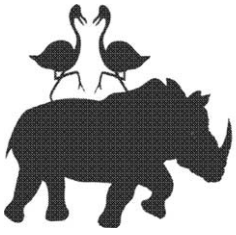

Vyacheslav Trubnikov

RELATIONS BETWEEN RUSSIA AND INDIA REPRESENT REAL STRATEGIC COOPERATION

Cooperation between Russia and India is becoming increasingly important in view of the new international order that is now taking shape, with a much greater role played in the international arena by nations such as Brazil, Russia, India, and China (the BRIC countries). What are the main areas of cooperation between those countries? And what does the future hold for their partnership?

We have put those questions to Vyacheslav Trubnikov, who served as the Russian Ambassador to India in 2004–2009.[1]

SECURITY INDEX: How would you describe the current state of Russian–Indian strategic relations?

TRUBNIKOV: The word ''strategic'' is often used these days to describe the relations between certain large nations. Russian relations with the United States, China and India can all be described as strategic. But their nature is not the same. For example, the relations between Russia and the United States would best be described as strategic dialogue.

As for our relations with India, the more accurate term here would be ''cooperation''. It is more than just partnership—it is precisely cooperation, which is based on the fact that the interests of our two countries in the international arena are either very close or coincide completely.

Russia and India fully agree on the role that the United Nations should play as a universal organization whose main task is to promote peace. We also agree completely in our aspiration for a multipolar world based on the supremacy of international law.

Russia and India have similar approaches to new challenges and threats. Suffice it to name the issue of international terrorism, where Russia and India are engaged in active cooperation, both bilateral and multilateral. Other areas include the struggle against narcotics and international crime—here too our relations can best be described as strategic partnership and strategic cooperation.

SECURITY INDEX: What is the basis of Russia's cooperation with India?

TRUBNIKOV: There are three main pillars of our partnership: energy (especially nuclear energy), defense industry cooperation, and space cooperation. These areas have always been, and will remain, the basis of our strategic partnership.

India is now growing at a breakneck pace, and this growth is predicated on a fairly complex energy situation. The country imports about 70% of its energy needs. Russia, as a major energy exporter, is a natural partner and ally of such a big energy consumer as India.

In defense industry cooperation, about 70% of the weapons used by the Indian armed forces (including the Air Force, the Navy, the tank forces, and artillery) are either Soviet/Russian made, or manufactured in India under a Soviet or Russian license.

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Similarly, India's space technology was developed and created at the initial stages with the Soviet Union's—and then Russia's—active assistance and participation.

SECURITY INDEX: What is the current state and the future of energy cooperation between the two countries?

TRUBNIKOV: Both Russia and India are trying to make use of new forms of cooperation in this area, especially mutual investment.

India has already invested 1.8 billion dollars in the development and production of the *Sakhalin-2* oil and gas deposits. This is a mutually beneficial area of cooperation that is developing very successfully. There is also a prospect of India's participation in the *Sakhalin-3* project as well. The future of that project is yet to be decided by the Russian government, but foreign investors' participation is not being ruled out at this stage.

Russia is also taking part in the construction of a network of thermal power plants in India.

In view of the commitments undertaken by both our counties under the Kyoto protocol, as well as our common aspiration to develop new renewable energy sources, the focus in bilateral energy cooperation is now shifting towards nuclear energy.

The joint Russian–Indian project to build two nuclear energy reactors at Koodankulam, in India's southern state of Tamil Nadu, is now in the final stages. Later on, the two 1,000 MW reactors that are now nearing completion will be followed by another two 1,000 MW reactors at the same nuclear power plant. There also excellent prospects for Russia's involvement in building nuclear power plants in other parts of India.

Russia also supplies nuclear fuel for the energy reactors that were built by India itself and have been placed under the IAEA safeguards system.

Following the signing of the 123 Agreement between India and the United States, as well as the decision by the Nuclear Suppliers Group to lift the sanctions previously imposed on India, the prospects for Indian–Russian nuclear cooperation have become even more promising. At the same time, the Indian market is also becoming increasingly competitive. Already Russia is competing with France, and soon it will go head to head with the United States as well.

Nevertheless, in the next few years that competition will not be especially hard to beat, and Russia has a number of factors going in its favor. First, it has already established its presence in India, while the French and American companies are only entering that market. Second, India is not particularly enthused by the steep price of the projects proposed by the United States. It is also concerned by reports that the construction of a French reactor in Finland is experiencing certain difficulties. In their estimates of the price to performance ratio, the Indians still prefer Russian nuclear technology.

SECURITY INDEX: What is your assessment of the decision by the Nuclear Suppliers Group to lift the sanctions from India, and of the 123 Agreement? What can be done to make sure that the entire international community, and not just India itself, could benefit from those steps?

TRUBNIKOV: First, I believe that the 123 Agreement and the decision by the Nuclear Suppliers Group were absolutely correct. There is no point for the international community, and especially for the nuclear powers, to stick their heads in the sand and pretend that nothing is happening, that the Indians can be tarred with the same brush as all the other nations attempting to develop nuclear weapons.

The Indian nuclear program is completely indigenous, from start to finish. India did not steal nuclear technology from anyone, and it has not broken any international laws. There is absolutely no reason to accuse India of participating, encouraging, or making use of any breaches in the nuclear nonproliferation regime.

We should not forget that India detonated its first nuclear device as far back as 1974. And it would be silly to imagine that in the intervening quarter of a century India has not made any further steps in the development of its nuclear program. The 1998 nuclear tests were a logical continuation of the Indian nuclear program, the military nature of which has been quite clear to the international community back in 1974.

And second, the signing of those two agreements was not in any way an absolution of India's past nuclear conduct, or a reward for its nuclear detonations. Those two steps were made in return for greater transparency of the Indian nuclear program, including both the peaceful and military components of that program. We need to be quite clear that this was not some unilateral incentive—this was a deal, which was offered to India in return for making steps to address the concerns of the international community, to put its nuclear activity under IAEA controls, to separate the military and peaceful nuclear programs, and to put a clearly specified number of reactors under IAEA controls. In other words, those two agreements were not a gift to India—they were a product of a certain compromise.

Had those two agreements not been signed, India would have carried on with its military nuclear program regardless, just as it does now. India would have continued that program. It would have continued as before—but with less transparency.

I am probably the only foreign diplomat to have visited the Indian nuclear reactor in Hyderabad. I saw for myself India's nuclear industry achievements, which in some ways resulted from the lengthy period of sanctions. Instead of participating in international cooperation, which would have been transparent, Indian specialists have independently developed some pieces of technology which the outside world simply had no idea about.

The signing of those agreements in return for India's greater nuclear transparency was the right step. It will eventually lead India to either joining the two treaties officially, or making a similar move in a form that would be acceptable to the international community. So far, some difficulties remain, including legal difficulties. For example, the Indians like the Russian idea of creating the International Uranium Enrichment Center in Angarsk—but the provision that only non-nuclear nations can take part in that project is a turn-off for the Indian side.

It will be interesting to see whether India's practical interest in further development of its nuclear program and technology will eventually prevail over its stubborn policy of remaining outside the two treaties, which the Indians label as discriminatory. Time will tell.

SECURITY INDEX: How important for India do you think is the defense industry cooperation with Russia?

TRUBNIKOV: India has made a very practical contribution to keeping the Russian defense industry afloat. During a very difficult period for our ship-building industry (especially for the St Petersburg shipbuilders), New Delhi placed an order for three modern frigates—and paid up-front.

Defense industry cooperation is therefore an important pillar of our strategic partnership.

Only three days before my term as Ambassador to India was due to expire, I received an invitation from the Indian government to visit the southern port city of Visakhapatnam for the launch of India's first nuclear-powered submarine, which was built with Russian assistance. That was a good example of real partnership. I don't know of any other partnerships or strategic dialogue relations which are more deserving of the term ''strategic''.

Unlike India's other partnerships in defense industry cooperation, we have moved on from the simple ''buy and sell'' relations to a new level of cooperation, which includes joint development (starting from initial designs), joint manufacture, licensing, and sales of military hardware on the international market.

Another good example of our cooperation in this area is the development, production and deployment of the BrahMos supersonic anti-ship missile, which is so effective that the Indian armed forces are now transplanting it onto mobile land chassis and even planning to use it in aviation. In addition, we are now negotiating and discussing the possibility of selling that missile to third countries. We have a lot of interest in the missile from countries with long coastlines.

We are now working on a joint project between India's Hindustan Aeronautics Limited and the Russian Sukhoi bureau to develop a fifth-generation combat aircraft. There are also plans to develop a medium-haul transport, which has a market both in India and in Russia.

Russia has won an Indian contract for 343 T-90 tanks. We were also bidding, along with a whole number of other countries, to supply 126 fighter aircraft for the Indian Air Force. We were offering the MiG-35.

The arrival of the Americans on this market has been a very serious factor. For decades, India's transport fleet consisted of the Il-76 and An-32 aircraft. But in 2008 the Americans broke into that turf, which Russia considered as its own, with their Hercules C-130J transports. India has bought six of them.

We have a similar situation in the market for naval reconnaissance planes, where Soviet and Russian technology is being replaced by American-made planes. India is planning to purchase eight Eagle aircraft from the United States—in fact, the deal is already as good as done. French and Israeli companies are also working hard to break into the Indian market.

In some ways the weakening of Russia's positions was brought about but certain problems in our cooperation, such as the delays and rising costs of the Admiral Gorshkov aircraft carrier contract. Nevertheless, both sides are earnestly trying to find a mutually acceptable solution here.

Another thing to consider is that in all the history of our defense industry cooperation, India has never found itself under a Russian embargo. That contrasts sharply with the Americans, who at one point imposed an embargo even on food suppliers to India—I am referring to Public Law 480, adopted following one of the clashes between India and Pakistan.

Finally, the price to performance ratio is still in Russia's favor, both in military equipment and in heavy industrial equipment. Here too let us recall the embargos. Russia continued to fulfill all its commitments on the Koodankulam nuclear power plant contract even after sanctions were imposed on India. Russia argued that since the contract was signed before the sanctions were introduced in 1998, that contract should not be affected. The Nuclear Suppliers Group, meanwhile, stopped all cooperation with India in peaceful nuclear technology.

SECURITY INDEX: What can you tell us about the current state of space industry cooperation and its prospects?

TRUBNIKOV: Russia's latest contribution to strengthening the Indian space industry came in the form of assistance in developing cryogenic engines for powerful Indian space carriers used for commercial satellite launches, including foreign satellites.

When I visited the Indian space agency in 2005, I was very pleased to see two manufacturing floors on which Indian specialists were assembling Indian satellites, using Indian technology and expertise from start to finish. I was also very glad to hear the Russian language spoken by senior Indian space engineers who received their training in the Moscow Aviation Institute and other Soviet universities.

The next issue on the agenda of Russian–Indian space cooperation is our participation and assistance in independent orbital flights of manned Indian spacecraft, exploration of the Moon and joint development of the GLONASS satellite navigation system.

SECURITY INDEX: You have said that Russian–Indian and Russian–Chinese relations could both be described as strategic cooperation. Could you give us your assessment of the relations between India and China, and of Russia's role in that relationship?

TRUBNIKOV: The key thing here is to determine what makes these two relationships different.

Russia has no common border with India—but we have a common border with China. That is why we have never had territorial problems with India, no history of border incidents. There are no conflicts or disputes in the history of Soviet–Indian or Russian–Indian relations that could affect our current cooperation in any significant way.

Meanwhile, the history of our relations with China, and now with the People's Republic of China, is the exact opposite of our history with India. Which is why in our relations with China we should proceed from the notion that China is our partner and neighbor. And it is in our interest to have good-neighborly and preferably friendly relations with Beijing. But I am not talking about our two countries becoming allies. It is of course in the interests of both our countries to achieve a legal definition of our territorial positions or our views on our territorial differences. Progress achieved over the past 40 years during the talks on the delimitation of the Soviet–Chinese and Russian–Chinese border, as well as China's borders with the Central Asian states, has created a legal basis for good-neighborly relations.

But at the same time, we must also view China as a very strong competitor—and, in the hypothetical event of a deterioration of the international situation, as a serious rival. We must

remember our vast and sparsely populated territories in Siberia, the natural riches of those areas, and be vigilant with regard to our borders in that region. That is why we must make a distinction between our strategic relations with India and with China.

Both India and China are members of a whole number of international organizations and groups, including the Shanghai Cooperation Organization, the Russia–India–China triangle, and the BRIC group. As part of our participation in those groups, Russia tries to be a diligent partner for both India and China, and to make sure that relations between those two giants (both in terms of their population and the growth of their economies) develop in the spirit of peaceful cooperation and interaction, which is in line with Russia's own interests.

Sometimes it is not easy, because the two countries are rivals in the Asia-Pacific region. We also have to take into account Western attempts to turn India into a counterbalance to Chinese influence. These attempts are not a secret, they are quite obvious. Of course, India hardly wants to position itself in the eyes of the international community and its regional partners as a bitter rival of China. India wants to normalize its relations with China by resolving the territorial problem and persuading China to abandon its claim to a big chunk of Indian territory (Arunachal Pradesh), which periodically causes tensions. Those tensions are mainly initiated by the Chinese.

Russia's task here is to keep these two partners from making any unexpected steps that could cause a deterioration of their bilateral relations. That is a very complex task, but it is in our own interests. We must encourage India and China to maintain good-neighborly relations and prevent any conflicts between them.

SECURITY INDEX: What can you tell us about Russian–Indian humanitarian cooperation? Are there any difficulties in that area?

TRUBNIKOV: Humanitarian and cultural ties are a very important part of our relations. I can cite programs such as the Year of Russia in India and the Year of India and Russia. All this helps to strengthen our strategic relations, making them more diverse and relevant to the peoples of our two countries. Tourism is another area of growth, and we have been exchanging school and children's delegations. This is conducive to our cooperation in the three strategic areas that are the future of Russian–Indian cooperation and our strategic partnership.

There is of course certain room for improvement. Some things we have not yet managed to achieve. First, we have not yet achieved a radical shift in our trade and economic relations from intergovernmental cooperation to cooperation between the business communities of the two countries. And second, we still need to achieve greater understanding of modern Russia in modern India, and vice versa.

There is still a lot of inertia in this area. We still think of India as a nation that needs aid, where 300 million people live below the poverty line, where they have tsunami, snakes, elephants, floods and droughts. That image needs to be corrected in view of India's rapid economic growth. Despite the world economic and financial crisis, India's economy is still expanding. The GDP growth figures have fallen from 9% to 6.8%, but that is still a very respectable growth. And we must remember that although there are 300 million people in India who live below the poverty line, there is also 300 million people of the middle class, which is two and a half times the population of Russia. That middle class forms the foundations of a strong economy and a strong state. To give you another example, Russia produced 900 million dollars' worth of software three years ago, while the figure for India was 20 billion. Modern India is not the India we are all used to.

India too has its fair share of obsolete ideas about Russia as a country that is either no different from the former Soviet Union—or, to the contrary, as a country that has nothing in common with the former Soviet Union and cannot claim a rightful place in the group of leading world nations in terms of its economic and human potential. That latter idea is especially widespread in the Indian business community. Indian businessmen do not fully understand Russia's potential as a market and an investment destination. They sometimes think little has changed since the Soviet times, and their ideas are no longer relevant to the demands of the Russian market.

All these old ideas about each other need to be changed as soon as possible.

SECURITY INDEX: What are the practical steps that need to be taken to effect such a change?

TRUBNIKOV: First, we need to change the scale and the nature of the Russian media presence in India.

Suffice it to say that Russia's entire journalist corps in India consists of five correspondents: two working for the ITAR-TASS and RIA Novosti news agencies, and three newspaper journalists. Back in 1971, the local Communist party cell of Soviet journalists included 27 people. And Indians themselves were being told about events in the Soviet Union in 12 different languages, from English to Oriya and Tamil. Meanwhile, there are 90 million people in the world who speak Tamil. There are about 50 million Oriya speakers. Many of the modern Indian political leaders read the Soviet children's magazine *Sputnik* when they were little. That magazine was published by the Novosti news agency's bureau in India. The bureau had 400 employees, including locally hired staff. In other words, the scale of the information exchange back then was colossal.

Radio and television journalists also had a bureau here, which was very busy. Not a single Russian TV channel now has a bureau or even a permanent correspondent in India. They sometimes send someone over to cover some breaking story, but that is it. For example, after the Mumbai terrorist attack, when India's most famous Taj Mahal hotel was burning, a group of Russian correspondents came over. They weren't very well prepared. They shot some footage, but most of the information was lifted from foreign TV channels. We are not creating our own product for the Russian TV viewers or newspaper audience, to cater to their specific demands. The BBC or CNN are not going to do that for us. Information is only valuable when it is tailored with a specific audience in mind.

Second, there is the problem of insufficient travel between our two countries. The visa regime is a very serious obstacle here. Strangely enough, we don't even have a simplified visa system with the Indians for any of the usual categories such as businessmen, students, etc. We have such simplified systems with many European nations, and they greatly facilitate travel. In the case of India there is one major difficulty. The draft Russian–Indian agreement on a simplified visa regime has existed since 2004—but it is still just a draft because the Russian immigration service refuses to give the document its vetting. The problem is, Russia has undertaken a commitment before the EU not to allow illegal migration through its territory. In connection with this, the EU requires that if Russia signs a simplified visa regime with any country, it should have a readmission agreement already in place with that country. The EU regards a whole number of countries as potential sources of illegal migrants. Unfortunately, India is among those countries. That means we cannot sign a simplified visa regime agreement with India without signing a readmission agreement, under which India would allow the deportation of illegal migrants who entered Russia from Indian territory back to India. The Indians do not have a readmission agreement with a single country, and they do not want to sign such an agreement with Russia either, so as not to create a precedent. Certain steps have been made to find a compromise—but time goes by, and the lack of a simplified visa regime continues to hamper travel and contacts between the business communities of the two countries. As one wise Russian businessman told me, ''business is like electricity: it follows the path of least resistance.''

Third, bureaucracy is a serious drag, both in India and here in Russia. This is a scourge of enterprise, both domestic and international.

These three problems need to be dealt with by our two nations if we want to move on from intergovernmental relations towards relations between our two peoples and business communities.

NOTE

[1] The text of the interview is based on Vyacheslav Trubnikov's speech at a meeting of the Trialogue Club International hosted by the PIR Center on March 3, 2010.

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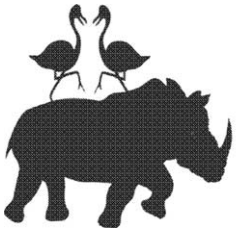

Tibor Tóth

THE CTBT IS ONE OF THE HISTORICALLY LONGEST BRICKS OF THE NONPROLIFERATION REGIME

To ban all nuclear explosions in all environments, for military or civilian purposes, is a historical mission of the Comprehensive Nuclear Test Ban Treaty (CTBT). Being a significant part of the nonproliferation regime this treaty still did not came into force.

Executive Secretary of the CTBT Organization Tibor Tóth estimates the possibility of the CTBT ratification by the United States and some other countries in his interview as well as the current development of the International Monitoring System and a mechanism of on-site inspections.

SECURITY INDEX: How would you assess the current situation and the progress made in the area of test-ban treaty so far?

TÓTH: CTBT is a part and parcel of the nonproliferation regime. So, if you wish, the regime is something built of bricks: test ban brick, safeguards brick, nuclear weapon free zones, export control arrangements. There are many other bricks: negative security guarantees, disarmament, nuclear security and safety, bilateral arrangements. It is important to see whether these bricks are working right or not. The stronger the bricks are, the stronger the facade is. From that point of view, it is important to see CTBT as one of the historically longest bricks. It was very much visualized back at the time of the conclusion of the NPT; mentioned as one of the principals in 1995 when the Treaty was extended indefinitely; and mentioned as measures 1 and 2 (in this order) in the 13 Practical steps (of the 2000 NPT Review Conference). The treaty is not in force; nine ratifications are missing. At the same time, we have grown into an organization of 182 member states with 151 ratifications. If I compare where we were in 2000 when 13 Practical Steps were adopted, there were less than 50 ratifications and there was no International Monitoring System. So now we are at 151 with more than 250 monitoring stations in place, and the system showed its strength in 2009 and 2006, in the context of the DPRK tests.

SECURITY INDEX: Annex II of CTBT lists 44 states whose ratification is required for the Treaty's entry into force. The United States is one of the key countries that has yet to ratify the Treaty. With the change of administration, the United States voiced its commitment to the Treaty. What is your estimation of the possibility that the United States will ratify CTBT? Does your organization participate in any promotional activities facilitating CTBT ratification in the United States?

TÓTH: The administration went clearly on record with pursuing ratification: President, Vice-President, Secretary of State, and Secretary of Defence made points which are supporting the ratification. In addition to that there is bipartisan support: the Reykjavik initiative, Kissinger–Shultz–Perry–Nunn, quite a number of senators are very supportive. At the same time, it doesn't mean that right now there are 67 votes. And the intention of the administration is to give the best chance for this Treaty to be ratified. They are putting in place the necessary ingredients for successful ratification, ingredients like update of the National Academy of Science Report, which was done in 2001—soon it will be rolled out; they are interacting with the key Senators and Vice-President Biden is playing a key role in this respect. There will be more interaction. Having said that, not only on this issue but on other issues as well it is not easy to reach a super-majority in the Senate. The CTBT should be put in this context, whether or not on other issues there is a

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bipartisan/nonpartisan approach. What I would like to stress is that the road we covered during the last 10–13 years is thanks to investments by the United States, among other countries, under different administrations. In that respect it is a result of a nonpartisan approach by the United States. So, it will be important to take it into account when the ratification debate will take place.

SECURITY INDEX: Three states—India, Pakistan and North Korea—have not even signed the Treaty. Do you conduct any activities trying to engage these states in CTBT work?

TÓTH: The absence of India, Pakistan, and North Korea is important in a wider sense. The presence of these countries in arrangements which would make the nonproliferation regime stronger is absolutely a must. So, I see CTBT as a measure which is more doable for India and Pakistan, setting aside North Korea, than some of the other measures. Of course, it would be important to see these countries in each and every element of the regime, especially the NPT. But I see the chance for these countries to express in a multilateral framework what they have committed themselves to in a national or bilateral framework. India and Pakistan separately and in a bilateral framework went on record on a moratorium. So, if these countries are serious about a moratorium, then the best way to demonstrate their seriousness is through the multilateral framework, which, by the way, might make it easier for them to have good guarantees that other countries which are relevant in their region or in a wider context are bound by the same obligations. We are not trying to enter the scene in a way where it might raise more questions than answers. Yes, we have been listening to some scientists and researchers from India and Pakistan in different fora, we happen to sit in different fora with them. But we are waiting for the right moment, and for the right signal from these countries. On the DPRK, the six-party talks are an important vehicle and framework to denuclearization of the Korean peninsula. We see, and I see, the test ban as an important part of the denuclearization. Eventually, the denuclearization cannot be serious without a multilaterally binding commitment by the DPRK not to carry out nuclear tests. And, unfortunately, the 2006 and 2009 tests were creating a lot of uncertainty, and this uncertainty is not just for the countries of the region but globally speaking, because of the potential spread of technologies, which with each and every explosion are further improved. We don't have contacts with the DPRK, but we would like to see this issue as part and parcel of the denuclearization effort.

SECURITY INDEX: What about the CTBT verification regime? Could you, please, describe the current status of development of the International Monitoring System?

TÓTH: Altogether we should have around 340 facilities and 250 communication assets—it's approximately 600. Out of this 600 right now, we have around 560 in place. This is a very high level of readiness. The 2006 and 2009 North Korean nuclear explosions were a reminder of how useful this system can be. Why? Because it enables countries in near-real time to get information: raw information and processed information about an event, which is a serious issue for discussion in the Security Council, for example. It makes a big difference whether those who are discussing an issue are discussing one that requires the special attention of the Security Council, whether these countries are knowledgeable or not about this issue, whether they have independent sources of information or they have to rely on a few, and whether they believe in the consistency and integrity of the verification data and verification information. I do not have to refer to recent history as to why these elements make a difference. This is where we can make a difference. We have 90 countries from which data is collected, there is no chance to have any doubt about the integrity of the data, we have data processing, which is absolutely transparent and countries with their own software can do it. So it's not someone telling them what's happened, they themselves see what's happening.

SECURITY INDEX: How would you assess the performance of the IMS at the time of the North Korean tests in 2006 and 2009?

TÓTH: First of all, it is called provisional operation of the IMS. We are indeed trying to see how the system is functioning, so it is not an official verification functioning of the system. In the case of the 2006 explosion, which was 0.5 kiloton estimated yield, we had more than 30 stations that registered the explosion. And for your information, when negotiators were discussing in Geneva the sensitivity of the seismic system, with the full-blown monitoring system, they said 1 kiloton and above should be registered by at least two stations. So we had half of that yield, only half of the stations in place and we registered it in more than 30 stations. We managed to invoke another technology called noble gas, though we had only 25 percent of the noble gas network in place. And of course, it was a yield which is uncharacteristically low—0.5 is 50 times smaller than the first

explosions of other countries. Against this background, again, something that is 50 times smaller, because of that the release of radionuclide material is much smaller, and we were able to register noble gas release. In 2009, we haven't measured any release of noble gas, no one measured any release. We had 61 stations (that registered an event); again we need only three to include an event in our bulletin. We provided information (raw data) in split seconds, we provided processed information within less than two hours, we had meeting in Vienna at nine o'clock in the morning the same day. So, these are the reminders about the potential for the future. We did not use the on-site inspection leg of the regime; it can be operational only with entry into force of the rest of the system as well. But on the on-site inspections we are running more of the simulation tests.

SECURITY INDEX: Talking about the on-site inspections, could you please briefly describe the purpose and the mechanism of the inspection?

TÓTH: It is a part of the regime, so on top of collecting the data, processing data, making sense of information, on top of what we call consultations and clarification, this is the last layer of the regime. It can be operationalized through the decision of the future Executive Council. From that point of view, compared with the Chemical Weapon Convention we call it a ''green line procedure'', so the future Executive Council will need to approve it. Of course, by that time there will be information and data as a result of the international monitoring system and international data center functioning. The magnitude of the OSI—a one thousand square kilometer area can be defined as an area for inspection, 40 inspectors, two months, even more, tens of tons of equipment, more than 10 different clusters of technology. So, this is a reminder about a very massive last resort tool in a wider toolbox. We simulated it in an exercise, an on-site inspection exercise in 2008 in Kazakhstan. We moved there more than 50 tons of equipment; we kept there more than 200 people, because they were very much interested in seeing how it is working, we stayed there a full month in conditions which were a combination of summer and winter and spring and autumn at the same time. And it is a former test site where nearly 500 explosions were carried out. So, if there is any place where one can simulate in a realistic way all the different conditions, I think we got it right.

SECURITY INDEX: It looks indeed like a very ambitious project. What are the main challenges in developing procedures for on-site inspections and would you say that they are already in place?

TÓTH: As with other elements, of course, it is still work in progress. In the context of the Kazakhstan 2008 integrated field exercise we tested certain components—we tested logistical, infrastructural components, activation of the inspection, the early period of the inspection. We did not test other components—we call continuous aerial techniques, some of the technologies which happen in the second phase of the inspection. Yes, we are working on equipment, on technologies, on methodology. So, it's work in progress. Of course, the overall strength of this regime is the aggregate application of different layers. So, you might be able to get all the necessary information as a result of applying the international Monitoring System. Only in the case where there is a need for additional information, you might have to resort to this last layer. In the next two to three years we will prepare the ground for another big inspection, we'll activate some other technologies, so this is where we are.

SECURITY INDEX: You said it is a measure of last resort. So, in the case of North Korean nuclear tests, if the treaty were in force, would you think it would be necessary to conduct on-site inspections, or were the available data enough to prove the violation?

TÓTH: In the case of both 2006 and 2009, first of all, a chance would have been given to a country, in case the country involved feels that things did not happen, to prove a situation through on-site inspection. Because looking from outside, in the case of 2006 and 2009, there was very compelling evidence about things which cannot be explained with natural phenomena. And the corroborated evidence, especially in 2006, pointed clearly to things which have one explanation—a non-natural, man-made event of a nuclear character. In 2009, there was no measurement by no one, not just by us, of radionuclide particles or noble gas release. I think, yes, it is on the line of significance of on-site inspections and on the line of possibility not just for the country to prove that they haven't done something but for the international community to see in case there is very compelling evidence to look into the method. And under both scenarios, I think it's important that this tool is there. Of course the country can eventually ''stonewall'' the international community; even if there is a decision by the future Executive Council, a country can breach its obligations, but then it would be a serious breach of verification obligations,

international obligations, in addition to the suspicion in carrying out something which is against the norms.

SECURITY INDEX: You mentioned that the IMS is in a very advanced development stage. What are key areas still missing in the system?

TÓTH: We would like to see more progress, first of all, in the stations that are supporting different technologies. We are putting heavy emphasis on the radionuclide noble gas technologies to put more stations in place. To give you one example, in 2006 we had 10 noble gas stations, now we have 24, and we are moving forward each year adding around five to six noble gas stations; eventually we have to reach 40. We are investing heavily in infrasound technologies. It is not just about stations, it's about how we process the data, which are collected with the help of the stations. So, recently we put infrasound technology into what we call processing. So the infrasound is contributing to the bulletins, which are practically pulling together information from seismic, hydro acoustic, infrasound, and radionuclide sources. We would like to move forward with the radionuclide technology and to put the stations on a certified basis, so it is now what we call the International Noble Gas Experiment and we would like to certify some of these stations. So, this will be a new development as well.

We are improving the speed with which we are processing the data. So, we have moved to the Linux system. So the brain speed of the system is significantly increased as the result of moving to Linux—another area of recent achievements. We would like to further improve the precision and the versatility of the information and the way we relate this information to the member states.

Geographically speaking, it is a widening network. Recently we crossed the 250 facilities threshold, which is a nice number out of 337. In certain areas and regions, we have new facilities as well. The last station which we certified was in Turkmenistan and we are waiting for new ones.

SECURITY INDEX: Are there any areas where you cannot monitor the situation?

TÓTH: North Korea was a 0.5 kiloton event, which was registered by 31 stations; the most distant station was in Bolivia, La Paz more than 7000 km away, and even the travel time was 22 minutes, if I am not wrong. So, it is a question of how much you would like to monitor. In the U.S. National Academy of Sciences 2001 Report, there was a reference that below 0.5 kiloton the military significance of the test is decreasing, and because of that cheating and circumvention might become more risky against the background of the benefits. So, we are looking upon it from that perspective. In 2006 when we were able to detect a 0.5 kiloton yield event in 30 stations—at that time we had 80 facilities; we have three times more facilities now. The sensitivity of the system in the northern hemisphere is going into 0.01 kiloton. So, we are speaking not about hundreds of tons of TNT equivalent, but tens of tons of TNT equivalent. To give you another example, we were able to measure a hydro acoustic event, which was generated, I think, by 60 kg of explosives practically nearly 10,000 km away. At that time, this was Juan Fernandez hydro acoustic station, which registered something that originated at the Japanese coast. Unfortunately, the tsunami which happened in Chile destroyed that station. It is a reminder that we are not just building the system but we have to maintain the stations; and then there are forces majeurs like this unfortunate and dramatic disruption, which was done by the tsunami in Chile.

SECURITY INDEX: Tsunami warning is now part of the civil applications of the International Monitoring System. Could you describe what other civil applications of the system exist and how important they are in the work of your organization?

TÓTH: The tsunami warning is absolutely important. I would very much underline the notion that we have tsunami-warning arrangements under the International Oceanographic Commission of UNESCO with regional centers—Japan, Hawaii, Alaska, and with quite a number of countries, especially in the Pacific region. Having said that, a tsunami, as Chile reminded us, can hit in any place, so we would be very much interested in proliferating this very positive experience and moving to other countries. We have been interacting with countries and reminding them about the capabilities of the system, so we hope that the potential given to all these countries already in the Pacific region will be praised by countries in Latin America, in the Caribbean, in the West and East African region, in the Mediterranean region. This is the first point and it is important that we do not just say ''OK, I taking care of the tsunami'', we have to further spread the benefits.

Other applications are providing data and data products and training. The countries, in accordance with their own requirements, can make use of the data for purposes like monitoring

of volcano eruptions/earth structure research as the result of seismic data; the infrasound data might provide information on natural phenomena, how to be ready to mitigate the consequences of different types of disasters. I just had the Ambassador of Indonesia sitting here: Indonesia is unfortunately affected by tsunamis, by earthquakes, by volcanoes, by many other things, like recently the meteorite that landed somewhere on Indonesian territory. So at the national level all these applications can be pursued. As an organization, of course, we are pursuing very vehemently the tsunami warning and doing the training and capacity building and empowerment on the other issues.

SECURITY INDEX: In what areas does Russia participate in the CTBTO activities?

TÓTH: What is important is that Russia is an early signatory and ratifying country. So, from the P5 it is a very important example. What is extremely important is that out of the Russian Federation's 32 stations, we have more than half of the stations already in place and certified. So, it is a very important contribution of Russia to the Monitoring System. Russia contributes significantly with scientific and technical support; beyond building the stations we are getting good advice through involvement of Russian experts in our work, our discussions; technical experts are helping a lot. Financial contributions are very important. So, I think Russia is an exemplary partner in both the political and technical aspects, as has been demonstrated quite frequently. In September last year, I had a meeting with Foreign Minister Sergey Lavrov and Russia pledged its continuous support to the CTBT. It is important in the situation when we have to bring on board the remaining two P5 nuclear weapon states. We need the ratifications, so, it is an important message that this Treaty can be embraced by the nuclear weapon states. It is an important message in the context of the deeper cuts in strategic nuclear weapons as well. I see the test ban treaty as an important enabler for the deeper cuts, because the test ban treaty is making sure that there is no qualitative door left open. So, once there is quantitative deep reduction of nuclear weapons, I think it's important that this qualitative door is closed firmly by a legally binding verification regime. So that is where it is important that Russia is supportive of that concept.

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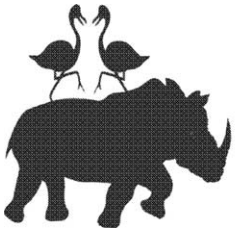

Ali Asghar Soltanieh

IRAN EXPECTS IAEA DIRECTOR GENERAL TO FULFILL THE WORK PLAN

The escalating crisis over Iran's nuclear program urges the international community to impose new sanctions against this country. What are the current relations between Iran and the International Atomic Energy Agency (IAEA)? And how does Iran estimate the possible steps for trust-building between Iran and the international community?

We have put our questions to Iran's Permanent Representative to the IAEA Ali Asghar Soltanieh.

SECURITY INDEX: What measures could be taken to restore the confidence between Iran and the international community on Iran's nuclear program?

SOLTANIEH: In order to enhance the confidence both sides should try to find out what are the reasons for the confidence deficit and take steps to improve the situation for the future. From our side we've taken bigger steps in order to remove ambiguities. We are still an active party to the NPT. We are cooperating fully with IAEA despite the UN Security Council's resolutions imposing sanctions against Iran. The Western countries involved the UN Security Council in the Iranian nuclear issue, which belongs to the IAEA in Vienna. This proves that Iran is helping to remove questions, problems, and to take steps towards confidence building.

Now the question is, what has the other side done? Nothing. They've taken steps to destroy the confidence by passing resolutions and bringing this issue to New York. At the NPT Review Conference we were working together to find a common solution but they were talking about resolutions. This has shown that the United States and a couple of European countries just want to destroy the constructive environment. And this is the case. It is unfortunate that they are not taking steps in the right direction.

SECURITY INDEX: What is the main purpose of a new Iran–Brazil–Turkey agreement?

SOLTANIEH: This agreement clearly proves Iran's political will for cooperation. Although usually any country should pay and get the fuel, we are ready to send the material out. And this shows that we are really going to help the negotiation's process using peaceful means. This is a clear indication of our political goodwill. And we appreciate the attempts made by Brazil and Turkey—they wanted to show to the whole world that Iran has the right to the peaceful use of nuclear energy. They are asking Iran to help, and we are affirmative and positive towards their request. We do not see any necessity to send the material out but we want to show our positive approach to it.

SECURITY INDEX: What is your current evaluation of relations between Iran and the IAEA?

SOLTANIEH: Generally we have full cooperation with the IAEA. Nevertheless the new Director General has arrived. Of course, his first report was not suitable because he was reviewing past history, which was not necessary. They criticize. We hope that in the next report he will be more constructive, and the report will be more balanced. Nevertheless in general we have been working very hard and even after we started up to 20 percent enrichment activities we had a meeting with IAEA specialists. Our new safeguard approach also shows that Iran is fully determined to

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cooperate with the IAEA in order to make sure that every nuclear activity is under surveillance of the IAEA.

SECURITY INDEX: What are the prospects of these relations? What goals is Iran putting forward?

SOLTANIEH: The future is very clear: we will continue the same trend working with the IAEA under NPT comprehensive safeguards, and Iran expects the IAEA Director General to immediately fulfill the work plan which was agreed between Iran and IAEA. According to that document the Agency should immediately announce the safeguards as a routine inspection and put an end to the political discussion around the world. If such a thing happens we will open up a new chapter of cooperation with the IAEA.

SECURITY INDEX: The Iranian enrichment program is developing very fast. What is the reason for the hurry? Would you comment on the possibility of an Iranian moratorium on uranium high enrichment?

SOLTANIEH: We are not going to produce high-enriched uranium even for a research reactor. We will go up to 20 percent, which is not categorized by the IAEA as high-enriched. It is categorized as low-enriched. We need uranium enriched up to 20% for a research reactor and low-enriched uranium for the Bushehr Power Plant. And we will definitely continue our enrichment program because otherwise there is no assurance and guarantee for the fuel. Today there is no international legally binding instrument to guarantee this kind of fuel.

SECURITY INDEX: The Iranian position concerning the Nuclear-Weapon-Free Zone in the Middle East is connected with the position of Israel concerning the NPT. Does Iran see any other ways of implementing the idea of a Nuclear-Free Middle East?

SOLTANIEH: We are looking for a nuclear-weapon-free zone. Iran in the long term will support a WMD-free zone but on this stage we have to focus on a nuclear-weapon-free zone and we are supporting it. But the only way for this is a prompt Israeli accession to the NPT. The international community understands that we are very disappointed with Israel's nuclear capability and not joining the NPT. All 116 countries of the non-aligned movement have condemned Israeli nuclear capability and have expected Israel to join the NTP immediately and put all nuclear installations and activities, and nuclear materials under the safeguards of the IAEA. We should give only two years—by the time of the next Preparatory Committee of the NPT Review Conference—for Israel to join the NPT.

SECURITY INDEX: In your interviews you often talk about the new Iranian policy of full transparency. What will be the further development of this policy? What steps is Iran going to take?

SOLTANIEH: First of all the transparency itself should be defined because there is no internationally negotiated definition of what transparency means. For instance, if you say that Russia is not transparent, what does that mean? Russia should open the door of each house for inspectors to come, then is it transparent? Every inch of the country should be inspected? What is transparency? If a country like Iran is fully committed and all inspectors are coming 24 hours a day with the cameras installed in Iran according to the comprehensive safeguard agreement—this is transparency. We are following the NPT and this is the way transparence should be measured. We fully support the transparency which accords with the definition of the safeguards agreement.

For more information on Iran, please visit ''Resources by Region – Iran'' at the PIR Center website: http://www.pircenter.org/view/iran/eng

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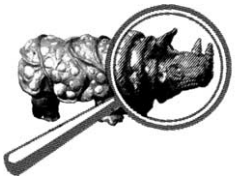

Bilyana Tsvetkova[1]

DISPROVING A CONVENTIONAL WISDOM: WHY NUCLEAR TERRORISM ORIGINATING FROM RUSSIA IS A MYTH

In his speech in Prague on April 5, 2009, President Barack Obama reiterated the widely accepted fear that ''terrorists are determined to buy, build or steal'' a nuclear bomb.[2] Since the end of the Cold War it has often been asserted that nuclear weaponry and nuclear material from Russia's vast nuclear arsenal remains a likely target for such terrorists. Furthermore, based on available information Russia is considered to be the country with the highest risk of nuclear theft. In contrast, this paper argues that the current preoccupation with Russia as a source of nuclear weapons and material for potential use in a nuclear terrorist attack is exaggerated and highly improbable for the following reasons:

- ❑ improved supply security in Russia;
- ❑ lack of established trafficking networks;
- ❑ insufficient demand; and
- ❑ difficulties in producing and delivering nuclear weapons.

Many experts and policymakers believe that nowadays nuclear terrorism poses an existential threat to the Western world.[3] Smuggling nuclear weapons or nuclear material out of Russia is considered to be one of the options for terrorists aiming to acquire nuclear capabilities. Although hard to estimate, based on available information, in November 2008 Russia was reported to be the country with the highest risk of nuclear theft.[4] Immediately following the demise of the USSR, former USSR nuclear stockpiles were seen as a major cause of concern because they were spread out across four Former Soviet Union (FSU) states causing difficulties of command and control. Programs aimed at consolidating the nuclear weapons of FSU states have proven to be very effective and consolidation within Russia of some 30,000 to 40,000 nuclear weapons has successfully taken place.[5] After significant reductions under the provisions of the 1991 Strategic Arms Reduction Treaty (START) and the 2002 Strategic Offensive Reductions Treaty (SORT, also known as the Moscow Treaty), as of January 2009, Russia's nuclear arsenal amounts to 3,909 nuclear warheads.[6] Regardless of this progress, Russia remains the country possessing the world's largest amount of nuclear weapons and materials, located in the world's largest number of bunkers and buildings, estimated at approximately 250.[7] It is estimated that as of October 2009, Russia possesses between 735 metric tons (MT) and 1,365MT of weapons usable highly enriched uranium (HEU) and between 106MT and 156MT of military-use plutonium.[8] Many experts believe that these nuclear weapons and material are still vulnerable because of inadequate security at storage sites and a lack of government commitment to, accountability for, and monitoring of existing nuclear weapons and material.[9] Additionally, deplorable economic conditions facing Russian nuclear scientists and workers in Russia's closed nuclear cities are believed to compel individuals to clandestinely steal and sell nuclear knowledge or material for personal profit.[10]

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Contrary to these beliefs, by conducting a systematic analysis of the existing evidence this paper argues that the current preoccupation with Russia as a source of nuclear weapons and material for potential use in a nuclear terrorist attack is exaggerated for the following reasons: improved supply security in Russia; lack of established trafficking networks; insufficient demand; and difficulties in using nuclear material to produce and employ nuclear weapons.

First, international initiatives and aid programs spearheaded by the United States have been largely effective in bolstering the security and storage of Russian nuclear weapons and nuclear material. Programs such as those put in place by the U.S. National Nuclear Security Administration (NNSA), the U.S. Department of Energy (DOE) and the U.S. Department of Defense (DOD), agreements between U.S. and Russian presidents and initiatives such as the ''Megatons-to-Megawatts'' program have greatly reduced the likelihood of smuggling nuclear materials by securing the nuclear material and weapons sites within Russia and on the territory of all FSU states. By mid-2008 as much as 75 percent of the buildings that contain weapons-usable nuclear material on the whole territory of all FSU states have been secured.[11] By June 2009, these programs had achieved almost full success in upgrading the security of the Russian nuclear sites with nuclear weapons and nuclear material. Therefore, the budget requested for these programs for fiscal year (FY) 2010 has decreased. It is projected that in the future the funding for these projects will experience a gradual and steady decline as the planned work in Russia is close to completion.[12] Additionally, since the end of the Cold War, Russia has had effective monitoring mechanisms in place but they are often ill-understood and underestimated by U.S. experts seeking to safeguard Russian nuclear material.

Second, there is no evidence to support the claim that an established and stable trafficking network designed to smuggle nuclear weapons or material out of Russia exists. There is no proof of Russian organized criminal activity in this area as most attempted trafficking is undertaken by amateur individuals who are relatively inexperienced and unsuccessful.[13] Illicit trade of this nature involves substantial risk and opportunity cost leading to an apparent unwillingness on the part of established smugglers to enter this unprofitable and risky business.

Third, the demand side of this equation seems to be quite weak. According to existing evidence and analysis, there appear to be only a limited number of states, groups, or individuals worldwide who desire to purchase nuclear weapons or material, and little conventional wisdom on how to proceed in any attempt to acquire such material. Additionally, much of the perceived demand side consists of state police and intelligence services conducting sting operations in an effort to prevent the flow of nuclear materials. The historical record shows that there is not one single reported case of a nuclear weapon having changed hands for money.[14] Though the A.Q. Khan network was active during the 1970s and 1980s in supplying information, technology, and equipment necessary to conduct uranium enrichment to governments willing to pay for it,[15] this is very different than acquiring and selling a nuclear device, something that even this network did not do. It is often said that the International Atomic Energy Agency's (IAEA's) confirmed cases represent only a minute picture of the reality of the trafficking situation and that we should fear what we do not know. However, an evenhanded approach demands that we review the existing facts and information in an attempt to avoid exaggeration of such fears.

Fourth, would-be nuclear terrorists face significant obstacles in seeking to produce and employ nuclear weapons. Though many experts claim that it is not hard to construct a nuclear device, this does not seem to be a compelling argument when one considers that potential terrorists would only have access to much of the necessary knowledge and equipment in the event of having a state sponsor willing to assist in the development of such weapons. It is unlikely that any state would view the benefits of harboring a terrorist group on its territory, and assisting such a group in developing a nuclear device, as outweighing the costs imposed by the international community once such a device is employed and, ex post, linked to the aforementioned state. Before presenting each of these arguments in detail, the paper will provide a brief technical background on nuclear weapons that will prove essential in conducting an analysis of the significance of the nuclear smuggling threat from Russia, and nuclear terrorism in general.

TECHNICAL BACKGROUND

Nuclear devices function through one of two processes: fission or fusion. Fission is the most commonly used process and is often the first process pursued when a state or other group desires to construct a nuclear device because it is simpler and requires less industrial

infrastructure than the fusion process.[16] Fusion devices are commonly known as thermonuclear or hydrogen bombs and, as they are significantly harder to produce, will be excluded from the currently presented discussion.

In constructing a fission bomb, the two most important issues to determine are the type of nuclear material and explosion mechanism to use. Both of these considerations have ramifications for terrorist groups seeking to construct such a device because there are difficulties in smuggling certain types of material and complexities in engineering techniques requiring access to industrial machinery, resources, and know-how. There are two types of widely used explosion mechanisms in fission bombs, a gun-type mechanism and an implosion-type mechanism, and two types of fuel material, plutonium and highly enriched uranium (HEU). An implosion-type mechanism is a more complex device requiring specialized equipment and advanced engineering techniques and is believed to be beyond the capability of non-state actors. A gun-type mechanism is relatively simple and requires less specialized technical knowledge to build.[17] This weapon type is only suitable for use with HEU as a fuel source and requires a minimum of 50kg enriched to 90 percent or more.[18] As will be apparent later, this is quite a large amount of nuclear material when compared with confirmed accounts of previous smuggling activity.

Due to its highly radioactive nature and the technical requirements for producing a nuclear bomb with it, plutonium is not likely to be used by non-state actors to produce a nuclear device.[19] HEU is seen as the preferred fuel material for a terrorist organization seeking to build a nuclear weapon because of its user-friendly properties. It is not immediately dangerous, is only mildly radioactive, can be handled with bare hands or transported in a backpack and will pass through most radiation monitors undetected. Additionally, it is the only alternative for use in the relatively less technologically advanced gun-type method of detonation.

There is an inverse relationship between the level of enrichment and the amount of HEU needed to reach the critical mass necessary to create fission. Weapons-grade HEU contains more than 90 percent of the fissionable isotope U-235 and, at this level of enrichment, only 25kg of HEU are necessary to reach critical mass if the technologically more advanced implosion-type mechanism is used.[20] For instance, uranium enriched to the 20 percent level would require about a ton of HEU to reach critical mass. The relationship between level of enrichment and critical mass is extremely important when evaluating the danger of smuggled nuclear material and its usefulness in building a nuclear device.[21]

TRAFFICKING BACKGROUND

According to the IAEA Illicit Trafficking Database, since the end of the Cold War until the beginning of 2008 there had been over a thousand confirmed cases of trafficking and other unauthorized activities in nuclear and radioactive material.[22] However, the vast majority of these incidents have been determined to be false alarms or have involved nuclear material in such small amounts or such low quality as to allow no possibility for use in the production of a nuclear weapon. According to the most recent data available from the IAEA, between 1993 and the beginning of 2008 there were 1340 confirmed cases of trafficked nuclear material of some description. However, only 18 of these cases have involved plutonium or HEU (see Figure 1). Of these 18 cases, two involved the accidental loss of small amounts of nuclear material and one case involved the discovery of trace amounts of HEU on a pipe in a steel mill and thus cannot be considered cases of theft or trafficking. This suggests a total of 15 confirmed cases of unauthorized possession and trafficking of nuclear material globally between 1993 and the beginning of 2008. Regarding the HEU cases on this list, the enrichment levels are unknown, making it difficult to ascertain whether this material was weapons-usable or not.[23] However, what *is* clear from this information is that the combined total of all the material smuggled globally since 1993 is far less than the amount of nuclear material that would be needed to construct *a single* nuclear weapon, and that only 1.3 percent of all confirmed cases of unauthorized possession and trafficking of nuclear material involved the material necessary for constructing nuclear weapons.

Not only has there not been very much nuclear material trafficked from Russia after the end of the Cold War, it is also interesting to note that IAEA most recently available data until 2007 indicates a steep decline in nuclear smuggling even after 1995 (see Figure 2).[24]

Given the wealth of nuclear weapons and material present in Russia after the dissolution of the USSR and the significant public attention this issue has received, it is worthwhile investigating the

Figure 1. **Confirmed Trafficking Incidents of Plutonium and HEU, 1993–2007**

Incidents involving HEU and Pu confirmed to the ITDB, 1993–2007			
Date	**Location**	**Material Involved**	**Incident Description**
May 24, 1993	Vilnius, Lithuania	150g HEU	4.4t of beryllium including 140kg contaminated with HEU were discovered in the storage area of a bank
March, 1994	St Petersburg, Russian Federation	2.972kg HEU	An individual was arrested in possession of HEU, which he had previously stolen from a nuclear facility. The material was intended for illegal sale
May 10, 1994	Tengen-Wiechs, Germany	6.2g of plutonium	Plutonium was detected in a building during a police search
June 13, 1994	Landshut, Germany	0.795g HEU	A group of individuals was arrested in illegal possession of HEU
July 25, 1994	Munich, Germany	0.24g of plutonium	A small sample of PuO2–UO2 mixture was confiscated in an incident related to a larger seizure at Munich Airport on August 10, 1994
August 10, 1994	Munich Airport, Germany	363.4g of plutonium	PuO2–UO2 mixture was seized at Munich airport
December 14, 1994	Prague, Czech Republic	2.73kg HEU	HEU was seized by police in Prague. The material was intended for illegal sale
June, 1995	Moscow, Russian Federation	1.7kg HEU	An individual was arrested in possession of HEU, which he had previously stolen from a nuclear facility. The material was intended for illegal sale

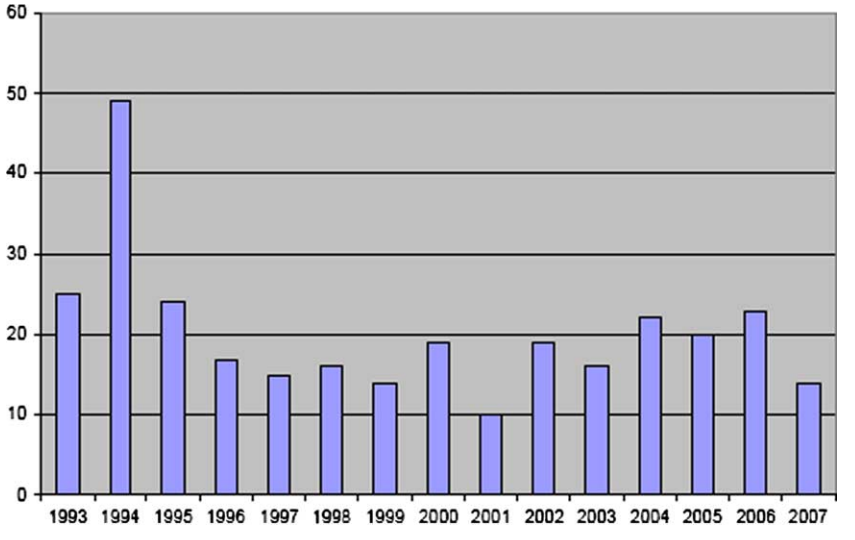
(Continued overleaf)

Figure 1. (*Continued*)

June 6, 1995	Prague, Czech Republic	0.415g HEU	An HEU sample was seized by police in Prague
June 8, 1995	Ceske Budejovice, Czech Republic	16.9g HEU	An HEU sample was seized by police in Ceske Budejovice
May 29, 1999	Rousse, Bulgaria	10g HEU	Customs officials arrested a man trying to smuggle HEU at the Rousse customs border check point
December, 2000	Karlsruhe, Germany	0.001g of plutonium	Mixed radioactive materials including a minute quantity of plutonium were stolen from the former pilot reprocessing plant
July 16, 2001	Paris, France	0.5g HEU	Three individuals trafficking in HEU were arrested in Paris. The perpetrators were seeking buyers for the material
June 26, 2003	Sadahlo, Georgia	~170g HEU	An individual was arrested in possession of HEU upon attempt to illegally transport the material across the border
March, 2005 to April, 2005	New Jersey, USA	3.3g HEU	A package containing 3.3g of HEU was inadvertently disposed of
June 24, 2005	Fukui, Japan	0.0017g HEU	A neutron flux detector was reported lost at an NPP
February 1, 2006	Tbilisi, Georgia	79.5g HEU	A group of individuals was arrested trying to illegally sell HEU
March 30, 2006	Hennigsdorf, Germany	47.5g HEU	Authorities discovered trace amounts of HEU on a piece of tube found amidst scrap metal entering a steel mill

Source:
Data retrieved from *IAEA Illicit Trafficking Database Factsheet (ITDB) 2006*, *Incidents Involving HEU and Pu Confirmed to the ITDB, 1993–2006* (http://www.iaea.org/NewsCenter/Focus/NuclearSecurity/pdf/heu-pu_1993-2006.pdf, accessed October 31, 2009).

Figure 2. **Incidents reported to the *IAEA Database on Illicit Trafficking* involving unauthorized possession and related criminal activities, 1993–2007.**



various explanations accounting for this. As previously stated, this study suggests four reasons for these phenomena: improved supply security in Russia; a lack of established trafficking networks; insufficient demand; and difficulties in using nuclear material to produce and employ nuclear weapons.

IMPROVED SUPPLY SECURITY

The perceived inadequacy in protecting Russian nuclear storage facilities causes anxiety for U.S. experts and policymakers when contemplating the possibility of global nuclear terrorism.[25] Concerns of this nature and policy actions designed to correct deficiencies in this area are certainly prudent as Russia itself has approximately 70 percent of the world's HEU, making nuclear leakage from this country an important focal point when seeking to prevent the proliferation of nuclear weapons and material.[26] However, today this fear has become increasingly unjustified because measures taken by Russia and the international community, spearheaded by the United States, have been largely effective in improving accounting and security at nuclear weapons and material storage sites in Russia.[27] Although it is difficult to measure the success of such a complex matter, the components that this paper uses to define the success of improving nuclear site security is whether the funded programs in place have completed executing the points on their agendas as initially negotiated. Particularly for the programs aiming at securing buildings with nuclear weapons and material, the measure of effectiveness and success is whether accounting and security upgrades for the respective nuclear sites in Russia and other FSU states have been installed. For programs aiming at reducing nuclear warheads and materials, success is defined as whether the disposal and destruction are going according to plan. For the programs aiming at stabilizing employment for nuclear personnel, success is defined by a combination of achieved goals on the program's agenda and analysis of the current improved economic situation in Russia. The paper does not claim that these programs have fully secured the nuclear material and weapons sites in Russia. Due to the vast number of nuclear facilities, due to the difficulty of measuring and relativizing qualitative data and due to the restricted access to information and overall statistics on the topic, such a claim is beyond the scope of this study. Instead, the paper claims that the programs and systems highlighted here have been successful and, therefore, make a positive contribution in enhancing the security of nuclear sites in Russia.[28]

Measures taken to protect the supply of Russian nuclear weapons and material since the dissolution of the USSR can be broadly categorized into measures taken by various administrative departments in the United States and other international partners in conjunction with the Russian

government, and measures taken by the Russian government itself. As will be shown, the second broad category of actions is controversial and not well understood and therefore its contribution has often been downgraded from the perspective of U.S. academics and policymakers.

The United States is the main sponsor of programs aimed at preventing ''nuclear leakage'' from Russian storage sites. The U.S. Department of Defense reports that it spent over $5 billion up to the end of 2007 on such initiatives and the spending was expected to exceed a cumulative amount of $6 billion by the end of 2008. The estimated total amount required to achieve the program objectives through FY 2013 is $8,137.5 million.[29] The EU, Japan, and Canada have also partnered with the United States in preventing the proliferation of Russian nuclear material by reducing strategic nuclear resources, securing remaining stockpiles, decommissioning nuclear submarines, and employing former weapons personnel in alternative industries.[30]

The most significant U.S.-sponsored programs addressing Russia fall into three basic categories: first, programs that seek the direct improvement of security of nuclear materials and weapons in the FSU; second, programs that seek the permanent disposal of nuclear weapons and material; and, third, programs that seek to stabilize employment for nuclear personnel.[31]

The first category of U.S. initiatives is primarily carried out by the NNSA and the DOD. The NNSA has been responsible for the programs under the heading Material, Protection, Control and Accounting (MPC&A), which is given the largest budget share of the programs in this category.[32] The DOD is mainly responsible for programs related to Nuclear Weapons Storage Security and Nuclear Weapons Transportation Security in Russia.

The NNSA has successfully denuclearized Former Soviet States by carrying out the complete consolidation of all nuclear weapons from Kazakhstan, Belarus, and Ukraine back to Russia. Thus, the main effort of NNSA programs is now securing stocks of nuclear material within Russia itself. These efforts are also proceeding rapidly and successfully.[33] As of the end of 2008, the NNSA has provided comprehensive security upgrades to approximately 75 percent of the buildings that contain weapons-usable nuclear material on the whole territory of all FSU states by mid-2008.[34] It has been estimated that the MPC&A programs in Russia are close to completion and, therefore, their budgetary allocation is expected to decline steadily from FY 2010.[35] Initiatives for increasing the transparency of U.S. and Russian nuclear establishments have also been progressing. Efforts have focused on improving the accounting and control of nuclear material. Material accounting measures are crucial for determining whether a theft has occurred and can also serve as deterrence to thieves who would have stolen only if the theft would be unnoticed. At many Russian sites such measures to date have not been adequately installed or not been consistently used. For instance, many nuclear material sites in the past decade have not conducted annual counts of their available nuclear containers. Other abuses include marking the nuclear weapons and material with wax seals, which can be easily erased. To improve the accounting mechanism, together with Russia, the NNSA has launched a series of initiatives to provide Russian facilities with the necessary equipment for effective accounting, which are also proceeding with the predicted speed and efficiency.[36]

The other set of U.S.-sponsored programs aiming at improving Nuclear Weapons Storage Security is mainly managed by the DOD. Similar to the MOC&A programs by the NNSA, the DOD programs also enjoy considerable success in achieving the goals initially outlined in their agendas. As these programs are also finishing their upgrade work and nearing completion, the budgetary request for FY 2010 is $15 million, which is $8 million less than FY 2009. Moreover, the FY 2010 funds are allocated primarily for training activities. The other program under DOD management, namely Nuclear Weapons Transportation Security in Russia, aims at shipping Russian nuclear warheads to secure central storage locations or to dismantlement sites. This program has experienced a rise in its budget, which signals success because it reveals Russia's willingness to cooperate in securing and reducing its nuclear warheads arsenal.[37] These programs have greatly facilitated the Russian technology-based capacity for monitoring and security and therefore have reduced the likelihood of theft for the execution of a nuclear terrorist attack.[38]

Another area that the DOE has addressed is improving the security culture among personnel at nuclear sites. Security culture is broadly defined as the level of competence and commitment of the employers.[39] In contrast to the nuclear weapon sites, which are guarded by highly professional military personnel, most weapons-usable nuclear material sites are guarded by poorly paid and trained conscripts.[40] To improve the quality of the security culture in Russia and

make Russian guards more cautious in their duties, the DOE has initiated a pilot program focusing on improving security culture at several selected Russian nuclear sites. The initiative includes ''security culture coordinators'' who promote security awareness through training sessions, seminars, and videos provided for Russian nuclear security personnel. Since the Bratislava nuclear security summit in 2005, the security culture program has been expanded to cover more Russian nuclear storage facilities.[41]

Initiatives to achieve goals in the second category of U.S.-inspired programs aimed at permanently disposing of Russian weapons-usable nuclear material and weapons include the ''Megatons-to-Megawatts'' program, also known as the HEU Purchase Agreement or simply The Agreement, in which Russia began converting 500MT of weapons-grade HEU to non-weapons-usable low-enriched uranium (LEU) to be purchased by the United States for use as nuclear reactor fuel in 1993. This process is known as ''down-blending'' because it reduces the proportion of uranium that is enriched, rendering the fuel non-weapons-usable. Since the first Russian LEU shipment, made on May 31, 1995, approximately 11,000MT of LEU down-blended from 375MT of HEU has been transferred to the United States. This amounts to 75 percent of the total 500MT negotiated at the signing of the HEU Purchase Agreement.[42] These results indisputably show the effectiveness of this Agreement. The program has another advantage to Russia because it uses part of the money earned from the down-blended shipments (the overall sum exceeding $8.5 billion)[43] to finance the improvement of its national nuclear safety and conversion programs.[44]

The third set of measures spearheaded by the U.S. departments aims at stabilizing employment for nuclear personnel. Such programs focus on redirecting nuclear scientists to civilian job positions after their retirement or in the case where they are no longer employed by the nuclear facility or institution. Such efforts are exerted with the purpose of preventing these scientists from selling their knowledge to terrorist groups or other interested buyers who may later on resell it to terrorist organizations. The EU and Japan have also sponsored a number of such programs.[45] Until recently there were fears that due to deplorable financial conditions Russian scientists may be induced to sell their knowledge for personal profit, but these have now been increasingly unjustified. The economic growth in Russia has reduced the risk of desperation-driven sales to such a level that recently the United States has been expanding these programs to meet more urgent contemporary threats of the same sort but at a different location. New areas where scientists are believed to be at risk of selling their know-how to prospective terrorist groups are Iraq and Libya.[46] Moreover, some of the programs such as the Global Initiative for Proliferation Prevention have been criticized in recent years for requesting an increase in their budgets when it has been argued that the current economic improvement in Russia renders them unnecessary.[47]

The second broad category of measures taken to protect Russian nuclear weapons and material are those taken by the Russian government itself. In the opinion of many U.S. academics and experts, Russian initiatives in this area are not adequate enough.[48] This paper argues that this perception can be largely attributed to differences in beliefs and methods between U.S. and Russian officials concerning intelligence operations and best practices regarding prevention of theft and smuggling of nuclear material. Moreover, the paper claims that differences in Russian methods do not necessarily imply less effectiveness. It is frequently overlooked that Russia itself is greatly concerned by the prospect of a nuclear terrorist event on its territory and is at a substantial risk of this happening, largely because of the intense and protracted conflict in Chechnya on its southern border. Chechen groups have demonstrated their brutality and willingness to sacrifice civilian lives. Their interest in acquiring nuclear material is undoubted.[49] Consequently, it seems incongruous to claim that Russia is doing nothing to prevent this sort of occurrence. Moreover, though attempted, such an event has thus far been thwarted.[50] While acknowledging the present room for improvement and the justified criticism by academics and policymakers, the argument presented below attempts to highlight the positive aspects of the currently existing Russian supply security system in order to demonstrate their valuable contribution to the overall security of Russia's nuclear complex.

A major criticism of Russian nuclear storage methods by Western academics is the lack of central control, serious commitment, and sufficient investment in the security of nuclear sites by the Russian government.[51] Following the collapse of the Soviet Union, Moscow followed a policy of decentralization and division of power and decisionmaking between the central government in Moscow and the regional federal constituencies. This had the effect of empowering regional administrations and municipal leaders with more governing autonomy regarding Russian nuclear

facilities. From 2000, former Russia President Vladimir Putin transformed this arrangement and started a policy of re-centralization, characterized by improved federal governance and control across the country.[52] Nowadays, the legacy of relative regional autonomy founded on legal authority has essentially taken the form of concentric circles of oversight and monitoring emanating from local administration of the nuclear facility and incorporating regional and federal oversight agencies. These various levels of administration have simultaneously independent and overlapping mandates to supervise the nuclear complex and have created what is essentially a legal division of responsibility known as ''matryoshka.''[53] This existing, complex center–periphery relationship has been a major concern for the Russian central government because of the lack of coordination and the existing confusion of authority over nuclear sites. However, for certain areas this tendency for overlapping power structures has the likelihood of increasing the control of nuclear sites. In some regions local and federal partners have learned to share the burden of responsibility and the economic benefits.[54] More particularly, in recent years the Russian government has increased its control over nuclear sites through the Federal Security Service (FSB) representatives who restrict access to formerly secret nuclear cities and have increased their presence in nuclear facilities as well. According to certain information, FSB representatives claim to be ''deputy directors of security'' within the sites. These individuals are perceived as impediments to the MPC&A program by U.S. experts because they restrict their access to the nuclear facilities. However, the stronger control of the FSB can also be seen in a positive way because it has been helpful in contributing the prevention of nuclear material thefts since 1996.[55] Overall, the cooperation between the center and the regions is still in many cases problematic due to the unwillingness of regional elites to yield their regional autonomy and political influence to the Russian government; however, in certain regions it contributes to enhancing the security of nuclear weapons and materials.[56] Moreover, according to Dr Vladimir Orlov, who is a specialist on the issue, ''most of the challenges [related to nuclear regionalism] of the previous decade were adequately addressed, both domestically and with international support.'' Therefore, the issue of regional autonomy is ''definitely not [a] significant factor any longer.''[57]

Additionally, regional political actors have strong incentives to effectively monitor and control nuclear facilities primarily due to the strong linkage of this issue with their political popularity among local electorates. Nuclear safety is a highly significant issue for the Russian populace because of the serious associated environmental and health considerations. An example of such action is shown by Murmansk Governor Yuriy Yevdokimov, who alerted the national administration to a serious problem regarding the financing of nuclear submarine dismantlement within his region and the lack of security inherent in the process. He cooperated with the Russian government and provided relevant and informed recommendations for action to Moscow.[58] Accordingly, it appears that local leaders believe that successfully addressing nuclear issues, such as in the manner already described, within their sphere of influence, will enhance their value in the eyes of their superiors and will further their political careers. In addition, if local and regional administrators are viewed as proactive on nuclear issues, it increases the chances that Moscow will fund programs at their nuclear facilities and that they will be able to attract funds to projects in their local constituencies.[59]

Another positive area of cooperation between the central government and the regional governments concerns the new relationship that has emerged between the military and local political leaders. Financial shortages in the 1990s led to the inability of the central government periodically to pay the military personnel at nuclear sites. Therefore, security conducted by military units was not adequate at many nuclear storage facilities. Because of severe financial problems affecting the Russian military after 1990, in several regions Moscow developed arrangements with regional governments for joint financing of the Russian military. This policy has increased the quality of security services provided by Russian military personnel at nuclear storage sites.[60]

The development of unique coping mechanisms by regional actors, coupled with center–periphery cooperation programs inherent in the regionalism approach described earlier, though different from U.S. methods, appears to contribute to the overall maintenance of security of Russian nuclear weapons and material. Therefore, their role should be included when analyzing the overall level of security of Russian nuclear weapons and material.

A second source of friction and misunderstanding for Western experts is Russia's reliance on what amounts to a model of human intelligence rather than technological methods of monitoring and enforcement.[61] When U.S. scientists and program managers travel to Russia and observe few

radiological monitors and security cameras they quickly draw the conclusion that Russian safeguards are inadequate. The Russian government employs the traditional practice of fences and guards at gates, but supplements this with a network of intelligence officials and agents tasked with monitoring the attempted smuggling or sale of nuclear weapons and material from Russian facilities.[62] This is largely because implementing advanced technological detection devices that are extremely sensitive to trace amounts of nuclear material in a country with widespread radiological contamination is an exercise in futility. Under these conditions such technological devices cannot discriminate between smuggled material and contaminated objects and therefore turn on constantly, giving false alarms. For example, such detection devices are constantly sounding the alarm when a tree, contaminated with low levels of radiation, is transplanted close to one, or someone goes to work with a lunch made of fish caught from a local lake that is also contaminated with radiation.[63] Therefore, upon inspection, U.S. personnel often discover that the technologically advanced radiological monitors they have paid for and installed are turned off.[64] In the nuclear site areas of Russia there is enough radiological material present in objects such as trees and fish to trigger radiation detectors, making it easier to smuggle material concealed in proximity to other innocuous objects such as one's lunch, causing faith in advanced technological devices to be misplaced. In these cases, it is simply ineffective to rely on advanced technology to prevent the theft of nuclear material. A further flaw in the radiation detectors currently being installed in Russia is that they are incapable of detecting HEU material if it is shielded even slightly.[65] Additionally, it is argued that due to their large size and visibility, they are not likely to deter intelligent adversaries who can notice them and circumvent them by choosing alternative routes.[66] Due to these limitations, the radiation detectors seem to be insufficient in protecting the Russian sites so local methods may be a useful addition to strengthen the security of nuclear material. These local methods, sometimes ill-understood or simply unknown to U.S. experts, lead to them doubting their efficiency. Although one cannot claim that these methods are sufficient in themselves to protect the nuclear material within Russia, evidence (or the lack of such) suggests that these alternative monitoring techniques may have a certain level of effectiveness, as there has not yet been a nuclear terrorist attack on Russian territory or, for that matter, anywhere in the world.

Furthermore, the fears that Russian nuclear scientists will steal the nuclear material out of need for profit are much fewer than before as the economic situation in Russia has improved.[67] The 2,000 percent inflation that occurred after the end of the Cold War was contained and in the last decade Russia has experienced economic growth due to increased oil revenues and a significant budget surplus.[68] By 2002 the average monthly salary of a worker at a nuclear research and development facility in Russia has amounted to $209, which is substantially above the average $146 Russian salary. Moreover, since the increase in the average salary, workers have been paid on a regular basis.[69]

An indicator of the trust of the Russian government in the human intelligence Russian model can be seen when analyzing the mid-2007 Russian program for improving radiological and nuclear safety over 2008–2015. The overall budget for this program is $5.8 billion. Although, up to November 2008, the full text of the program had not been released, it is known that there is very little budget allocation for improving security measures. The largest budgetary fractions have been assigned for nuclear cleanup and safety improvements.[70] This financial allocation signals that Russia does not put a high priority on improving the security of its nuclear buildings and bunkers, which is likely to suggest that Russia does not regard the current combination of human intelligence and physical intelligence as posing an urgent security threat that needs to be duly addressed and modified by the Russian government.

Moreover, evidence shows that most of the past success cases of seizing illicit nuclear material have been attributed to conspirators and good police and intelligence rather than radiation detectors.[71] Only one of the 18 IAEA-reported cases of seized stolen HEU or plutonium has involved radiation detectors. This was the 2003 case of HEU seizure in Georgia. All the remaining 17 cases have been successful either due to information from a person involved in the robbery or a bystander, or alternatively due to sting operations.[72]

LACK OF ESTABLISHED TRAFFICKING NETWORKS

There is little evidence that suggests the existence of a trafficking network designed to smuggle nuclear weapons and material out of Russia and aimed at delivering these materials to willing

buyers. The reported cases have involved amateurs attempting single illegal sales or at large being bribed to allow unauthorized passage at nuclear sites, without creating a sustainable trafficking network.[73] There is much conjecture that Western authorities are not aware of everything being smuggled, but what is known with certainty is that the vast majority of trafficking takes place by amateur individuals in one-shot transactions, which are poorly organized. Moreover, it is known that very few of them involve actual weapons-grade nuclear material (less than 2 percent).[74]

There are fears concerning the involvement of Russia's organized crime networks in the trafficking of nuclear weapons and material out of Russia. However, there is little evidence to suggest this and, indeed, the opposing viewpoint is more likely to be true. The main reason for this is that the nuclear market is economically inefficient: it is too risky and provides no guaranteed profits.[75] In Russia, the Federal Security Service says that nuclear trafficking does not fall within the sphere of interest of major organized crime groups. There are other, less risky and more profitable sources of income for organized crime. ''Why drive across multiple frontiers kilograms of uranium that requires years of reworking and enrichment and then spend months looking for a potential buyer,'' asks Kirill Belyaninov, a long-time observer of Russian criminal trends, ''why not just ship non-ferrous metals out of the country or make millions from banking manipulations and ruble–dollar exchange transactions?''[76] Moreover, it is unlikely that a trafficking network for nuclear material will ever be created because the nature of the commodity is such that there is no continuous flow of material to be trafficked.

Practical logistics are another obstacle to the potential creation of such a network. Even if an individual or group is successful in buying or stealing nuclear material from somewhere in Russia, the next steps involved in smuggling the material out of the country are highly risky. There appear to be three main trafficking routes that various commodities take when making their way out of Russia: through Europe, through Kazakhstan, or through Turkey via the Caucasus.[77]

In the past, Europe has been the most popular destination for would-be sellers of nuclear material but has become much less popular now due to the advanced intelligence networks of law-enforcement officials with high success rates of interdicting nuclear materials before they are sold.[78]

It is unlikely that Kazakhstan, a closely regulated police state, would look favorably upon smugglers attempting to pass through its border with nuclear material as Kazakhstan voluntarily returned all nuclear weapons to Russia after the dissolution of the USSR years ago. Moreover, Kazakhstan has demonstrated that it desires to cooperate in the fight against the proliferation of nuclear material as evidenced by the presence of radiation monitors installed by the United States on its borders with Russia (as well as the Turkish border).[79] Additionally, Kazakhstan is participating in the WMD Proliferation Program, launched in 2003 and managed by the DOD. This program aims at reducing the likelihood of illicit trafficking of nuclear weapons and material from FSU states. The program has received an increase in its budget for FY 2010 and it has been reported that the main share of this increase, approximately $62.4 million, is to fund programs preventing fissile and radioactive material proliferation in Kazakhstan.[80]

In order to smuggle materials to Turkey via the Caucasus region, one would need a three-day head start on Russian law enforcement officials and the ability to pass through challenging terrain.[81] Additionally, by taking this route to Turkey there is a high risk of detection through human intelligence action. In areas where the government cannot control national borders, such as Russia's border with Turkey, local tribal leaders, in this case Kurds, control the region and know who and what is transporting and being transported through their territory. Therefore, identifying and apprehending individuals involved in trafficking nuclear material through these areas is made significantly easier because the local population takes note of foreigners who appear out of place in the region. On Russia's southern border in particular, it is suggested that no stranger can cross without the knowledge of the tribal leader.[82] Even if smugglers manage to successfully pass the border and enter Turkey, they face the additional risk of being detected by the Turkish Village Guards who monitor the Turkish territory near the border. Similar to the Kurds on the territory of Russia, the Turks have created a local human intelligence network to protect the local villages.[83]

INSUFFICIENT DEMAND

One of the fundamental reasons for the delinking of Russian nuclear material from the threat of a nuclear terrorist attack is that the demand side of the equation seems to be almost non-existent. Indeed, even authors whose books focus on the existential threat that these issues seem to pose to the world make it clear that there is little or no demand for nuclear weapons or material and that no established market seems to exist. Renesslear Lee, in his provocatively titled book *Smuggling Armageddon*, states that, ''markets for stolen or diverted nuclear materials are narrow, rarified and inaccessible to many aspiring merchants.''[84] Graham Allison, a U.S. expert who has written on this topic extensively, asserts in his book *Preventing Nuclear Anarchy* that there is little evidence that either demand for stolen or illicitly purchased nuclear material or a nuclear black market actually exist at all.[85] Furthermore, in an article in 2004, Allison reports that until 2004 there has not been ''a single former Soviet Union nuclear weapon'' that was ''found in another country or in an international bazaar.''[86] Numerous more recent publications confirm the same fact. The *2009 National Security and Nonproliferation Briefing Book* states that ''there is no convincing evidence that any terrorist group has yet gotten a nuclear weapon or the materials needed to make one.''[87] Furthermore, in *Securing the Bomb*, Matthew Bunn indicates that there is evidence proving the existence of confusion and even lack of nuclear knowledge in Al-Qaeda top operatives. Bunn explains: ''Both Khalid Sheikh Mohammed and Abu Zubaydah are reported to have believed that uranium, which is only weakly radioactive, would be a good material for a dirty bomb—and there have been other Al-Qaeda operatives arrested for seeking uranium for dirty bombs as well.''[88] Bunn further concludes that both Al-Qaeda and the Japanese terrorist group Aum Shinrikyo seem to have encountered significant challenges in attempting to organize a nuclear attack. This fact demonstrates that obtaining a nuclear bomb is a difficult task even for terrorist groups with financial capacity.[89]

Modern terrorist organizations can, at least in a limited sense, be regarded as rational utility-maximizers because they do not want to get caught prematurely trying to acquire elusive and heavily monitored WMD when other weapons will seemingly serve the same purpose. This appears to lead such organizations to avoid the ''nuclear black market'' because, from the perspective of the demand side, the risks of detection and capture are quite great and far outweigh the chances of being able to acquire enough nuclear material to construct an effective nuclear weapon. Thus, the historical record seems to suggest that terrorists prefer to use weapons, or objects as weapons (for instance aircraft), that do not immediately attract massive international attention and interdiction efforts by law-enforcement agencies globally. Osama bin Laden's right-hand man, Ayman al-Zawahiri, himself said about weapons of mass destruction that ''We only became aware of them [the nuclear weapons] when the enemy drew our attention to them by repeatedly expressing concerns that they can be produced simply with easily available material.''[90] This quotation further reinforces the argument about the meager existing demand for nuclear weapons by terrorists today.

Additionally, according to experts' guesstimates, the price of weapons-usable HEU must be very high, which makes the material unaffordable to most terrorist organizations. This fact further forces the terrorist groups, such as Al-Qaeda, who could afford to pay such a high price, to contemplate carefully whether this money will be wisely spent, considering the difficulties in every way of the process of nuclear attack. Though it is difficult to estimate accurately what nuclear material would actually cost on the black market, because there are almost no recorded transactions to guide a process of estimation, guesses as to the HEU price per kilogram on the black market in the 1990s range from $16,000/kg[91] to between $1 million and $60 million.[92] A more recent comment in 2004 by the former Chief of Russia's Strategic Missile Troops, General Staff Colonel-General Viktor Yesin, confirmed the high price of such material and weapons. He states that although nuclear ''suitcase devices'' of approximately 15kg–20kg are possible to create, they ''would be so expensive that no state could afford them.''[93] Regardless of the price, the current state of the ''nuclear black market'' indicates that a terrorist's money would better be spent elsewhere as the majority of transactions are attempted by amateurs and are badly organized, adding one more reason to doubt the successful completion of the process.[94] This could help explain why it appears that terrorists prefer to use conventional weapons or explosives that they know rather than expensive, risky, and difficult to acquire WMD.[95]

Apart from the economic arguments based on a simple cost–benefit analysis, a new debate on the moral legitimacy of murdering innocent civilians has recently emerged among the Muslim community itself. This debate has spread even among the extremist violent Muslim groups. One of the founding fathers of Al-Qaeda, who has written two of the fundamental books containing principles that the group adheres to, has recently disseminated another book arguing that indiscriminate killing of civilians is forbidden by Islamic law.[96] This book triggered a heated debate among the Al-Qaeda top operatives on whether their operations are excessively violent. Although it has not been reported that the debate has triggered any concrete changes, it is evidence for the beginning of a rift in the ideological foundations of Al-Qaeda. This rift may add another hindrance to the pursuit of a nuclear attack because more Muslims are likely to oppose it on moral grounds.[97]

In light of the foregoing cost–benefit analyses and the recent moral debates, one logically wonders whether a nuclear terrorist attack is as likely and imminent as some experts claim.[98]

COMPLEXITY OF PRODUCING AND EMPLOYING NUCLEAR WEAPONS

There are three possible ways for terrorists to acquire nuclear weapons capability: steal a pre-existing nuclear device, buy one, or build it after acquiring the necessary nuclear material to fuel it. There is wide consensus in academic and political circles that the first two alternatives are currently broadly infeasible for nuclear terrorists and that the third option is the most promising.[99] Moreover, it is strongly argued that no terrorist organization possesses the necessary capability to produce its own weapons-usable nuclear material using either uranium or plutonium because of the complexities of the production process.[100] Consequently, if a terrorist group wants to develop a nuclear weapon of some description it must purchase, be supplied with, or steal the requisite nuclear material and, subsequently, construct a device capable of effectively detonating this material in the intended fashion. However, although experts raise fears that this is the most likely form of nuclear terrorist attack, undertaking this process is still fraught with difficulties.

To begin with, acquiring a pre-existing, functional nuclear device seems to be very challenging. Democratic governments and even dictatorial regimes consider these weapons to be critical national assets and secure, monitor, and account for these devices in a corresponding fashion.[101] Given the dynamics of the international community and the seriousness with which nuclear proliferation is considered, it is, by extension, extremely unlikely that a state would give or sell a nuclear weapon to a terrorist organization. The guaranteed consequences for any state assisting a terrorist organization in such a way makes it unlikely that even a ''rogue state'' would find the benefits to outweigh the repercussions of this action.[102]

Furthermore, even if a nuclear weapon is stolen from a Russian storage facility, the chances that it will be a functional device are very slim. Russian nuclear weapons need comprehensive maintenance every six to seven years, and if this maintenance is not performed these weapons will be ineffective.[103] Because of these known time limitations, the fact that we have not experienced a nuclear terrorist strike since the dissolution of the USSR suggests that nothing was stolen during the transportation of nuclear material and weapons to Russian territory in the first place or, if it was, it is no longer functional. Moreover, Russian nuclear weapons are protected by complex electronic locks that will defeat any attempt to detonate the weapon in an unorthodox fashion.[104]

For the terrorist organization desiring to steal nuclear material and fashion its own bomb, challenges still abound. This task is especially difficult should the terrorist organization not have a state sponsor to assist in the process. Keeping in mind the brief technical description of how a nuclear device functions and the type of devices it is possible to construct, it follows that any group desiring to construct such a device will need a myriad of technical equipment, advanced engineering knowledge, and an appropriate place in which to carry out the assembly of the nuclear weapon. No terrorist organization is believed to currently have the intellectual capability to build a nuclear device, not even the infamous Al-Qaeda.[105] In fact, the Japanese terrorist group, Aum Shinrikyo, attempted to enrich uranium itself in Australia in 1993, but eventually failed and abandoned the project due to the insurmountable technical challenges involved in this process.[106] Consequently, a terrorist organization will need to import foreign scientists to assist with the production processes involved in constructing a nuclear weapon. This exposes the entire operation to a serious security risk. Getting the scientists into the country and having them exist as a group in any community where nuclear weapons manufacturing is likely to take place are

significant obstacles for success. It is highly unlikely that such scientists will entirely escape the notice of the local population, especially in states based on close-knit cultures of community and personal interaction where a group of foreign scientists may be quickly detected, like many Middle Eastern states.[107] This makes the complicity of the state in which this activity is taking place almost a necessity if the process is to proceed in an efficient manner, owing to the significant risk of detection and apprehension. It is extremely unlikely, as discussed earlier, that any state would dare to be associated in the eyes of the international community with the construction of nuclear weapons by a terrorist organization.[108] The costs of retribution to the harboring state after the nuclear device was detonated in a terrorist attack would far outweigh the material or ideological benefits derived from assisting such a terrorist group.[109] For all of these reasons, the chances of a terrorist organization being able to successfully construct a nuclear weapon appear to be quite slim.

POLICY RECOMMENDATIONS

First, to further secure the protection of Russian nuclear stock weapons and material, supervision can be always enhanced. Many of the usual recommendations for improving policies and SOPs are applicable here, such as: strengthening the rule of law in Russia and fighting corruption, improving central control and coordination of nuclear accounting, and monitoring and additional dedicated human intelligence officers tasked solely with tracking these types of issues within Russia.

Second, it could be beneficial for U.S. experts to reduce the focus on Russian nuclear weapons and focus on potentially more relevant security issues that are currently not receiving as much attention from the academic community or policy funding from the U.S. government.[110] In the nuclear area, an example of this could be to give much more policy attention to reducing the chances that a terrorist group could obtain nuclear weapons or material with the assistance of ideologically sympathizing states such as Pakistan, Iran, Iraq, North Korea or Libya.[111] Indeed, the world has already witnessed the willingness of Pakistani nuclear scientists to share their know-how with ideologically similar states through the eventual disruption of the A.Q. Khan network.[112]

The EU has begun to pursue this avenue in the last several years. This information was confirmed in personal correspondence with Lars-Gunnar Wigemark, Head of Unit for Security Policy of the Directorate General for External Relations at the European Commission. When asked to assess the threat of Russian nuclear weapons and material being used in a nuclear terrorist attack he stated that:

> It should be noted that the main nonproliferation threat in recent years has not come from Russia or other parts of the FSU but rather from other countries and regions, including Asia, the Middle East and Northern Africa. The EU is currently, together with other partners in the G8, considering how to counter the growing threat of WMD proliferation in regions outside of the former Soviet Union. When identifying suitable programs under the new ''Instrument for Stability'' we try to take account of these new threats.[113]

CONCLUSION

This study has sought to provide an insightful analysis of the linkage between the smuggling of Russian nuclear weapons and material and the threat of international nuclear terrorism. The paper acknowledges it is a challenging task to measure qualitative issues such as level of security and level of threats, draw clear conclusions about topics with little publicly available information, and assess evidence that is at times anecdotal at best. Nevertheless, admitting these limitations, the paper makes use of the available data to systematically disprove the conventional wisdom that smuggling nuclear weapons and material from Russia is an alarming concern. The paper does not aim at disproving this grim possibility altogether and agrees that much more could be done in securing the nuclear sites. Instead, it argues that the current preoccupation with Russia as a source of nuclear weapons and material for potential use in a nuclear terrorist attack is exaggerated for the following reasons: improved supply security in Russia mainly with the assistance of the United States and due to improvements within Russia; a lack of established trafficking networks; insufficient demand; and difficulties in producing and employing nuclear weapons.

Undoubtedly, the mission of preventing nuclear terrorism is of paramount importance. As former U.S. President George W. Bush has asserted, Americans' ''highest priority is to keep terrorists from acquiring weapons of mass destruction.'' President Barack Obama again reminded us in Prague of the seriousness of this issue by stating that ''terrorists are determined to buy, build or steal'' a nuclear bomb.[114] However, in the current world of economic crisis and funding shortages in many areas of global concern, the need to protect and safeguard millions of people from nuclear terrorist attack requires a more relevant and accurate assessment of potential threats and better allocation of resources that can enhance our capacity to deter the ultimate preventable catastrophe.

NOTES

[1] The author thanks Jon Strandquist for the contribution to this article.

[2] White House, Office of the Press Secretary, *Remarks by President Barack Obama, Hradcany Square, Prague, Czech Republic*, April 5, 2009. http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/, last accessed October 27, 2009.

[3] Ibid.; Peace and Security Initiative, *2009 National Security and Nonproliferation Briefing Book*, November 2008, 29; Matthew Bunn, *Securing the Bomb 2008* (Cambridge, MA and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, November 2008), pp. 7, 14; Robin M. Frost, ''The Nuclear black market,'' *Adelphi Papers* 45, no. 378 (2005), pp. 11–24.

[4] Bunn, *Securing the Bomb 2008*, p. 7.

[5] Graham Allison et al., *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material* (Cambridge, MA: MIT Press, 1996), p. 6; Graham Allison, ''Nuclear Terrorism: How Serious a Threat to Russia?,'' *Russia in Global Affairs online edition* (September/October 2004), http://belfercenter.ksg.harvard.edu/publication/660/nuclear_terrorism.html, last accessed November 3, 2009; Peace and Security Initiative, *2009 National Security*, p. 29.

[6] Nuclear Threat Initiative, *Russia Profile, Introduction*. http://www.nti.org/e_research/profiles/Russia/index.html Updated October 2009, last accessed November 3, 2009).

[7] Bunn, *Securing the Bomb 2008*, pp. 7, 48.

[8] Nuclear Threat Initiative, *Russia Profile, Introduction*.

[9] Ibid., pp. 23–28.

[10] Ibid., 7; Rensselaer Lee, ''Reappraising Nuclear Security Strategy,'' *Policy Analysis* 571 (June 14, 2006), CATO Institute, p. 1.

[11] Bunn, *Securing the Bomb 2008*, p. x.

[12] Andrew Newman and Matthew Bunn, *Funding for U.S. Efforts to Improve Controls Over Nuclear Weapons, Materials, and Expertise Overseas: A 2009 Update* (Cambridge, MA, and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, June 2009), pp. 3–5.

[13] International Atomic Energy Agency (IAEA), *IAEA Database on Illicit Trafficking (ITDB), Fact Sheet Figures 2007, 2008*. http://www.iaea.org/NewsCenter/Features/RadSources/PDF/fact_figures2007.pdf, last accessed October 31, 2010. Bunn, *Securing the Bomb 2008*, pp. 23–24; Rensselaer Lee, ''Nuclear smuggling: Patterns and Responses,'' *Parameters* 33 (2003), pp. 100–101; Rensselaer Lee, *Smuggling Armageddon: The Nuclear Blackmarket in the Former Soviet Union and Europe* (New York: St. Martin's Press, 1998), pp. 15–19.

[14] IAEA, *IAEA Database on Illicit Trafficking*.

[15] Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity and the Rise and Fall of the AQ Khan Network* (New York: Oxford University Press, 2007).

[16] Allison et al., *Avoiding Nuclear Anarchy*, Appendix B.

[17] Charles D. Ferguson, ''Preventing Catastrophic Nuclear Terrorism,'' *Council on Foreign Relations Special Report*, March 11, 2006, pp. 7–8.

[18] Ibid., p. 5.

[19] William Langewiesche, *The Atomic Bazaar* (New York: Farrar, Straus & Giroux, 2007), pp. 21–22.

[20] Ibid., p. 24.

[21] For reasons of completeness it is worthwhile mentioning a third type of nuclear device known as a radiological weapon (RDD) or ''dirty bomb.'' An RDD is often called a poor man's nuclear weapon because it is far easier to construct than a nuclear weapon and requires less costly nuclear material but still requires considerable skill. Many analysts consider an RDD to be more a weapon of mass disruption than a weapon of mass destruction because such a device would cause few, if any, fatalities but would be more effective in engendering panic and possible mass disorientation. Thus, this type of weapon is in another category altogether and will not be addressed further in this study.

[22] IAEA, *IAEA Database on Illicit Trafficking*.

[23] Ibid.

[24] IAEA, *IAEA Database on Illicit Trafficking*.

[25] Bunn, *Securing the Bomb 2008*, v, pp. 23–27; Allison, ''Nuclear Terrorism.''

[26] Ferguson, ''Preventing Catastrophic Nuclear Terrorism,'' p. 14.

[27] Bunn, *Securing the Bomb 2008*, v, 21; Newman and Bunn, *Funding for U.S. Efforts*, 3–6.

[28] For a more detailed discussion on definitions of success, please refer to Bunn, *Securing the Bomb 2008*, Chapter 1 and Chapter 2.

[29] U.S. Department of Defense, *Cooperative Threat Reduction, Annual Report to Congress Fiscal Year 2008* (Washington, D.C.: U.S. Department of Defense, December 31, 2008), p. 32; U.S. Department of Defense, *Fiscal Year 2010 Budget Estimates: Defense Threat Reduction Agency* (Washington, D.C.: U.S. Department of Defense, 2009), p. 471.

[30] CSIS Report, ''Protecting Against the Spread of Nuclear, Biological and Chemical Weapons, Volume 4: Russian Perspectives and Priorities'' (Nuclear Threat Initiative: Washington D.C., 2003), p. 3.

[31] Newman and Bunn, *Funding for U.S. Efforts*, pp. 3–13.

[32] Ibid., pp. 3–4.

[33] Ibid., pp. 3–5; Bunn, *Securing the Bomb 2008*, pp. 21–23.

[34] Bunn, *Securing the Bomb 2008*, p. x.

[35] Ibid., pp. 21–23; Newman and Bunn, *Funding for U.S. Efforts*, p. 5.

[36] Bunn, *Securing the Bomb 2008*, pp. 31–32.

[37] Newman and Bunn, *Funding for U.S. Efforts*, p. 6.

[38] Ibid., 3–5; Allison et al., *Avoiding Nuclear Anarchy*, p. 14; Bunn, *Securing the Bomb 2008*.

[39] Nathan Busch defines security culture as containing three main components: first, the level to which all personnel are aware and committed to accepted norms such as best practices and nonproliferation; second, the usage of available security technology; and third, the effectiveness of implementation of security rules and procedures. An acceptable security culture would consequently entail: first, clearly defined and strictly enforced standards; second, that workers know how to and use the available security technology and third, that personnel follow the procedures and rules at place. E. Nathan Busch and James R. Holmes, ''The 'Human Factor' and the Problem of Nuclear Security in Russia,'' *Perspectives on Political Science* 34, no. 3 (2005), pp. 154–161. For further information on the theory of security culture, see Igor Khripunov et al., *Nuclear Security Culture: The Case of Russia* (Athens, GA: Center for International Trade and Security, 2004), pp. 5–17.

[40] Bunn, *Securing the Bomb 2008*, pp. 26–27; Allison, ''Nuclear Terrorism.''

[41] Bunn, *Securing the Bomb 2008*, p. 31.

[42] Press Center of Nuclear Energy and Industry, ''Important stage in implementation of HEU agreement, another shipment of low enriched uranium set sails to the USA within the framework of the HEU Agreement,'' news release, September 22, 2009. http://www.minatom.ru/en/news/17178_22.09.2009, last accessed November 1, 2009.

[43] Ibid.

[44] There are a number of programs sponsored by the U.S. government that also aim at reducing the plutonium nuclear material and warheads in Russia; however, due to there being little likelihood of plutonium being used in a terrorist nuclear attack, which is discussed in this paper under Technical Background, these programs will not be discussed in this section. For further information, please refer to Newman and Bunn, *Funding for U.S. Efforts*, pp. 10–12. For more detailed information on legal issues related to the U.S.–Russia

nuclear arms control negotiations, please, refer to Amy F. Woolf, *Nuclear Arms Control: The U.S.–Russian Agenda*, CRS Issue Brief for Congress (Washington, D.C.: Library of Congress, 2006).

[45] The EU is the main supporter of the International Science and Technology Center (ISTC) in Moscow and its sister organization the STCU in Kiev, together with the United States and Japan. These centers are primarily engaged in the redirection of former WMD weapons scientists and engineers. Important work as also been carried out over the past 15 years in other parts of the former Soviet Union, including Central Asia and the Caucasus. Lars-Gunnar Wigemark, Head of Unit for Security Policy of the Directorate General for External Relations at the European Commission, email message to author, April 4, 2008.

[46] Newman and Bunn, *Funding for U.S. Efforts*, p. 8.

[47] Ibid., p. 9.

[48] Amy F. Woolf, *Nuclear Weapons in Russia: Safety, Security, and Control Issues.* CRS Issue Brief for Congress (Washington D.C.: Library of Congress, 2003), pp. 3–5; Bunn, *Securing the Bomb 2008*, vi, pp. 27–32.

[49] Lee, *Smuggling Armageddon*, p. 136; Allison, ''Nuclear Terrorism.''

[50] Bunn, *Securing the Bomb 2008*, p. 24.

[51] Ibid., 27.

[52] Dmitry Evstafiev and Vladimir A. Orlov, ''Center–Periphery Relations and Russia's Nuclear Infrastructure,'' in *Preventing Nuclear Meltdown: Managing Decentralization of Russia's Nuclear Complex*, ed. James Clay Moltz, Vladimir A. Orlov and Adam N. Stulberg (Aldershot, UK: Ashgate, 2004), p. 21.

[53] Ibid., pp. 21–22.

[54] Ibid., pp. 35–36.

[55] Lee, ''Reappraising Nuclear Security Strategy,'' 3–4; Oleg Bukharim, ''The FSB and the U.S.–Russian Nuclear Security Partnership,'' *Nonproliferation Review* (Spring 2003), pp. 137–146.

[56] Evstafiev and Orlov, *Center–Periphery Relations*, pp. 35–36.

[57] Dr. Vladimir Orlov, founding Director of the Moscow-based PIR Center, email message to author, November 17, 2009.

[58] Evstafiev and Orlov, *Center–Periphery Relations*, p. 31.

[59] Ibid., p. 30.

[60] Michael Jasinski, ''The Military, the Regions, and Nuclear Weapons,'' in *Preventing Nuclear Meltdown: Managing Decenralization of Russia's Nuclear Complex*, ed. James Clay Moltz, Vladimir A. Orlov and Adam N. Stulberg (Aldershot, UK: Ashgate, 2004), pp. 88–90.

[61] Langewiesche, *The Atomic Bazaar*, p. 45.

[62] Langewiesche, *The Atomic Bazaar*, p. 45.

[63] Ibid., p. 45; Bukharim, The FSB, pp. 137–146.

[64] Bunn, *Securing the Bomb 2008*, p. 30.

[65] Ibid., p. xiv.

[66] Newman and Bunn, *Funding for U.S. Efforts*, p. 7.

[67] Ibid., p. 8.

[68] Allison, ''Nuclear Terrorism;'' Bunn, *Securing the Bomb 2008*, p. 137.

[69] Lee, *Reappraising Nuclear Security Strategy*, p. 3.

[70] Bunn, *Securing the Bomb 2008*, 28.

[71] Ibid., p. xiv; IAEA, *IAEA Database on Illicit Trafficking.*

[72] Bunn, *Securing the Bomb 2008*, p. 72.

[73] Ibid., pp. 23–25; IAEA, *IAEA Database on Illicit Trafficking*; Lee, *Smuggling Armageddon*, p. 4; Lyudmila Zaitsea and Kevin Hand. ''Nuclear Smuggling Chains,'' *American Behavioral Scientist* 46, no. 6 (February 2003), pp. 822–844.

[74] IAEA, *IAEA Database on Illicit Trafficking*; IAEA, *Illicit Trafficking Database*, 2007, http://www.iaea.org/NewsCenter/News/2007/itdb.html, last accessed October 21, 2009.

[75] Al J. Venter, *Allah's Bomb: The Islamic Quest for Nuclear Weapons* (Guilford, CT: Lyons Press, 2007), p. 20.

[76] Ibid., p. 63.

[77] Ibid., p. 73.

[78] Lee, *Smuggling Armegeddon*, p. 73; Wigemark, email message to author.

[79] Langewiesche, *The Atomic Bazaar*, pp. 49–55.

[80] Newman and Bunn, *Funding for U.S. Efforts*, p. 7.

[81] Langewiesche, *The Atomic Bazaar*, p. 50.

[82] Langewiesche, *The Atomic Bazaar*, p. 64.

[83] Kardas Saban, ''Turkey Debates the Village Guard System,'' *Eurasia Daily Monitor* 6, no. 90 (2009), http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=34976, last accessed October 21, 2009.

[84] Lee, *Smuggling Armageddon*, p. xi.

[85] Allison et al., *Avoiding Nuclear Anarchy*, p. 13.

[86] Allison, ''Nuclear Terrorism.''

[87] Peace and Security Initiative, *2009 National Security*, p. 29.

[88] Bunn, *Securing the Bomb 2008*, p. 12.

[89] Ibid., p. 12; Ferguson, *Preventing Catastrophic*, p. 5.

[90] Quotation in John Mueller, *Overblown: How Politicians and the Terrorism Industry Inflate National Security Threats, and Why We Believe Them* (New York: Free Press, 2006), p. 25.

[91] A Nuclear Threat Initiative article, ''The Demand for Black Market Fissile Material,'' describes an attempt by Iraq to purchase HEU from Kazakhstan prior to 1994.

[92] Lee, *Smuggling Armageddon*, p. 43; IAEA, *IAEA Database on Illicit Trafficking*.

[93] ''Could Al Qaeda Have a Bomb,'' *Yezhnedelny zhurnal* 12 (March, 2004), pp. 20–22, op. cit. Allison, ''Nuclear Terrorism.''

[94] IAEA, *IAEA Database on Illicit Trafficking*.

[95] Mueller, *Overblown*, p. 25; Bunn, *Securing the Bomb 2008*, p. 12.

[96] Bunn, *Securing the Bomb 2008*, p. 13.

[97] Ibid.; Lawrence Wright, ''The Rebellion Within,'' *The New Yorker*, June 2, 2008, pp. 37–53.

[98] In 2004 Graham Allison has estimated that the chance for a nuclear terrorist attack is over 50 percent for the next 10 years and Matthew Bunn estimated in 2006 that the chances for a nuclear terrorist attack in 10 years are 29 percent. Bunn, *Securing the Bomb* 2008, p. 14.

[99] Allison, ''Nuclear Terrorism.''

[100] Peace and Security Initiative, *2009 National Security*, p. 29; Ferguson, *Preventing Catastrophic*, pp. 5–6; Bunn, *Securing the Bomb 2008*, ix, p. 12.

[101] Bunn, *Securing the Bomb 2008*, xiv, p. 14.

[102] Langewiesche, *The Atomic Bazaar*, p. 65; Bunn, *Securing the Bomb 2008*, p. 14.

[103] Ibid., p. 19.

[104] Ibid., p. 19.

[105] Mueller, *Overblown*, p. 17; Peace and Security Initiative, *2009 National Security*, p. 29.

[106] Ferguson, *Preventing Catastrophic*, p. 5.

[107] Langewiesche, *The Atomic Bazaar*, p. 69.

[108] Ibid., p. 20.

[109] Ibid., 65.

[110] John Mueller, ''The Atomic Terrorist: Assessing the Likelihood,'' *Conference Paper*, Ohio State University, January 1, 2008, pp. 143–157.

[111] Newman and Bunn, *Funding for U.S. Efforts*, p. 8; Bunn, *Securing the Bomb 2008*, pp. 32–35.

[112] Mueller, ''The Atomic Terrorist,'' pp. 143–147; Bunn, *Securing the Bomb 2008*, pp. 34–35.

[113] Wigemark, email message to author.

[114] Bush–Putin Press Conference, November 2001, quoted in Graham Allison, ''How to Stop Nuclear Terror,'' *Foreign Affairs* (January/February, 2004); White House, *Remarks by President Barack Obama*.

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THE TURKMEN GAS GAMES

In 2008 it was confirmed that Turkmenistan's proved recoverable gas reserves[1] (Figure 1) are just short of eight trillion cubic meters—which is about five trillion more than the previous estimate.[2] If Turkmenistan succeeds in attracting the investment required to develop new gas fields and build the pipelines to deliver the gas to foreign buyers, the country will become one of the world's biggest gas exporters within a decade.[3] The question of the export destinations for Turkmen gas has therefore acquired strategic importance. As a result, Ashgabat has found itself at the epicenter of complex economic and political interplay between Russia, China, and European countries, who all want to use Turkmen gas in their own interests.

TURKMEN GAS: STRATEGIC ASPECTS

Turkmenistan's gas export capacity (Figure 2) exceeds that of the other gas producers in the south of the former Soviet Union (such as Azerbaijan, Kazakhstan, or Uzbekistan) by 100–150 percent.

One of the key reasons why Turkmenistan can export so much gas is that the country's domestic consumption is relatively low—about 20bn m^3 in 2008. In addition to that, most of the gas from Uzbekistan, the second biggest exporter in Central Asia and the Caspian region, is routed to Kyrgyzstan, Tajikistan, and the south of Kazakhstan, which do not have enough energy resources of their own. Meanwhile, Azeri gas is exported mainly to Georgia and Turkey.

Moscow is keen to preserve the Soviet-era energy transport routes from Central Asia, especially from Turkmenistan and Kazakhstan, as all of those routes go via Russia itself. That is seen as a potent instrument for maintaining Russia's dominant position in Central Asia. Meanwhile, Turkmenistan and Kazakhstan are trying to diversify their export routes so as to minimize their dependence on Russia. They are supported in this aspiration by China, Europe, the United States, India, Pakistan, Iran, and many other nations which want to secure oil and gas supplies from that region.

Russia's position is formed by economic considerations, as well as geopolitical and ideological priorities. Almost all the available forecasts predict a substantial drop in Russia's own gas output. Production from the main Western Siberian gas fields is already declining, while attempts to develop new fields on the Yamal peninsula and in the northern seas are facing huge difficulties. The precise numbers vary but, on the whole, experts agree that Russia's own production in the coming decade will fall tens of billions of cubic meters short of the amount required to fulfill all the export contracts while also meeting domestic demand.

The situation is compounded by the political decision to develop the gas fields of Eastern Siberia and the Far East. The strategy is aimed at ameliorating the severe social and economic crisis in Russia's eastern provinces, as well as creating export opportunities in the Pacific. But transporting the gas produced in the Far East to the European part of the country, where the main consumers are—let alone to Europe itself—would be prohibitively expensive. Securing tens

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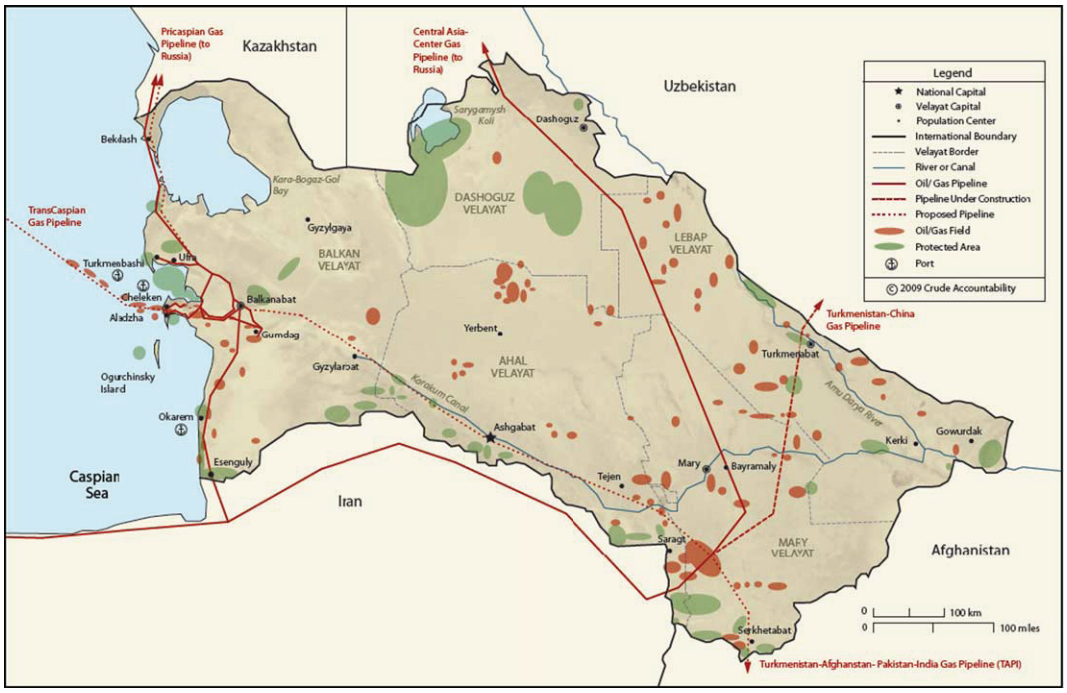
Figure 1. **Turkmenistan oil and gas map**[1]

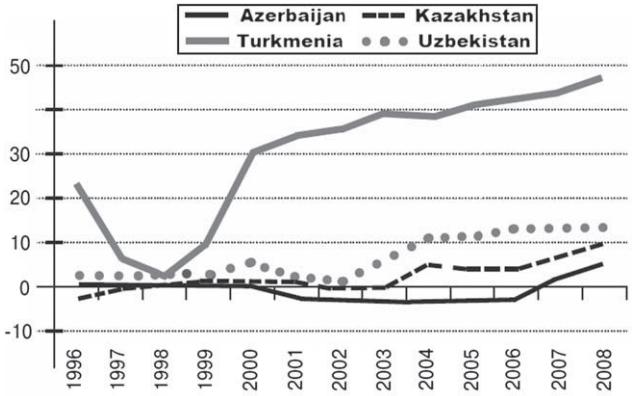


Note: [1]Turkmenistan Oil and Gas Map. *Crude Accountability*, http://www.crudeaccountability.org/ru/uploads/File/turkmenistan/Crude%20Accountability%20-%20TK%20Oil%20and%20Gas%20Map.pdf

of billions of cubic meters of Central Asian gas supplies is therefore a matter of critical importance to Russia.

Gas imports from Central Asia are strategically important to China as well (Table 1). On current estimates, China will be importing 50–60bn m^3 of gas via pipelines by 2020, and another 10bn–25bn m^3 in the form of liquefied natural gas (LNG) shipped from the Pacific region. LNG

Figure 2. **Gas exports from Central Asia and the Caspian region in 1996–2008, billion cubic meters**[1]



Note: [1]BP Statistical Review of World Energy, 2007–2009.

Table 1. **China's gas production, consumption, and imports 2006–2020, billion cubic metres.**[1]

	2006	2020
Consumption	55.6	162–207
Production	58	101–151
LNG imports, million tons[2]	0	10–25
Natural gas imports	0	50–60

Notes: [1]Galyamova Venera. China's oil and gas industry: before the crisis, or new development parameters. China's policy at the current stage. Kazakh Institute of Strategic Studies. Almaty, 2005, pp. 216–217. See also: PRC's State Committee of Economics and Trade; US Energy Information Administration; BP Statistical Review of World Energy.
[2]It is believed that 1m tons of LNG is equivalent to 1.36bn m^3 of natural gas in a normal state.

supplies are not very reliable. In the event of a conflict, the US and Japanese navies would be able to cut off China's shipping lanes.

In other words, China needs to secure gas supply routes (the same is true for oil, for that matter). In the event of an armed conflict in the Asia-Pacific region, the supplies should be channeled via an overland route from areas that can be occupied with relative ease, and where the deployment of a large U.S. military force would be difficult. Central Asia answers that description perfectly. Another region that theoretically could interest China is the Russian Far East. But the harsh climate, rough terrain, and lack of infrastructure make the far-eastern gas fields much less attractive to China compared with the Central Asian ones.

Europe views imports of Turkmen and Azeri gas as one of the ways of reducing energy dependence on Russia—or at least preventing that dependence from becoming even more severe. For European leaders, this is a strategic priority, especially after the interruption of supplies in the winter of 2009, when Russia used gas as an instrument of blackmail against Ukraine, and in view of Moscow's poor reputation after its aggression against Georgia. Falling demand amid the economic crisis of 2008–2009, as well as certain steps taken by the European nations, led to a substantial reduction in Russian gas exports to Europe in 2009. But the overall nature of energy relations between Russia and the European countries remains unchanged. That is why, along with some other measures to strengthen its energy security, the EU gave its final approval to the Nabucco gas pipeline project in 2009. But the project becomes unviable without substantial gas supplies from Turkmenistan. It also requires the construction of the Trans-Caspian pipeline to link Turkmen gas fields with terminals on the Azeri side of the Caspian Sea. The Trans-Caspian project is languishing in the face of stiff opposition from Russia and Iran, as well as the continuing dispute between Turkmenistan and Azerbaijan over the division of exclusive economic zones in the Caspian Sea.

TURKMEN GAS RESOURCES

The size of Turkmenistan's recoverable gas deposits has not only economic implications but serious political repercussions as well. The bigger the deposits, the more the likelihood of massive foreign investment that will be needed to develop the Turkmen gas fields and take the new gas to customers outside the region. Such investment would end Ashgabat's dependence on Russia for gas transit, and turn the country into a big independent player on the world energy market.

Industrial-scale gas production in Turkmenistan began in 1966, shortly after the discovery of the Odzhak–Naip group of gas fields in the northeast of the country, with 100bn m^3 of proved gas reserves. The discovery of the Shatlyk fields followed in the late 1960s. They were estimated to contain about 900bn m^3 of recoverable gas. Production there began in 1974. But the bulk of the country's gas reserves is held in the Dauletabad–Donmez group of gas fields, not far from the Iranian border in the southeast of Turkmenistan. Those fields were discovered in 1974. The initial recoverable gas reserves there were estimated at 1,600bn m^3. Production began in 1983, and peaked in 1989–1990.[4]

In the middle of the past decade, before the discovery of the gigantic South Yoloten–Osman and Yashlar fields was announced, the Turkmen authorities put the size of the country's initial

Table 2. **Turkmen reserves of free and associated gas (as of January 1, 2005)[1]**

	Number of gas fields	Initial recoverable reserves (billion m^3)
Total	149	4,971
Land	139	4,573
Caspian shelf	10	398
In production	54	2,621
Ready for production	11	257
Exploration under way	73	1,958
Mothballed	11	135

Note: [1]Lukin Oleg. Turkmenistan's gas mask. *Neftegazovaya Vertikal*, No 1, 2006, http://www.turkmenistan.ru/?page_id=6&lang_id=ru&elem_id=7646&type=event&sort=date_des, last accessed November 17, 2009.

recoverable gas reserves at 5,000bn m^3 (Table 2). The total reserves forecast was in the region of 20,000bn cu.m.

Those estimates were met with skepticism—especially because many Russian specialists who knew the situation in Turkmenistan prior to the collapse of the former Soviet Union said the figures could not be trusted. The general opinion was that the size of Turkmenistan's recoverable gas reserves was in the region of 2.6–2.7 trillion m^3. The official announcement of the discovery of the giant South Yoloten–Osman gas field was taken with more than a pinch of salt—the then Turkmen president, Saparmurat Niyazov, had already earned himself a reputation for extravagant hyperbole.

But the situation changed after the Turkmen authorities submitted their seismic exploration and drilling data from the South Yoloten–Osman and the Yashlar gas fields for an audit by Britain's *Gaffney, Cline and Associates* (*GCA*) (Table 3). The auditor's conclusions were unveiled in October 2008.

After the publication of the GCA report, the internationally recognized estimate of Turkmenistan's proved recoverable gas reserves was increased to 5 trillion m^3 in late 2008. Only Russia, Iran, and Qatar are now ahead of Turkmenistan in that category, while Saudi Arabia, the United States, Nigeria, Algeria, and some of the other biggest players on the world gas market are behind.[5] On the one hand, that gives Turkmenistan a bigger international political role. But on the other, it causes serious concern in the Russian oil and gas industry. From time to time, attempts are being made to discredit the figures provided by the Turkmen authorities and the British experts.[6]

The main known Turkmen gas deposits are all situated in the southeast of the country. Some areas on the right bank of the river Amudarya, close to the Uzbek border, are thought to be very promising. One of the already discovered gas fields there is Saman-tepe, with recoverable reserves of over 100bn m^3. But further exploration and development in the southeast requires new high-capacity pipelines linking the fields there either with China or with the Caspian coast. From the Caspian, the gas can then be routed either to Russia via the proposed Caspian pipeline, or to Azerbaijan via the proposed Trans-Caspian pipe. Without new pipelines, gas production in the southeast of Turkmenistan becomes impossible because there is simply no way of bringing that new gas to foreign customers.

Table 3. **Gas reserves at the South Yoloten–Osman and Yashlar fields, trillion m^3.[1]**

Estimate	South Yoloten–Osman	Yashlar
Lower	4	0.9
Most likely	6	0.7
Upper	14	1.5

Note: [1]Press Release by GCA on Turkmen Gas Fields, http://www.eurasiantransition.org/files/293903981280d22280a9be3ecf842b63-243.php, last accessed November 17, 2009.

No large land deposits have been found in western Turkmenistan, including the Caspian coastal areas. The proved recoverable reserves there are only about 180bn m^3, with little prospect of new discoveries. Small amounts of gas produced in western Turkmenistan (4–5 billion m^3 a year) are supplied to Iran via the Korpedzhe–Kurt-Kui pipeline. The Turkmen section of the Caspian shelf is relatively unexplored. Proven recoverable reserves in the offshore gas fields are in the region of 400bn m^3. The estimated total, based on seismic exploration data, could be up to 5.5 trillion m^3. But developing the Caspian shelf would require huge investment, complex technology, and new infrastructure. The launch of large-scale production of oil and gas from the Turkmen offshore deposits is not going to happen any time soon.

GAS PRODUCTION IN TURKMENISTAN

Gas production in Turkmenistan depends on three factors: the availability of gas reserves, the capacity of the gas industry, and access to the transit network. The last factor is especially important as 70–75 percent of the country's gas production was destined for exports in the past decade.

Turkmen gas production peaked at just under 90bn m^3 a year at the very end of the Soviet era, in 1989–1990. In the following years output fell sharply, reaching a minimum of 12–14bn m^3 in 1998. Starting from 1999, production began to recover and hit the 70bn m^3 mark in 2008—but as of late 2009, it still had not returned to the levels of 1989–1990.

There were several reasons for a sharp contraction in Turkmen gas output. Some of the old gas fields had been depleted. In the first years after the collapse of the former Soviet Union, the main importers or Turkmen gas—Ukraine, Georgia, and Armenia—were unable to pay for gas deliveries. This led to a sharp fall in gas production. But the main reason why Turkmen gas output went into a nosedive in 1997–1998 was the interruption of its transit via Russian territory in March 1997.

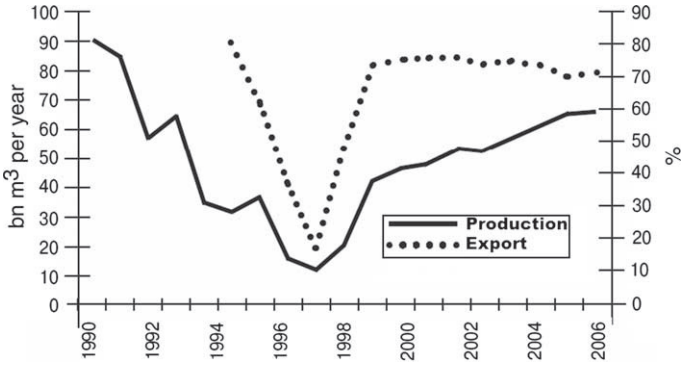
The reason for this was Gazprom's tactic of putting pressure on Ashgabat after the Turkmen government attempted to increase the price of its gas, which the Russian gas giant was buying on the Turkmen–Uzbek border. Another cause of the bitter dispute was Ashgabat's intention to sell its gas not to Gazprom but directly to the end buyers in Europe. Such a move would, among other things, put an end to the problem of non-payments and late payments, which blighted trade between the CIS countries. But for Gazprom that would mean unwanted competition on the very markets it wanted to dominate.[7] The Russian company viewed (and continues to view) Turkmenistan as a serious potential competitor which should be kept off its European and Turkish turf.

After transit via Russia was cut off in 1998, Turkmen gas production shrank to the level of domestic consumption. The country lost a vital source of revenue, and its economy took a sharp turn for the worse. Many gas wells were seriously damaged by the abrupt stoppage of production. The transit blockade demonstrated the Turkmen economy's extreme vulnerability to Russian pressure. Ashgabat immediately began exploring the possibilities for building new pipelines that would bypass Russian territory. A small pipeline was built between the Korpedzh gas field and the Iranian town of Kurt-Kui. Its length is 200 km, transit capacity 8bn m^3 a year. The project cost 200m dollars. More importantly, Ashgabat started to show keen interest in the Trans-Caspian pipeline project. In 1999 it commissioned the General Electric and Betchel Corporation to conduct a feasibility study. Several agreements were signed with Turkey, Georgia, and Azerbaijan.

That finally got Moscow's attention, as the Trans-Caspian gas pipeline would end the dependence of Central Asian producers on Russia for gas transit, and set a dangerous precedent that could pave the way for a Trans-Caspian oil pipeline as well. Those fears became one of the key reasons why the Kremlin was forced to end the transit blockade of Turkmenistan. Another reason, which may have been even more relevant, was Gazprom's increasingly obvious inability to satisfy both the growing domestic demand and large export commitments without buying gas from Central Asia.

The end of the transit blockade has enabled Turkmenistan to restore its gas production over the past decade—though not to the pre-crisis levels. One of the key limiting factors is the capacity of the Central Asia–Center trunk pipeline, which accounted for about 90 percent of Turkmenistan's gas exports. The pipeline was built in 1967 to channel gas from Kazakhstan, Uzbekistan, and

Figure 3. **Turkmen gas production and exports in 1990–2008[1]**



Note: [1]Statistical Review of World Energy, 1990–2008.

Turkmenistan to the industrialized heartlands in the European part of the USSR. In the past 10–15 years its capacity has remained steady at about 45–50bn m^3 per year, which is about 40bn m^3 below the peak reached in the 1980s. The pipeline is now much the worse for wear, and requires a lot of investment. Plans were agreed in 2007 between Russia, Turkmenistan, Kazakhstan, and Uzbekistan to restore it to former glory—but so far everything remains on paper due to lack of funding and constant disputes over a whole host of practical issues.

In 2010 Turkmenistan's export capacity received a serious boost following the launch of a 40bn m^3 pipeline to China. Another pipeline, from Dauletabad to Iran, is under construction.[8] A further rise in Turkmen gas production potential now hinges on investment into developing new gas fields, especially the South Yoloten–Osman and Yashlar.

Official estimates in the middle of the past decade assumed that in order to achieve the 2020 gas production target of 170–200bn m^3, Turkmenistan would need to invest about 63bn dollars over the period 2005–2020, i.e. about 4bn dollars every year.[9] That means that Ashgabat will need to secure 3.5–3.7bn dollars in annual foreign investment. Western estimates in 2009 suggest that the actual figure of annual investment needed to achieve those ambitious production targets is in the region of 10bn dollars.[10] This is far more than Turkmenistan has been able to attract in recent years. Total foreign direct investment in the Turkmen economy (not just the oil and gas sector) averaged about 119m dollars a year in the decade to 2000. By 2007 the annual figure had risen to 800m dollars, and jumped to 2.2bn in 2008[11]—but that is still far below the levels required to achieve the production targets.

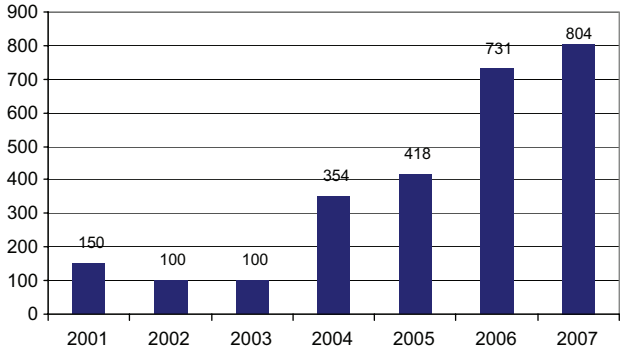
TURKMEN–CHINESE GAS INDUSTRY COOPERATION

Trade with China opens up grand opportunities before the Turkmen gas industry. The official launch of large-scale bilateral cooperation in this area dates back to April 3, 2006, when the General Agreement was signed in Beijing on the implementation of the Turkmenistan–China gas pipeline project and exports of Turkmen natural gas to China. Chinese specialists had spent several years in Turkmenistan prior to the signing of the agreement to study the country's gas production potential.

Under the General Agreement, Turkmenistan undertakes to supply 30bn m^3 of gas to China every year, for a period of 30 years. A new pipeline would be built to that end; the gas for it would be produced under a program of ''joint exploration and developments of all the gas fields and sites on the right bank of the river Amudarya under a production sharing agreement.'' Turkmenistan also undertook to supply any extra gas required for the pipeline to operate at full capacity from other Turkmen gas fields, if need be. The procedure of purchasing natural gas from Turkmenistan will be defined by the Chinese side.[12]

Later it was agreed that the source of gas for exports to China will be the Saman-depe and Altyn Asyr fields on the right bank of the Amudarya. They are expected to produce 13bn m^3 every year. The remaining 17bn will come from Dauletabad and, in future, from the new South Yoloten–

Figure 4. **Foreign Direct Investment in the Turkmen economy in 2001–2007, million dollars**[1]



Note: [1]World Investment Report. Country fact sheet: Turkmenistan. UNCTAD, September 24, 2008, http://www.unctad.org/sections/dite_dir/docs/wir08_fs_tm_en.pdf; Turkmenistan. *FDI.Net*, http://www.fdi.net/country/sub_index.cfm?countrynum=199&infosectr=2700, last accessed November 17, 2009.

Osman field. The gas pipeline was completed in 2009. It crosses the territory of Turkmenistan, Uzbekistan, and Kazakhstan. Under an agreement reached in June 2009, China will give Ashgabat a 4bn dollar loan and purchase an additional 10bn m^3 of gas every year. Another agreement concerned gas production at the Bagtyarlyk site. Turkmenistan's annual gas exports to China will therefore rise from 30bn to 40bn m^3.[13] The deal has confirmed China's strategic interest in securing Central Asian energy resources, and became another demonstration of Beijing's growing political and economic clout in the region.

In December 2009, the Turkmengaz concern signed 9.7bn dollars worth of contracts with several Asian companies, including China's CNPC (3.128bn dollars), the UAE's Petrofac International (3.979bn) and Gulf Oil & Gas (1.150bn), as well as the South Korean consortium of LG International Corp. and Hyundai Engineering (1.485bn dollars). Gulf Oil & Gas will design and build underground facilities, including production wells, at some of the sites of the South Yoloten field. These sites will produce 20bn m^3 of gas every year. CNPC will produce another 10bn m^3 at the same gas field.[14]

The Turkmen–Chinese gas deal will have serious effects on Turkmenistan's position in the geo-economic and, by extension, strategic landscape of the former Soviet Union's southern periphery. The launch of the pipeline to China has given Turkmenistan the ability—and the incentive—to ramp up gas production. Gazprom's monopoly on the transit of Turkmen gas to foreign markets has been broken. This will strengthen Ashgabat economically and further reduce its vulnerability to political pressures from Moscow—which was never that great in any case. The question now is whether Turkmenistan can produce enough gas to satisfy Gazprom's demand, especially in view of the plans to increase Turkmen exports to Iran to 20bn m^3 over the next few years. Another thing to consider is that China will now be less interested in securing the supplies of Russian gas produced at the Far Eastern and East Siberian fields.

RUSSIAN–TURKMEN GAS RELATIONS

From the start of this decade and until 2009, Moscow had been pushing hard for an increase in Turkmen gas supplies, hoping for an exclusive deal to buy almost all the gas produced in that country. In 2003, Moscow and Ashgabat signed an agreement on cooperation in the gas industry, under which Turkmenistan promised to supply 70–80bn m^3 of gas to Russia every year in 2009–2028. In practice, Turkmen gas exports to Russia stood at only about 40bn m^3 in the last five years or so, of which 30bn was then sold by Gazprom to Ukraine.

In order to monopolize Turkmenistan's gas exports, Russia agreed in 2007 to the idea of building the so-called Caspian pipeline, which Ashgabat had been lobbying for since the mid-1990s, and started to promote it with great energy. Moscow also expressed its backing once again for the

proposals to upgrade the Central Asia–Center pipeline. Without that upgrade, plans to increase Russian imports from Turkmenistan would remain wishful thinking.

The main problem in Russian–Turkmen gas relations stemmed from the need to renegotiate every year the price of Turkmen gas bought by Gazprom (Table 4) at the Turkmen–Uzbek border. That price went up from 44 to 150 dollars per 1,000 m^3 over the period 2004–2008.

In 2009, Russian–Turkmen relations suffered another serious trauma. In March 2009, Ashgabat spurned Gazprom's offer to build the East–West pipeline connecting the gas fields in the southeast of the country with the Caspian coast. In practice that translated into Turkmenistan's refusal to provide any guarantees that the new pipe will be connected to the future Caspian pipeline, and that the bulk of the country's West-bound gas exports will therefore go to Russia. In April 2009, Ashgabat announced that the contract to build the East–West pipeline would be awarded to the winner of an international tender. The decision was a serious setback for Russia because it meant that Ashgabat was seriously considering the possibility of joining the Nabucco project.

In 2009, the price Turkmenistan charged Gazprom for its gas rose sharply, reaching 300 dollars per 1,000 m^3, according to unofficial information. Transit via Uzbek and Kazakh territory cost another 40 dollars per 1,000 m^3.[15] Meanwhile, Ukraine, the main consumer of the gas which Gazprom buys from Turkmenistan, reduced its imports from Russia by 50 percent. In another blow to Gazprom, gas prices on the world market fell to reflect the lower oil price, and Russian exports to Europe also contracted. As a result of all those developments, Russian gas exports fell by almost 40 percent in the first quarter of 2009. Domestic consumption shrank by 5 percent.[16] Gazprom demanded a renegotiation of the price agreement reached with Ashgabat in December 2008. The Turkmen leadership refused and, in April 2009, Gazprom unilaterally halted gas transit from Turkmenistan. To make matters even worse, the pipeline ruptured as pressure in it shot up after Gazprom flicked off the taps. Ashgabat was incensed.

The situation was an echo of the events in 1997–1998, when the Russian gas transit blockade led to a sharp fall in Turkmen gas production and export revenues. But, this time around, Ashgabat was in a much stronger position to weather the storm. Turkmenistan had already received a 4bn-dollar loan from China, and the construction of another pipeline to Iran was well under way. Against all that background, President Berdymuhammedow made a statement clearly in favor of joining the Nabucco project. ''Turkmenistan pursues the strategy of diversifying its energy export routes, and intends to make use of the opportunities presented by large international projects, such as Nabucco,'' the Turkmen leader said.[17] During a visit to Bulgaria and Turkey in August 2009 he discussed Turkmenistan's participation in Nabucco with the leaders of the two countries.

Those steps caused extreme concern in Moscow. In September 2009, the Russian leadership offered Turkmenistan a resumption of talks on gas supplies. A decision to that effect was made during a meeting between Dmitry Medvedev and Gurbanguly Berdymuhammedow. But the underlying problems that had caused the conflict remain unresolved. Gazprom is seeking a renegotiation of the pricing mechanism to minimize the losses it incurs selling Turkmen gas to Ukraine or to European customers. Ashgabat, meanwhile, was bound to demand compensation for the losses it sustained when Russia halted gas transit in April 2009. Those losses are estimated at 2bn–3bn dollars. The conflict was settled only at the very end of 2009, when an agreement was reached that Turkmenistan would export 30bn m^3 of gas to Russia every year.[18]

Russia's decision to resume gas imports from Turkmenistan was driven by two considerations. First, a continuation of the pipeline blockade of Turkmenistan threatened to push Ashgabat into giving the green light to the Trans-Caspian pipeline, which would be a foreign policy fiasco for Russia. And second, gas production in Western Siberia will continue to decline, while progress in developing the Shtokman fields and the Yamal deposits, which are supposed to pick up the slack,

Table 4. **Price of Turkmen gas sold to Gazprom in 2004–2009, in U.S. dollars per 1,000 m^3**

				2008		
2004	2005	2006	2007	Jan–Jun	Jul–Dec	2009
44	60	65	100	130	150	300

gives little cause for optimism. Also, the hoped-for increase in gas production in the east of the country will do little to ease the situation in the European part of it because of the high transit costs. Russia will still need to import gas from Central Asia, especially Turkmenistan.

Meanwhile, the unilateral halt of gas transit from Turkmenistan to Russia damaged a large number of Turkmen gas wells. Restoring them will take a long time and serious amounts of cash. That means that exports from Turkmenistan in 2010 will fall quite sharply compared with the 2008 figures. Some 10–13bn m^3 will be pumped to China, 12bn to Iran and 10–11bn to Russia.[19] With domestic demand expected to remain below 20bn, this means that gas production will be in the region of 50–55bn m^3 in 2010, which is 10–15bn lower than in 2008.

Turkmenistan will have to increase production quite sharply if it is to meet all its export commitments in two or three years' time. To illustrate, the country will have to supply 40bn m^3 of gas to China in 2012, and another 20bn to Iran. That is 15bn m^3 more than the country's entire 2008 export figure. In addition, Ashgabat has undertaken to supply 10bn m^3 of gas to Europe. If domestic demand remains steady at 20bn m^3, Turkmenistan will have to produce 90bn m^3 every year by 2013–2014 to meet all its commitments. And if the agreement on gas exports to Russia is taken into account, that figure rises to 120bn m^3. In other words, Turkmenistan's gas production will have to rise by 50bn m^3 in the next three or four years compared with 2008—and that is after the country overcomes the effects of the 2009 crisis, when production fell by 30–35bn on the previous year.

All that will require billions of dollars in new investment. China, in cooperation with an Arab and a South Korean company, has promised to provide 14bn dollars in 2009 to ensure annual supplies of 30bn m^3 of gas. That leaves 40bn m^3 in other commitments to China, Iran, and Europe—the figure is just short of Turkmenistan's entire gas exports in 2008. In other words, in order to ensure that all these export commitments are met, Europe and Russia will have to come up with sufficient investment in the Turkmen gas industry to ensure the production and transit via Turkmen territory of an additional 30–40bn m^3 of gas. About three-quarters of that investment will have to come from Russia. And if Russia's annual import requirements rise above the current projection of 30bn m^3, the amount of investment will also have to rise accordingly.

But for now, Gazprom's activity in Turkmenistan is limited to ''geological and economic assessment of potential new production sites.''[20] In simple terms, serious investment is not on the table.

And if the proposed Trans-Caspian pipeline (with an annual capacity of at least 30bn m^3) is actually built, Turkmen gas exports to Russia will fall sharply, and may even end completely. In theory, the situation can be saved by large Russian investment in new Turkmen gas projects—but the terms of any such deals will largely be dictated by Ashgabat. In that situation, the only remaining source of optimism for Moscow is the recent deterioration of the Azeri–Turkmen dispute over the division of the Caspian Sea.

THE TRANS-CASPIAN PIPELINE PROJECT AND THE AZERI–TURKMEN DISPUTE

In the mid-1990s, Azerbaijan and Turkmenistan fell out over Azeri debts for Turkmen gas supplies. But the underlying reason for the political conflict between the two countries was the continuing dispute over several offshore gas fields. The initial bone of contention was the Kyapaz (Serdar) field, to which both countries laid claim. But very soon the entire issue of dividing the exclusive economic zones in the Caspian Sea became a source of serious tension. The situation is compounded by the fact that Turkmenistan essentially disputes Azerbaijan's ownership of the Azeri–Chirag–Gyuneshli fields, which are already being developed by an international consortium.

After the change of leadership in Ashgabat in late 2006, relations with Azerbaijan started slowly to return to normal. Diplomatic ties were restored, and the issue of Azeri debt was settled. The two leaders exchanged visits, and diplomats began a fairly constructive discussion on the economic zones in the Caspian. There was real hope that the problem would eventually be resolved on the basis of a compromise, though the outlines of any such compromise were far from clear. But then in the summer of 2009 Ashgabat suddenly decided to adopt a far more unyielding stance. President Berdymuhammedow ordered his diplomats to take Azerbaijan to the International Court of Arbitration, meaning that any possible resolution will now be delayed for a very long time. At first glance, that step does not make much sense, given Turkmenistan's increasing determination to

build the Trans-Caspian pipeline, without which the country will be unable to join the Nabucco project. One possible explanation is that the Turkmen president is hoping to use America's and Europe's interest in Nabucco as an instrument of pressure on Azerbaijan. Only time will tell whether that gamble will pay off. It is quite possible that instead of Azerbaijan, Turkmenistan itself will come under Western pressure to stop making trouble and clear the path for the Trans-Caspian pipeline.

Legally, Turkmenistan's position in the dispute is based on two arguments. The bottom of the sea, along with all its oil and gas deposits, should be divided along the median line, ''each point of which, as defined by Paragraph 1 Article 6 of the 1958 Convention on the Continental Shelf, is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.'' Azerbaijan does not dispute that point. The crux of the problem is that Ashgabat wants to invoke the ''special circumstances'' clause and the ''principle of fairness'', which are mentioned in the Convention on the Continental Shelf and the 1982 UN Convention on the Law of the Sea. According to the Turkmen diplomats and lawyers, the ''special circumstance'' here is the very unusual line of the Azeri coast, with narrow strips of land protruding sharply into the sea, and with an island that is not historically linked to the mainland. In practice, the essence of Ashgabat's position, according to the Turkmen Foreign Ministry, is that ''the division of the bottom of the Caspian Sea and all its resources between Turkmenistan and Azerbaijan should not take into account the Apsheron peninsula and the Zhiloy island, both of which constitute special circumstances and should be disregarded for the purposes of drawing the median line.''[21]

If Azerbaijan concedes that point, several of its oil and gas fields that lie along the direct line between the tips of its Apsheron peninsula and Turkmenistan's Cheleken peninsula will become the property of Turkmenistan. Clearly, Baku would never accept that willingly. By the same token, Azeri lawyers can always argue that Turkmenistan's Cheleken peninsula is also a special circumstance, voiding Ashgabat's main point. It is also doubtful that the International Court of Arbitration will ever agree that Apsheron is a special circumstance, thus creating a precedent that would add to the already mind-boggling complexities of dividing the seas.

CONCLUSION

Growing rivalry between Russia, China, and Europe for Turkmenistan's gas resources has given the country's leadership much greater freedom of maneuver in the international arena. Ashgabat can now play the three great powers off against each other, while President Berdymuhammedow's own grip on power becomes ever stronger. In this ongoing rivalry, China is coming out on top, making use of its growing political and economic clout in Turkmenistan and the rest of Central Asia.

Cooperation with China is reducing Turkmenistan's dependence on Russia for gas transit—and, to a certain extent, makes Ashgabat less keen to pursue closer relations with the West. That allows the Turkmen leadership to adopt a fairly tough stance at the negotiations with the Western countries—witness its obduracy on the Caspian economic zones issue. The West, meanwhile, is finding itself in a bind, becoming entangled in a complex dispute to which international law offers no clear solution. The EU and individual European nations have only one bit of leverage in their dealings with Ashgabat: the promise of large investment in the development of Turkmenistan's gas fields in the southeast of the country and on the Caspian shelf. Russia, meanwhile, can make use of the dispute between Ashgabat and Baku to slow the implementation of the Nabucco project, or to bury it altogether. 

NOTES

[1] Proven reserves are the reserves of natural gas that are claimed, based on the available geological and technical information, to have a reasonable certainty of being recoverable from the known underground reservoirs using existing technology and under existing economic conditions.

[2] BP, which is known for its cautious and conservative estimates of energy reserves, estimated Turkmenistan's proved gas reserves at 7.94 trillion m^3 in late 2008; see: *BP Statistical Review of World Energy*, June 2009, p. 22.

[3] It is believed that peak annual production can reach up to 5 percent of proven reserves, meaning that the reserves will be in production for 20 years. In the case of Turkmenistan it is more likely that peak annual production will reach 2–3 percent of proven reserves, i.e. 160–240bn m^3, assuming that the size of the proved reserves is 8 trillion m^3.

[4] Olcott Martha Brill, *International Gas Trade in Central Asia: Turkmenistan, Iran, Russia and Afghanistan*, Working Paper N 28, May 2004, James A. Baker III Institute for Public Policy of Rice University, p. 34.

[5] *BP Statistical Review of World Energy*, June 2009, p. 22.

[6] On October 13, 2009, the Russian newspaper *Vremya Novostey* published an article under the headline ''Truboprokol'' (Word play on ''pipelines'' and ''rupture''). Citing (anonymous) ''sources in the Turkmen oil and gas industry,'' the article claimed that the Turkmen authorities denied GCA experts ''the chance to come up with their own analysis of the results of exploration drilling, giving them instead Turkmenistan's own inaccurate interpretation of those results.'' GCA immediately published a refutation of that claim. The company's statement said that the conclusions made by its experts were the result of ''independent work on the underlying data, and did not depend on previous interpretations made by the Turkmen or other independent specialists.''

[7] *Finansovye Izvestiya*, January 20, 1998.

[8] The new 30.5km pipeline between the Dauletabad gas field and the town of Salyr Yap on the Iranian border, with annual transit capacity of 12.5bn m^3, was due to be launched in late 2009. Turkmenistan and Iran signed an agreement in 2009 to increase Turkmen gas exports to Iran to 14bn m^3 a year, including 8bn from the Korpedzhe field and the remaining 6bn from the Dauletabad field. In the future, Turkmen gas exports to Iran are expected to rise to 20bn m^3 a year. See: ''Additional Turkmen gas supplies to Iran to begin in December 2009,'' http://www.turkmenistan.ru/?page_id=3&lang_id=ru&elem_id=15368&type=event&sort=date_desc, last accessed November 17, 2009.

[9] Solovyev Igor, ''Pipeline geography,'' http://www.turkmenistaninfo.ru/?page_id=6&type=article&elem_id=page_6/magazine_35/290&lang_id=ru, last accessed November 17, 2009.

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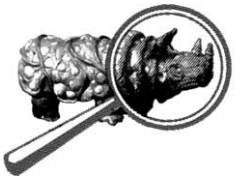

Nadezhda Arbatova

FROZEN CONFLICTS AND EUROPEAN SECURITY

The August 2008 crisis in the Caucasus put relations between Russia and the West on the brink of another Cold War. Russia and the United States found themselves an inch away from direct military confrontation in the Black Sea. But it is that very same crisis that also attracted international attention to Russian President Medvedev's initiative to construct new security architecture in Europe based on a legally binding treaty.

Following the end of the Cold War and the removal of the threat of a global conflict, Europe became one of the most stable regions in the world. Nevertheless today it is widely recognized that the old understanding of what security means, inherited from the Cold War, is no longer relevant. It is no longer a confrontation between military blocs or individual nations, a new war between them or another arms race that pose the main threat to security in Europe. These days, it is the spread of weapons of mass destruction (WMD), international terrorism and latent conflicts.

The emergence of newly independent states following the collapse of Yugoslavia and the Soviet Union gave rise to a whole host of new problems. One of them is separatist sentiment among the ethnic minorities that are large enough to hope for their own statehood. That separatism could well lead to armed conflict.[1]

The existing frozen conflicts—in Nagorny Karabakh, Transdnestria and (prior to the Caucasus crisis) in Abkhazia and South Ossetia have traditionally been seen in the West as part of Russian policy in the CIS aimed at maintaining control of these former Soviet territories. The reality is much more complex. Each frozen conflict has at least three aspects: the internal, the Russian/CIS, and the international aspect, which are all tightly intertwined.

THE INTERNAL ASPECT OF FROZEN CONFLICTS

The internal aspect of frozen conflicts is intricately linked to their origins. The external actors could never succeed in *driving a wedge* between the warring factions had there not been serious pre-existing reasons for discord. The collapse of the former Soviet Union gave rise to growing ethnic violence in those former Soviet republics, which had been plagued by ethnic, religious and territorial conflicts even before the arrival of the Soviets.

Enmity between the Muslim Azeris and the Christian Armenians in Nagorny Karabakh had existed for centuries. But the latest bout of conflict in the region began in 1988 following reports that an ethnic Armenian movement had been set up in Nagorny Karabakh to *liberate* it from the Azeris. The declaration of secession from Azerbaijan, proclaimed in February 1988, was the predictable result of serious restrictions on cultural and religious freedoms imposed by the central Soviet and then Azeri authorities. Those restrictions had long fuelled discontent among the predominantly ethnic-Armenian population of Nagorny Karabakh. Another reason for the independence declaration—arguably even more important—was territorial conflict over land ownership.

Large-scale armed hostilities broke out in the winter of 1992. These led to serious bloodshed and widespread destruction. By the time the war ended in 1994, the Armenians were in full control of

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Nagorny Karabakh; they also held about 9 percent of the territory of Azerbaijan proper. They still remain in control of those territories. The ceasefire agreement brokered by Russia was signed in May 1994. In the same year, peace talks began between Armenia and Azerbaijan, with the Minsk Group of the OSCE acting as mediators.[2] The talks continue to this day.

In Georgia, the disintegration trends unfolding across the entire Soviet territory spurred the pre-existing conflicts in South Ossetia and Abkhazia, fuelling nationalist sentiment and old grievances on both sides of the conflict. President Zviad Gamsakhurdia's ''Georgia for Georgians'' slogan became a catalyst for Ossetian and Abkhaz separatism. The authorities in the South Ossetian autonomy aspired to bolster the region's status through merger with the North Ossetian autonomous republic, which is a member of the Russian Federation. As a countermeasure, Tbilisi took the same step that Slobodan Milosevic did when faced with the Kosovo problem. In 1990, South Ossetia lost its autonomous status within Georgia and became just another province; Georgian nationalists claimed that the Ossetians were not an indigenous people so did not deserve autonomy.

In Abkhazia, the situation was quite different. The Abkhaz were an indigenous people, so they had the right to retain their political status as an autonomy—but only on the condition of giving much greater rights to the ethnic Georgians, who made up the majority of the population in Abkhazia due to Stalin's policy of mass resettlement and migration trends in later years. The Georgians disputed the political privileges of the titular Abkhaz ethnic group, which made up only 18 percent of the population. For their part, the leaders of the Abkhaz nationalist movement refused to recognize the rule of the Georgian government in Tbilisi. Even before the collapse of the former Soviet Union, they made attempts to raise the status of Abkhazia from autonomy within Georgia to a Soviet republic on par with Georgia itself.

After the fall of the Soviet Union, the disposition they demanded amounted to Abkhazia and Georgia proper becoming equal members of a free federation. Rising tensions amid the debate on the political status of Abkhazia degenerated into the 1992–1993 war, in which Georgian troops consisting mostly of paramilitary formations intervened in a political conflict between the two main ethnic groups in Abkhazia (the Abkhaz and the Georgians). The open phase of the conflict ended in the victory of the Abkhaz troops, who were backed by various nationalist movements from the North Caucasus and by the Russian military.

CIS peacekeeping forces were deployed along the ceasefire line in 1994. The UN sent its own military observers to the conflict zone and acted as a mediator, with Russia retaining the role of coordinator. But talks on a political settlement failed to make any substantial progress. The problem of the return of the ethnic Georgian refugees to Abkhazia also remained unresolved. Sporadic clashes between Georgian guerrillas and the Abkhaz militia eventually led to the resumption of armed hostilities and caused a new wave of refugees spilling out of the region, swelling the numbers of the internally displaced.[3]

Unlike South Ossetia, Abkhazia had no aspiration to join the Russian Federation. The August 2008 conflict triggered by Mikhail Saakashvili under the pretext of restoring constitutional order on Georgian territory led to the declaration of independence by South Ossetia and Abkhazia, with Russia's backing. In a sense, it was President Saakashvili who unwillingly implemented the old ''Georgia for Georgians'' slogan.

In Moldova, nationalist sentiment was also on the rise as the Soviet Union continued to fall apart. In December 1989, Communist rule ended in neighboring Romania. Ties between the two countries were becoming increasingly close, with a partial opening of the border on May 6, 1990. Many in Moldova's Transdnestria province came to believe that a union between Chisinau and Bucharest was imminent, and that the entire Moldovan population might soon end up as Romanian citizens. The Russian-speaking population in Transdnestria feared that they would no longer be able to demand the restoration of official status of the Russian language in the country. During the war, there was widespread opinion on both sides of the conflict that Moldova would probably rejoin Romania very soon, and its ethnic Russian population would become alienated. These fears led to the creation in 1990 of the Transdnestrian Moldovan Soviet Socialist Republic.

The proclamation was made by pro-Soviet separatists who hoped to keep Transdnestria as part of the Soviet Union after it became clear that Moldova was heading for full independence. The Transdnestrian Soviet Republic was recognized by neither Moscow nor Chisinau. In 1991, it changed its name to the Transdnestrian Moldovan Republic. The war in Transdnestria was essentially a series of armed clashes involving the Transdnestrian Republican Guard, militia and

Cossack paramilitary formations fighting—with the backing of the Russian 14th Army—against the Moldovan police and military.

The clashes began in November 1990 in Dubossary. They deteriorated amid a wave of local incidents on March 1, 1992, after newly independent Moldova became a member of the UN. Interspersed by several ceasefires, they continued throughout the spring and summer of 1992, until the signing of the final ceasefire agreement on July 21, 1992, which is still in force.[4] Although the ethnic factor played a certain role in the confrontation early on the Transdnestria problem is mostly political, which makes it quite distinct from all the other frozen conflicts.

For all the economic, political, cultural and ethnic specifics of frozen conflicts, and their geopolitical differences, all of them have many important things in common. Among these common features is the bitterness of defeat suffered by the dominant titular ethnic group in a conflict with separatists backed by an external force; the problem of refugees (with the exception of Transdnestria); the loss of territorial integrity; and, finally, the replacement of Communism with nationalism in the newly independent states. The only exception in the early 1990s was Russia, where the Communist system was overthrown by revolutionary democrats, whereas the Russian nationalists advocated the restoration of the Soviet empire.

Nationalist sentiment among the titular ethnic groups became the main driving force in the formation of statehood of the newly independent states. That titular nationalism suppressed the national identity of the ethnic minorities and took various forms, from applying Ukrainian spelling conventions to Russian surnames in the Crimea to outright armed violence in Georgia, Moldova and Azerbaijan. In no time at all, nationalism in the former Soviet republics became directed very clearly against Russia. Nationalist forces in the newly independent states transferred onto the new Russian government all responsibility for the misdeeds of the old Soviet government, based solely on the fact that the governments of the Soviet Union and the Russian Socialist Republic were essentially the same entity. Russia became the target of all sorts of grudges, suspicions, negative assessments and emotions (whether they were justified or not is a topic for a separate discussion). But at the same time it also became the subject of various ambitions, expectations and claims, which were often selfish and completely wrong in every possible way.[5]

RUSSIAN FACTOR IN FROZEN CONFLICTS

The Russian aspect of frozen conflicts is the result of a complex interaction of several factors, including Russia's domestic policies, its policy with regard to neighboring states (which only recently formed parts of a highly integrated totalitarian empire) and its relations with the West during the transition from Communism to a new system. That last element plays a key role in the international dimension of frozen conflicts, which goes far beyond the actual process of conflict resolution.

After the collapse of the Soviet Union, Russia suddenly faced the need to formulate a new strategy in relation to the area of its vital interests, the CIS. But throughout the 1990s Russian policy towards the CIS nations was defined by the Russian leadership's inability to solve the main dilemma in the *near abroad*. Should Moscow treat the newly independent states like any other foreign country—for example, by charging them world prices for energy supplies? Or should it maintain special relations through recognition of a special status of the Russian military and civilians abroad, by using industrial and military facilities in the newly independent states, maintaining an integrated system of defense, intervening in internal conflicts on the territory of these states, defending the former Soviet borders, etc? That dilemma was compounded by the fact that, on the one hand, Russia could not simply ignore the problems on the territory of the CIS states but, on the other, the resources at Russia's disposal to resolve these problems had dwindled quite severely.

The general opinion in the West is that Russia's policy under Yeltsin was far more democratic and liberal than under President Putin. But the majority of the problems related to Moscow's tensions with the GUAM nations dates back to the 1990s. The best proof of that assertion is the fact that the GUAM organization (initially GUUAM[6]) was founded in 1996. The tone of the Yeltsin administration's policy towards the CIS nations can best be described as neo-imperial idealism. Paradoxically, it coincided with the ideas of the Russian Communists, who believed that the people of the former Soviet nations sincerely aspired to reintegrate into a single country (despite the wishes of their elites) and restore former imperial glory.

The creation of the CIS under Russian auspices and the need to address some very real problems eventually persuaded the Russian government to try to establish *special relations* with the CIS countries. In practice, that translated into Russia acting as a donor for the newly independent states in return for their political loyalty. Such a policy led Russia to take an increasingly tough stance in its relations with Ukraine and certain other republics, and to put pressure on them over various territorial, ethnic, economic and military disagreements. GUUAM became a predictable result of that myopic and despotic policy.

In addition to that, Russia's national interests, both in terms of the country's internal evolutionary development and in its relations with the CIS nations, suffered a serious blow following the war in Chechnya. Moscow failed to transform the CIS from an instrument of *civilized divorce* into an integrating organization with *flexible geometry*. Instead, it tried to make use of the vulnerabilities of the CIS nations, such as the unresolved conflicts on their territory, to maintain its dominance in the so-called ''near abroad.''

Looking back, it must be recognized that Moscow's policy on Ukraine, Moldova and the Trans-Caucasus nations in the first half of the 1990s, when the model of relations between the former Soviet republics was being formed, has turned out to be myopic and counterproductive. The miscalculations of the Yeltsin–Kozyrev policy are especially obvious in the case of Georgia, which should have been cultivated as a key Russian partner in the Caucasus.

Russian policy in Georgia has turned out to be even more of a failure than in Ukraine or other CIS states. Thanks to Russian support for the Abkhaz separatists, and as a result of a civil war that broke out at the same time, Georgia found itself on the brink of complete collapse and disintegration as a nation. Georgian President Eduard Shevardnadze was forced to accept the idea of Georgian membership of the CIS, and asked Russia to send its troops in. This enabled him to defeat his main internal rival, Zviad Gamsakhurdia, and a certain status quo was achieved on the Abkhaz front.

Russia's ill-considered policy on Georgia led to growing anti-Russian sentiment among the Georgian public and the country's political elite, as well as the Georgian parliament. Tbilisi made attempts to distance itself from Russia. Georgia devoted its energies to cultivating ties with Turkey and Azerbaijan, and began to think very seriously about securing NATO membership. Later on, Georgia's plight as a victim of Moscow-backed separatism and the problem of refugees from its two separatist enclaves helped the radical nationalist Mikhail Saakashvili come to power, with his anti-Russian policy and the course towards NATO membership. That, in turn, removed any remaining reasons for Russia to want to help in the peaceful settlement of the conflict between Georgia and its unrecognized breakaway republics.

In other words, Russia made quite a few strategic blunders in its policy in the post-Soviet space in the 1990s. It tried to secure its dominance of the region by openly supporting separatism in neighboring countries, backing politically loyal but oppressive regimes, refusing to withdraw Russian troops that had remained in the newly independent republics since Soviet times, and using energy supplies as an instrument of blackmail.

> Apart from very few exceptions, that policy did not actually pursue any specific goals, apart from cobbling together some kind of a coalition of satellite nations to bolster Russia's international standing, or rather its grandstanding. While working against Russian policies in the CIS, the West did not allow the issue to become a stumbling block in its relations with Russia, because it was quite happy with Moscow's other foreign and domestic policies.[7]

It appears that the main problem the Russian leadership faced in its relations with the CIS countries boiled down to the fact that Russia, which was in the middle of a post-Communist transformation, could not serve as an attractive model of social, economic and political development for these countries. Moscow therefore tried to keep its dominance in the post-Soviet space using the traditional method of carrot and stick.

Over the past decade, Russian policy on the CIS has become far more pragmatic. Moscow has abandoned its unrealistic imperial projects and focused on securing energy transit, buying up promising companies and infrastructure in the neighboring countries, investing in geological exploration and production of mineral resources, maintaining the truly important military bases and facilities abroad, developing cooperation in fighting the new transnational threats and maintaining humanitarian links. Moscow has reconciled itself to the fact that, by setting up the

GUAM bloc, some of the post-Soviet nations were making an earnest attempt to break free of the Russian sphere of influence.

But despite its more realistic tone, Russian policy in the CIS over the past decade cannot be justified and supported in every respect. Alarmed by the anti-Russian tinge of the Orange revolutions, the Kremlin committed several serious blunders (such as congratulating Viktor Yanukovich on his eventually overturned victory in the 2004 Ukrainian presidential election even before the official announcement of the election results; the excesses of an unbridled anti-Georgian campaign in the autumn of 2006, etc.). Conflicts with Ukraine, Georgia and Belarus over energy prices and transit tariffs have given rise to accusations that Russia is waging a policy of *energy imperialism and blackmail.* While the Russian energy price ultimatums to its neighbors cannot be justified, it must be said that the transition to world energy prices represents a welcome departure from the former imperialist policy of offering economic incentives in return for political or military-strategic loyalty. Moscow's approach here has been equally pragmatic in its dealings with such different neighbors as Ukraine, Georgia, Armenia and Belarus.[8]

As for frozen conflicts, Russia's policy over the past decade has focused in most cases on preventing the use of force as a method of resolving conflicts in neighboring countries. Following the crisis in South Ossetia, it has become obvious that Russia should have worked harder on achieving peaceful resolution of these frozen conflicts. But in the absence of a solution acceptable to all sides of the conflict, the policy of preventing the use of force was not the worst of the available options. It appears that this is tacitly recognized even by the Georgian leadership and many Western politicians.

The stationing of Russian troops as peacekeepers under the CIS mandate in Abkhazia, South Ossetia and Transdnestria was accepted only grudgingly by the Georgian and Moldovan governments. They have been a source of constant tensions in Russia's relations with its neighbors and Western countries. But these troops were brought in to prevent a new outbreak of violence in the post-Soviet countries when no one in the West was too eager for this job. Only after relative stability was achieved did the West begin to express its unhappiness and impatience over the presence of Russian peacekeepers in Georgia and Moldova.

The crisis in the Caucasus has been a catalyst for new trends in the CIS. On the one hand, Russia has clearly drawn a red line, demonstrating to the United States and NATO that its refusal to accept the expansion of NATO to the CIS is not just empty words. But on the other hand, it has also become clear than during the military campaign itself and on the issue of recognizing the independence of South Ossetia and Abkhazia, Russia has found itself almost completely isolated. Not a single one of its allies and partners in the Collective Security Treaty Organization (CSTO), the Eurasian Economic Community (EurAsEC), or the Shanghai Cooperation Organization took a clear stance on the South Ossetian conflict or offered moral and political support to Russia. The Kazakh president, Nursultan Nazarbayev, summarized the misgivings of Russia's CIS partners in the following way:

> The CIS does not have any instruments or mechanisms to intervene in conflicts such as the one in South Ossetia. But when something happens, people say, ''Why is the CIS silent?'' The principle of territorial integrity of sovereign states is recognized by the international community. We, the CIS nations, are against separatism, and such complex inter-ethnic issues must be resolved by peaceful means, through negotiations. There is no military solution for such conflicts.[9]

This will undoubtedly have serious consequences for the CIS as a whole and for Russia's relations with the CIS nations.

> Every country that neighbors Russia is now facing the dilemma of how to ensure their own security. There are in fact only two possible options: looking for security guarantees from the outside, primarily from the United States, or seeking some kind of new relations with Moscow that would make Russia a friendly country.[10]

That last option will depend on what kind of lessons Russia has learnt from the South Ossetian crisis. The ability to secure collective support in the international arena is a cornerstone of successful foreign policy for any nation. Following the crisis in the Caucasus, Russia has made a number of attempts to strengthen the CIS during the summits of its leaders and in the CSTO framework. The world financial and economic crisis has also served to bring the CIS together to a certain extent, by strengthening Russia's role as the *chief manager* of the organization.

THE INTERNATIONAL ASPECT

The international aspect of frozen conflicts goes far beyond actual international participation in the resolution of these conflicts. Russia's relations with the CIS countries that have unresolved conflicts on their territory are an integral part of a much wider security environment. Western plans to create a new security architecture on the basis of NATO and the EU, but excluding Russia; events in the Balkans; prospects for NATO expansion in the CIS space—all these processes have inevitably fuelled great-power chauvinism among the Russian political elite. Russia is increasingly concerned by the apparent Western strategy of squeezing Moscow out of its sphere of vital interests, the CIS. Formally, the 2008 crisis in the Caucasus was caused by local events. But its fundamental cause was the policy of NATO's steady eastward expansion, in the face of Russia's objections.

After the problem of the Soviet nuclear heritage was resolved, the West came to see the disintegration processes on the territory of the CIS as a key precondition for democratization of those countries and as a guarantee that the Soviet Union will never be restored in the post-Soviet space, in whatever shape or form. That approach was just as misguided as Russia's attempts to cobble together the CIS in the 1990s without formulating any clear interests or objectives for each individual case. What is more, the Western policy of supporting Orange revolutions for the sake of democracy had acquired a clear anti-Russian tinge, causing a backlash in Russia. The pro-Western leaders in Ukraine and Georgia were led by the notion that their anti-Russian rhetoric was an indispensable instrument for securing speedy accession to Western institutions.

The spurious choice between the West and Russia forced upon the CIS nations has hindered international cooperation in resolving frozen conflicts. On the one hand, Russia's participation is vital for conflict settlement—although that participation is often viewed as part of the problem rather than the solution. On the other hand, the West is concerned that Russia's contribution to resolving frozen conflicts will strengthen Moscow's position in the CIS countries. That thinking was part of the reason for the Western rejection of the Kozak plan for peaceful settlement in Transdnestria (or so Russia believes). The plan, proposed in 2003 by then first deputy head of the Russian presidential administration, Dmitry Kozak, was rejected by Moldova after Chisinau came under pressure from the United States, the EU and other international actors. Moldova pulled out just a few hours before the plan was due to be signed at an official ceremony, succumbing to pressure from the Western hardliners. Nagorny Karabakh is the only frozen conflict in the CIS in which the West has remained equidistant from the two sides, just as Russia has. In all the other conflicts, the West has clearly sided with Georgia and Moldova, and opposed Russia.

The international context with regard to frozen conflicts in the CIS has deteriorated with each new discussion of the status of Kosovo. Russia tried to prevent any hasty decisions on that problem, arguing that the Kosovo precedent would give the green light to separatist movements elsewhere and cause a chain reaction in the Balkans, in the post-Soviet space and in the whole of Europe, from Spain to the UK. Kosovo's unilateral declaration of independence on February 17, 2008, which was backed by the United States and leading European countries against Serbia's will and in contravention of international law, created the risk of an escalation of frozen conflicts and new tensions between Russia and the West.

Explaining Russia's recognition of the independence of South Ossetia and Abkhazia, President Medvedev said the decision was difficult.

> It was not an easy step for us. We carefully analyzed all the possible repercussions. The Western nations ignored Russia's warnings and rushed to recognize Kosovo's anti-constitutional declaration of independence from Serbia. We warned them that if they took such a step, it would become impossible to say to the Abkhaz and South Ossetian people (as well as dozens of other ethnic groups throughout the whole world) that they are not allowed to do what the Albanians in Kosovo did. In international relations, you cannot have one set of rules for some and another set of rules for others.[11]

It appears that the main threat to stability in Europe while latent conflicts still remain on its territory is rivalry between Russia and the West in the post-Soviet space. As Russian Foreign Minister Sergey Lavrov put it, we cannot accept attempts to portray the naturally evolved and mutually privileged relations between the former Soviet republics as some kind of ''sphere of influence.'' By the same token, this definition can also be applied to the European neighborhood policy, the Eastern Partnership and many other EU projects—let alone some of the NATO projects, where decisions are made without the participation of Russia or the actual countries that are affected by these decisions.[12]

THE CAUCASUS CRISIS AS A REFLECTION OF FUNDAMENTAL PROBLEMS OF EUROPEAN SECURITY

The crisis over South Ossetia was a manifestation of the problems existing in all three aspects described above. Lacking any feasible re-integration strategy with regard to Abkhazia and South Ossetia, the Georgian government attempted to resolve this very complex situation by obtaining NATO membership, which led to the old conflicts on the country's territory flaring up again. Moscow had repeatedly sent signals to Washington and Brussels that granting NATO membership to Georgia and Ukraine in the absence of any clear NATO policy on Russia could lead to a new confrontation. No one in the West took those warnings seriously, in the mistaken belief that since Russia had eventually accepted NATO expansion in Central and Eastern Europe, it would also accept a new wave of expansion in the CIS.

The crisis in the Caucasus also reflected three fundamental contradictions of the new international set-up:

- the contradiction between the principles of territorial integrity and the right to self-determination;
- the contradiction between the nations' right to sovereignty and non-interference in their internal affairs on the one hand, and the right of nations to *humanitarian intervention* on the other;
- the contradiction between the right of nations freely to choose alliances to ensure their own security, and the right of nations to oppose the expansion of military alliances if said expansion is seen as a threat to their own national security.

The crisis in the Caucasus has clearly demonstrated that none of the existing security alliances that are supposed to resolve such conflicts is up to these tasks. The UN Security Council was bogged down in fruitless discussions and failed to react to the spiraling conflict in a quick and constructive manner. NATO succumbed to U.S. pressure and clearly sided with Georgia. The OSCE, which is a key player in the settlement of frozen conflicts, was paralyzed. The EU, which, strictly speaking, is not a security alliance and which does not have its own security space outside NATO, turned out to be Russia's only foreign partner who took the initiative and undertook the difficult role of a mediator in that conflict. But the EU committed a serious mistake when it conceded to Mikhail Saakashvili Article 6 of the peace plan which had already been agreed with Moscow—namely, the paragraph regarding international negotiations on the status of South Ossetia and Abkhazia. The wording was changed to ''international negotiations on regional security.'' As a result, something that was merely *possible* became *inevitable*.

The threat of a large-scale conflict over Ukraine, which could be the beginning of new confrontation in Europe, reanimated the discussion in the West of President Medvedev's initiative to build new security architecture in Europe based on a legally binding treaty. The European nations' position in the discussion of European security issues was also affected by the gas crisis between Russia and Ukraine in January 2009. President Medvedev's initiative proposed in Berlin in June 2008 was soon fleshed out in the draft of the proposed European Security Treaty unveiled in November 2009.

Many in the West were critical of the idea, taking it for a propaganda initiative similar to the former Soviet Union's phony peace proposals. They were also skeptical of the draft treaty as well, viewing it as an attempt by Russia to drive a wedge between Europe and the United States. In actual fact, Medvedev's proposal is an invitation for all the nations of the Euro-Atlantic region to do something that should have been done immediately after the end of the Cold War, when the old security architecture based on maintaining a balance between the two superpowers collapsed but was not replaced by any new system.

NEW SYSTEM OF EUROPEAN SECURITY AS A WAY OF PREVENTING CONFLICTS

The draft European Security Treaty proposed by Moscow is an attempt to resolve what Russia believes is the main contradiction in NATO's expansion to the CIS territory. Despite Western allegations that Moscow is trying to get the right to monitor NATO's activity, the draft treaty imposes the same obligations on all its participants, so its every paragraph is applicable to Russia

as well. Also, the very fact that this is just a draft of the treaty means that other countries are invited to discuss it and make their own proposals.

It must be recognized that although NATO's expansion in the face of Russian opposition will have direct implications for the future of frozen conflicts, the draft treaty does not touch upon any other contradictions of the new era.

Do the *ten commandments* of the Helsinki Final Act, which set out the key principles of dialogue and cooperation in Europe, still stand? Or have the priorities changed? If the principle of territorial integrity still stands, than what about the independence of Kosovo, South Ossetia and Abkhazia? Should they be seen as some kind of exception to the rule, a product of turbulent times that preceded new agreements? Does the self-proclaimed Transdnestrian Republic have the right to secede from Moldova if the latter becomes part of Romania? This question and many others require detailed analysis of the Helsinki principles based on the international norms already in place, as well as new legislation, where necessary. Selective application of the Helsinki principles and double standards in their interpretation, based on political expediency, can only lead to new conflicts.

Another important issue is the actual architecture of European security, without which the proposed treaty will not make much sense. Russian Foreign Minister Sergey Lavrov has repeatedly stressed that Moscow is not calling for the creation of any new organizations, or for the abolition of the existing ones. The West finds such a position entirely acceptable. But how does one build new architecture without changing the institutions?

The best way forward might be to effect a certain functional redistribution of the roles among the existing institutions in accordance with the main components of European security, such as economic and energy security, external security and internal security on the European continent, as well as international security legislation and humanitarian security aspects.

The UN will clearly retain its role as an umbrella organization for international security. As for security in Europe, the functions that were traditionally carried out by the OSCE in the area of economic and military cooperation should be redistributed between the other institutions that have long assumed responsibility for these tasks. Issues remaining within the OSCE remit might include international legislation and humanitarian security issues, with the OSCE working in tandem with the Council of Europe. The OSCE can also retain its function as a platform for discussing the most important issues of European security.

The basis of economic security and especially energy security in Europe should be cooperation between the EU, Russia, Ukraine, other CIS countries and Turkey. EurAsEC can and should play an important role here as a partner. The cause of strengthening energy security in the Euro-Atlantic region would also be served by adopting a universal energy charter that would take into account the interests of energy exporters, energy consumers and the transit nations, and by creating a single overarching energy system that would preclude any conflicts in this area. Such a system should be built on a long-term legal and institutional basis, common rules for exchanging assets, and common procedures of legal settlements and arbitration. Only a unified energy system can put an end to pipeline conflicts and wasteful use of financial and other resources.

Europe's external security, especially efforts to prevent the spread of WMD and international terrorism, should be based on cooperation between the United States/NATO and Russia (in the Russia–NATO Council framework). This cooperation should also involve the Collective Security Treaty Organization (CSTO) in order to address security problems in Central Asia, and the Shanghai Cooperation Organization (SCO) to resolve conflicts in the Far East. That cannot be achieved without a radical change of relations between Russia and NATO, without the recognition of the CSTO by NATO, and without developing a new common security strategy.

Security in Europe, especially conflict prevention and settlement in Greater Europe, as well as the fight against extremism, would benefit from cooperation within the framework of the European Security and Defence Policy (ESDP) between the EU, Russia and the former Soviet republics aspiring to EU membership. They could form a joint rapid reaction force to perform peacekeeping and forcing-to-peace tasks. New international mechanisms of monitoring, arbitration and mediation will also have to be set up.

This new model of European security architecture is based on close cooperation between all the nations in the Euro-Atlantic region. It will require the concepts of spheres of influence and rivalry in

the post-Soviet space to be abandoned. At this time, such a model looks too idealistic. Even in Russia, which initiated this large-scale project, there is no consensus on European security issues—let alone the EU nations or NATO. Nevertheless, a firm new legal basis in relations between Russia, the EU countries and NATO is required to face the new security challenges. That new basis is a necessary precondition for successful cooperation between the key partners in the Euro-Atlantic region in the resolution of various security problems in Europe—especially conflicts that still remain unresolved in the European continent. 

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ASSESSMENT OF THREATS IN RUSSIA'S MILITARY DOCTRINE

Russia's new Military Doctrine was approved in February 2010. The main issues raised by this document are next: the assessment of the military threat posed by NATO, and Russia's policy on using its nuclear weapons.

EXTERNAL MILITARY DANGERS

Let us look at the three successive Russian documents that contained the words ''military doctrine'' in their title.

Looking at the 1993 doctrine, you will discover that the word ''NATO'' was not even mentioned there. The section of the document headlined Key External Military Dangers only mentioned ''the expansion of military blocs and alliances''. It also listed as a danger ''an increase of groups of forces near the Russian borders to levels that upset the existing balance.'' But the document clearly stated that Russia ''does not see any of the world's nations as its enemy.''

Why did it say that? It was 1993, a time of a certain euphoria and romantic ideas, when everyone thought that the Cold War was over, that the Soviet Union and the Warsaw Pact had seized to exist, that everyone was friends now, that there would be no more wars, and that conflicts in general were a thing of the past. NATO's expansion at the time was still passive. Talking about NATO expansion, there have been six such waves of expansion to date.

The second document is the 2000 military doctrine. That was immediately after the first wave of NATO's expansion, but there had also been other events relating to the former Yugoslavia. That is when Russia became more critical of the NATO expansion process.

The process of NATO expansion was fairly controversial. In 1952, Greece and Turkey both became members. Greece was not a problem at all, but, as for Turkey, even the proponents of NATO expansion had issues, and certain changes had to be made to the Washington Treaty. The thing is, there is Article 52 of the UN Charter—and all the military and political alliances always refer to the Charter, and their own documents must comply with its provisions. Article 5 of the Washington Treaty is based on Article 51 of the UN Charter—the nations' right to collective defense. Meanwhile, Article 52 reads that the nations' right to collective defense is exercised using either ''regional agreements'' or separate bodies to deal with such issues. And Article 10 of the Washington Treaty says that the geographical remit of the NATO alliance is limited to Europe.

The founders of the UN made a very wise decision. Based on the sad experience of the Second World War, when a bloody war had to be waged against the so-called Axis (Germany, Italy, and Japan), they decided—as reflected in Article 52—that such alliances can be regional but not global. Were it not for those limitations, when the Warsaw Pact was being created in 1955, that organization would have included China, the present-day North Korea, Vietnam, Mongolia, and even Cuba. But that restriction in the UN Charter is absolutely justified.

What was the result of that wave of NATO expansion? In 1961, the United States stationed its nuclear-armed Pershing missiles on Turkish territory. And in 1962, the Soviet Union stationed its

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own nuclear missiles on the territory of Cuba. What had we really achieved? We put the world on the brink of a nuclear catastrophe. We were half a step away from a nuclear abyss, from putting our modern nuclear weapons to use.

Brent Scowcroft, one of the forefathers of the nuclear race, said once that the U.S. policy of expanding NATO eastwards was a humiliation for Russia.

The 2000 military doctrine stated that the increasing groups of foreign forces in the vicinity of Russian borders posed ''the main external threat.'' Again, the word ''NATO'' was not used in that context. But Russia did say that the eastward expansion would lead to an increase in the number of military bases and an escalation of military activity near the Russian borders.

Finally, let us look at the latest version of the doctrine adopted in 2010. There is one particular passage in it that has become a subject of much speculation and attempts to take it out of context. I am talking about Paragraph 8, subparagraph A of the section ''Key External Military Dangers'': ''The desire to endow the force potential of NATO with global functions and to move the military infrastructure of NATO member countries closer to the borders of the Russian Federation, including by expanding the bloc.'' That is how Russia assesses, but not treats, its military dangers– just military dangers.

To understand the reasons, let us look at the events of the past 10 years, the period of 2000–2010. I am talking about the modernization of America's strategic offensive weapons. In 2002 the United States adopted what was essentially a new policy on strategic offensive weapons. Until 2002, the structure of the U.S. strategic forces could be represented by an isosceles triangle, with three strategic offensive components: the intercontinental ballistic missiles (ICBMs), nuclear-armed submarines, and heavy bombers. But in 2002 the United States adopted a revised strategy of developing its strategic offensive weapons, which added a fourth component—conventional high-precision weapons.

The high-precision conventional weapons have now become comparable to nuclear weapons in terms of their destructive power, accuracy, and other characteristics. The Soviet Union was one of the pioneers in creating high-precision weapons. It is all about the state of the economy. The economy defines what kind of weapons a nation can afford. And if it is now possible to create the kind of weapons that enable a country to resolve military problems at a lesser cost (including damage to the environment and the civilian population)—or even to resolve such problems without resorting to force altogether—then why not create and deploy such weapons? The most important thing here is to avoid another arms race, this time in the area of high-precision weapons. That is why our doctrine says that Russia reserves the right to create such weapons and use them, if the need arises.

At the base of the old triangle, at one of the corners, there were active and passive air defense and missile defense systems. At another corner was a flexible integrated infrastructure, and all of it was linked together by a global communication, intelligence, and command-and-control system. Then in early 2010, we had a new U.S. defense review report that stated in no uncertain terms, very clearly, a position of principle adopted by this country, which is now Russia's partner: the Unites States rejects any constraints on the development of missile defense.

There is also another reason why all these issues and NATO itself are now mentioned in the new Military Doctrine. I am talking about the material and ideological support given to Georgia in the run up to and during that country's aggression in August 2008.

NUCLEAR POLICY

The second important issue to analyze is the possibility of using nuclear weapons according to Russia's plans. Again, if we look at the official documents reflecting Russia's military policy, there is nothing that mentions the possibility of a preventive nuclear strike—neither in the 1993 document, nor in the 2000 or 2010 versions. Russia reserves the right to use nuclear weapons. It will exercise that right if the very existence of our country is in danger. Meanwhile, the existing military doctrines and strategies of the other major nuclear power, the United States, stipulate that the United States can use its nuclear weapons preventively. That means that the United States can use its nuclear weapons not only in response to a specific threat, or when the country's very existence is in danger—as stated in the Russian military doctrine—but even if the United States unilaterally decides that such a military threat can emanate from the territory of a certain country.

What is more, Paragraph 16 of the Russian Military Doctrine says: ''Nuclear weapons will remain an important factor for preventing the outbreak of nuclear military conflicts and military conflicts involving the use of conventional means of attack (a large-scale war or regional war).'' It goes on to say, ''In the event of the outbreak of a military conflict involving the utilization of conventional means of attack (a large-scale war or regional war) ... the possession of nuclear weapons may lead to such a military conflict developing into a nuclear military conflict.''

Section Three of the Military Doctrine, ''The Military Policy of the Russian Federation,'' says that ''the Russian Federation's military policy is aimed at preventing an arms race, deterring and preventing military conflicts'' (Paragraph 17). And then Paragraph 18 says, ''the prevention of a nuclear military conflict, and likewise any other military conflict, is the Russian Federation's main task.''

It is therefore clear that the principle of defensive nuclear deterrence forms the basis of the recently adopted Russian military doctrine.

In the new Russian military doctrine, there is not even a hint of any strategy for a forward deployment of our nuclear deterrent. Meanwhile, that strategy is officially part of the U.S. doctrine, and it is now in force. The essence of that strategy is to deploy U.S. nuclear weapons on the territory of other countries. The United States has its tactical airborne nuclear weapons stationed in Europe now. And those tactical weapons have a strategic capability with regard to Russian territory.

The strategy of forward nuclear deterrence includes the maintenance and development of infrastructure required to enable the use of nuclear weapons from the territory of the very recent NATO members. I am talking primarily about the Baltic nations. Meanwhile, there is nothing in the Russian military doctrine to suggest the deployment of a global Russian missile defense system on the territory of other countries. There is nothing on placing weapons in space, or trying to achieve military superiority in space—there is not even a hint of any of this.

There is also no hint there at developing or implementing in practice the strategy of lightning-fast global strikes, which is part of the official U.S. strategy. It is as part of that strategy of rapid global strike capability that the United States reorganized its strategic offensive forces in 2002, giving these forces the capability to use high-precision weapons.

Careful study of the Russian strategic planning documents, including the National Security Strategy adopted in May 2008, the Military Doctrine of February 5, 2010 or the Russian Foreign Policy Concept adopted back in July 2008, completely disproves the conclusions by NATO experts that Russia does not intend to maintain and develop constructive relations with NATO. But such relations are possible only on the condition that NATO as a whole and its member states view Russia as an equal partner, and only if they are guided by the principles of equality and shared security. I can surmise that such misguided conclusions on the part of NATO pursue two possible goals. First, it is an excuse to misrepresent Russia's entire policy, and especially its military policy. And second, it is a justification for maintaining the offensive rather than defensive nature of the military and strategic doctrines of the NATO states and of the new NATO strategy, and an excuse to pursue the plans for missile defense, for placing weapons in space, etc.

Equal and mutually beneficial relations with NATO and its member-states are only possible on the basis of such careful study of our strategic documents. The old prejudices must be swept aside, because they only fuel mistrust. The new NATO strategy must be adjusted to reflect the reality of the twenty-first century and the ideas contained in the Russian strategic planning and military development documents. This will have very positive effects on the international situation.

I would also hope that the new NATO strategy will not include the goal declared in Prague in 2002: ''NATO must be able and ready to conduct operations wherever they are required.'' That goal can only become acceptable with one qualification—if these operations are peacekeeping operations. These must be genuinely humanitarian operations, rather than something else disguised as a humanitarian effort.

All Russian nuclear weapons are being kept on Russian territory. The NPT also emphasizes the need to keep nuclear weapons on national territory. These commitments must be fulfilled, especially as the NPT has been extended indefinitely.

We have a very positive experience of unilateral steps, made at some point by both the United States and the Soviet Union, on tactical nuclear weapons. First of all, the U.S. tactical nuclear

weapons need to be returned to U.S. territory. Only then can we discuss their reduction, elimination, or safe and secure storage.

NATO expansion has completely eliminated the buffer territory that once existed. Back then, the distance between the nearest infrastructure from which our two main cities, Moscow and St Petersburg, can be struck was thousands of kilometers. Now that distance has shrunk to just over a hundred kilometers. And citizens of our country are now asking legitimate questions. Why does the United States keep its nuclear weapons in Europe? Why is the infrastructure being maintained and developed? Even more to the point, why are the national air forces being prepared for the use of those weapons? If the U.S. nuclear weapons are returned to U.S. territory, Russia will have ideas to propose, specific proposals, including in the area of tactical nuclear weapons. 

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KEY TRENDS OF THE NEW U.S. ADMINISTRATION'S POLICY ON MISSILE DEFENSE

One of the key factors of strategic and regional stability is the deployment and expansion of America's Ballistic Missile Defense (BMD) system. BMD is an integral component of the strategic triad, and therefore plays a significant role in any negotiations on strategic offensive arms reductions. The legitimacy of the military and technological measures being undertaken to defend the United States and its allies from ballistic missiles is not in question. Nevertheless, it is important to determine whether Washington's policy is commensurate with the real level of missile threats, whether it properly reflects the potential sources of those threats, and how it affects the development of other components of the strategic triad.

Starting from 2002, America's BMD policy was guided by President George W. Bush's National Security Presidential Directive 17 (NSPD-17), which set out the overall goal of creating a global layered system of defense capable of intercepting ballistic missiles of all types, at every stage of their flight.

For a variety of reasons, that policy has faced fairly sharp criticisms, not least from opponents in America itself. That may be why revising the U.S. policy on BMD was one of the key election pledges of the new president. The arrival of Barak Obama's administration gave rise to hopes for some positive changes in this area. The expectation was that the promised revision would become a major turning point.

The Ballistic Missile Defense Review Report, directed by the U.S. President, mandated by Congress, and published by the Department of Defense on February 1, 2010, outlines America's new policy on BMD.

Careful study of the report suggests that while some of the priorities of the program to create a global BMD system have been adjusted, *its overall goal and direction remain unchanged*. There are no indications to suggest the possibility of any serious change of course here. The new trends in U.S. missile defense affect only the specific ways and methods of achieving the end result in terms of military policy, strategy, and technology.

MILITARY-POLITICAL ASPECTS OF THE BMD PROGRAM

While the overall military-political objective of creating and developing a BMD system remains unchanged, there have been some notable shifts in U.S. policy in this area:

- The American political and military leadership's position on BMD has become more unyielding. The new administration ignores all arguments in favor of scaling down or freezing the BMD program, including arguments made in the process of discussions on strategic offensive arms reductions, the spread of missile and missile-defense technologies, and cooperation on defense against regional missile threats. The new report stresses that Washington will continue its policy of rejecting any negotiated restraints on U.S. ballistic missile defenses.

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- Washington is trying to increase as much as possible the number of countries involved in creating area and regional BMD systems under the U.S. aegis, which could help distribute the financial burden of the program. At the same time, the main goal of pursuing international cooperation on various levels in this area is to strengthen America's military-political and economic influence, up to the point of establishing military presence and taking military command during combat action in every corner of the globe, i.e. globalizing as much as possible the BMD system now being developed. Depending on the economic, military, and technological capability of each potential member of that new coalition, the specific nature of cooperation with them can range from joint development of missile defense systems and their integration into the U.S. BMD network to the ''free of charge'' stationing of U.S. BMD assets on foreign territory.

- Washington is trying to strengthen international cooperation on developing the BMD system. At the same time, the report clearly demonstrates that the United States is not interested in real and equal military-technical cooperation on BMD with Russia, which already has advanced missile and missile-defense technology, as well as deployed BMD assets. Nor is America interested in such cooperation with the rapidly growing China.

The overall strategy of creating and developing the U.S. BMD system can be outlined in a few paragraphs.

First, while recognizing the merits of evolutionary (bottom-up) approach at the initial stages of BMD development, which was adopted by the Republican administration in 2002–2009, it has been decided that the *top-down* approach would be more appropriate at the current stage.

The report says that although the evolutionary approach has been costly, it has enabled the United States to develop various technologies and create a system with a limited capability of defending the U.S. homeland and American forces abroad, as well as the territory and troops of America's allies and partners, from long-, intermediate-, medium-, and short-range ballistic missiles. However, based on analysis of present and future threats—which is rather biased and not backed by sufficient evidence—a decision has been made to place more emphasis on speeding up the development of regional BMD systems, which in the medium term could become capable of contributing to the defenses of the U.S. homeland. The creation of such regional and area BMD systems should be based on existing proven missile-defense technologies; it should also be fiscally sustainable.

Second, based on the technologies which were created during the evolutionary approach phase and which are being further developed now, Washington will pursue an adaptive phased approach to the existing and future BMD systems, which should be flexible enough to adapt to the changing nature and scale of missile threats. The ability to effect such adaptation will be facilitated by the rapidly developing BMD information infrastructure, as well as the network-centric architecture of the command and control systems based on the DoD's global network. This adaptive phased approach is especially well reflected in the plans of establishing a European BMD system. That plan includes:

- *Phase 1* (2011 time frame) existing missile defense assets and systems will be deployed to defend against short- and medium-range ballistic missiles. Phase 1 will focus on the protection of portions of southern Europe by utilizing sea-based Aegis missile defense-capable ships and interceptors (the SM-3 Block IA). This first phase will also include a forward-based radar, which can provide target tracking for the sea-based SM-3 interceptors as well as Ground Based Interceptors (GBI) in Fort Greely (Alaska) and Vandenberg (California).

- In *Phase 2* (2015 time frame) America's capabilities will be enhanced by the fielding of a more advanced interceptor (the SM-3 Block IB) and additional sensors. Phase 2 will include land-based SM-3s and expanding the coverage area.

- In *Phase 3* (2018 time frame) coverage against medium- and intermediate-range threats will be improved with a second land-based SM-3 site, located in northern Europe, as well as an upgraded Standard Missile 3 (the SM-3 Block IIA, which is already under development) at sea- and land-based sites.

- In *Phase 4* (2020 time frame) an additional capability against a potential ICBM launched from the Middle East against the United States will be available. This phase will take

advantage of yet another upgrade to the Standard Missile 3, the Block IIB, which will be capable of intercepting ICBMs.

All four phases will include upgrades to the BMD command and control system. The adaptive phased approach will also be used during the deployment of regional BMD systems in East Asia and the Middle East.

Third, the report justifies the previous administration's practice of deploying missile defense systems before they were fully tested. But it also declares the intention to use a new approach from now on, deploying only fully tested BMD systems, and to end the practice of giving the armed forces bits of missile-defense technology that are not yet ready for prime time. According to Barak Obama, the United States will continue developing only those systems that are reliable, tailored to the threats they are supposed to defend against, fiscally sustainable, and not dependent on unrealistic operational scenarios. These considerations led to the decision to end in 2010 the financing of the Multiple Kill Vehicle (MKV) project, and of the Kinetic Energy Interceptor (KEI), which was designed to intercept the threat missile during the boost phase of its flight. As part of the same drive, the airborne laser complex has been shifted from the System Development and Demonstration Phase to the previous phase of Technology Demonstration.

At the same time, such a sharp change of approach seems rather questionable. For example, further deployment of the Ground-based Midcourse Defense component has been suspended, but production of the GBI interceptors, which are still struggling with teething problems, will continue. A second field of silos for those interceptors is being built at Fort Greely (Alaska). Production of the Terminal High Altitude Area Defense (THAAD) systems also continues, although its flight testing program is only half-finished.

BMD TECHNOLOGY POLICY

The priorities of the BMD technology policy are predicated on the new aspects of America's military and political course on BMD and the changing concept of the BMD program, which places greater emphasis on globalization, adaptability, and speedy deployment of regional BMD systems. The formulation of new priorities was based on the latest achievements in BMD information technology and flexible command-and-control systems. Another serious factor was the as yet unresolved problem of midcourse target discrimination by BMD interceptors. All that leads to the following conclusions.

First, the emphasis in the near and medium term has been placed on the creation and phased deployment of regional BMD systems, which after 2020 will be able to contribute to defending the U.S. homeland. To that end, the BMD systems now in development should be more easily upgradeable so that they could be quickly adapted to the changing situation.

Second, one of the new priorities in developing a global BMD system is bolstering its information component, including the deployment of the low-orbit Precision Tracking Space System (PTSS) (known previously as the Space Tracking and Surveillance System) and airborne optical-electronic systems, including those based on unmanned aerial vehicles, as well as AN/TPY-2 type forward-based radars.

Third, improvements in area BMD systems will be achieved by developing the technology of early intercept, when the threat missile is destroyed early in its flight, before missile defense countermeasures can be deployed. This will include developing the technology of launching the interceptor using target tracking by optical-electronic sensors, before the target is acquired by radars. Washington also believes that in strategic BMD it will be necessary to focus its efforts on the most advanced systems and components. That will include:

- ❑ maintaining the current level of capability with 30 ground-based interceptors (GBIs) and further developing capabilities that will enhance homeland defense;
- ❑ completing the second field of 14 silos at Fort Greely;
- ❑ deploying new sensors in Europe to improve cueing for missiles launched at the United States by Iran or other potential adversaries in the Middle East.

Fourth, the deployment of regional BMD systems will be based on building and upgrading additional land- and sea-based versions of the SM-3 Block I, and later SM-3 Block II interceptors.

The decision was made following successful tests of the interceptor and existing international cooperation in its upgrade program, as well as high demand for this system on the world market.

Fifth, until the supply of missile-defense assets can catch up with demand, emphasis will be placed on mobile and re-locatable assets.

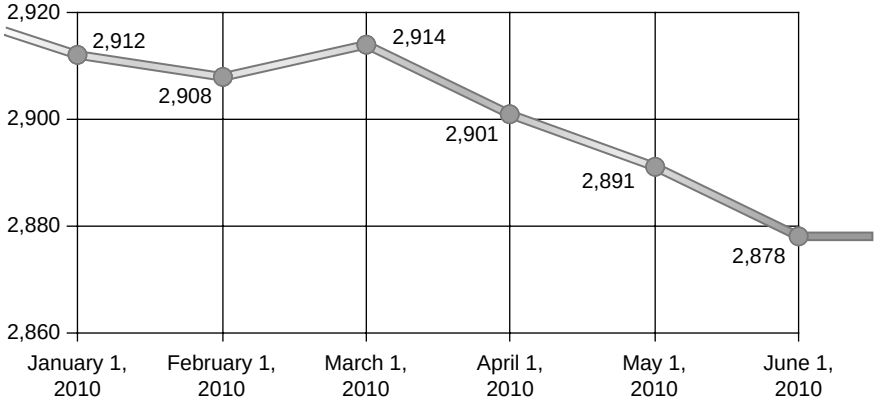
Sixth, another important area of BMD technology policy is integration of missile-defense systems and components of the allied nations into the U.S. BMD network, which will be made possible by the command-and-control system's architecture.

The new concept is aimed at giving the United States unconditional global technological superiority in BMD, unrestricted by any international commitments. The BMD department's budget request for 2011 suggests that the funding of this program will be a top priority. Meanwhile, the defense procurement plans for the 2015 framework show that the deployment of key BMD components will be speeded up. Some of the steps being taken in this area are neither grounded on any obvious military needs nor justified by real threats.

For example, there is no possible threat to justify the deployment in Poland of several Patriot PAC-3 batteries. The technical specifications of that system suggest that it cannot make any tangible contribution to defending against a possible Iranian missile strike. The real purpose of that move seems to be quite different. Russia cannot remain indifferent to the deployment of BMD infrastructure on the territory of America's European allies and in the adjacent seas, because all this could eventually pose a real threat to Russian strategic deterrence capability, as some components of that deterrent are based in the European part of the country.

In any discussions of strategic offensive arms reductions, the BMD systems should therefore be regarded as an integral part of the strategic triad. Another issue that must be raised is whether the BMD systems now being deployed can be justified by realistic missile threats. Otherwise, growing differences will sooner or later lead to a major setback in the ongoing dialogue. 

Figure 1. **The *iSi* International Security Index (April–June 2010)**



Dmitry **Evstafiev**, Vice-President of KROS Corporation (**Russia**)—by e-mail from **Moscow**: *For 20 years the world has been living in a complete institutional vacuum. Not a single one of the existing international organizations is adequate to the new situation. It is quite clear why the United States has been so opposed to the* institutionalization *of the rules of the game on the world arena. It was in America's own interests to* freeze *the situation for a time. Far more interesting is why other nations, including the ostensibly united Europe, China, and India, have somehow been avoiding any serious steps in that area.*

William **Potter**, Director of the James Martin Center for Nonproliferation Studies of the Monterey Institute of International Studies (**USA**)—by e-mail from **Monterey**: *The international security situation has remained largely unchanged in the past few months. But the Iranian nuclear problem has become worse, and some might well say that there is no more room left for diplomacy. The threat of a military scenario is growing. The peace process in the Middle East has not brought any resolution, and the situation remains tense in the Northeast, Southeast, and South Asia.*

Other negative developments include the failure of an attempt at the Conference for Disarmament to reach an agreement on the Fissile Materials Cut-Off Treaty due to the position of Pakistan. On the plus side, participants in the 2010 NPT Review Conference have shown greater flexibility, which had a very positive effect on the outcome of the conference.

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Konstantin **von Eggert**, Member of the Royal Institute of International Relations (**United Kingdom**)—by e-mail from **Moscow**: *The decision by Russia and the United States not to rush the negotiations on the START I replacement treaty suggests that both sides are prepared to continue this work without undue haste, disregarding various external pressures—which can be viewed as a positive factor. Although the new treaty itself was signed back in April, its ratification in the U.S. Congress can become a problem if the Republicans gain a majority in both chambers, as now seems likely.*

EAST-CENTRAL EUROPE

Yury **Fedorov**, Associate Fellow of Chatham House—The Royal Institute of International Affairs (**United Kingdom**)—by e-mail from **Prague**: *Viktor Yanukovich's victory in the Ukrainian presidential elections heralds the coming to power of several large interest groups based predominantly in the eastern part of the country and linked mainly to the Ukrainian steel industry. That industry is lobbying hard for a cut in the Russian gas prices. But that runs counter to the interests of not just* Gazprom *but also Russia's own steel industry, which does not want to face stiffer Ukrainian competition on the foreign markets.*

Dunay **Pàl**, Head of the International Security Program of the Geneva Center for Security Policy (**Switzerland**)—by e-mail from **Geneva**: *In East-Central Europe the security situation has been negatively affected by three developments: the reconsideration of the borders of Kosovo that undermines the original arrangements among which Prishtina gained independence in February 2008, the fact there is no consolidation in Bosnia and Herzegovina illustrates the stalemated development in that country, and the recent Russian–Belorussian gas dispute was slightly disturbing and closely monitored by the East-Central European countries. Its outcome has been found reassuring, however.*

There were several positive developments in the last few months: Polish–Russian reconciliation after the tragic death of the Polish president and his entourage, the rational reaction of Moscow to just another round of BMD plan by Washington—this time in Romania, and the report of the Albright commission in preparation for the new NATO strategic concept reassured those East-Central European political forces that are worried about the improvement of the relations between Washington and Moscow.

Andrey **Kortunov,** President of the New Eurasia Foundation (**Russia**)—by phone from **Moscow**: *There has been a fair degree of stability on the international arena in the past few months. There were no major events to destabilize the situation, so the level of international security has not changed in any radical ways. The inability of Russia and the United States to sign in a timely manner a new treaty on strategic offensive reductions was a worrying trend, but not excessively so since compromise was eventually found in April.*

The international security situation has benefited from the relatively calm elections in Ukraine. There were no major irregularities during or after the vote, and the outcome did not trigger a new bout of confrontation with Russia. There are no serious threats to Russia or its borders on the horizon.

MIDDLE EAST

Abdulaziz **Sager,** Chairman of the Gulf Research Center (**Saudi Arabia**)—by e-mail from **Dubai**: *The security picture remains highly unstable with Iran as intransigent as ever when it comes to resolving the issue of its nuclear program and the two conflict arenas of Afghanistan and Iraq are still highly volatile. The inconclusive elections in Iraq have thrown the country's future in doubt and the strategy in Afghanistan is providing few positive results.*

The March 2010 election in Iraq did not provide any positive outlook for the country in terms of regional stability and has brought back suggestions about a return to sectarian and ethnic violence as occurred in the period 2005–2006. As this is unlikely to be the case, it nevertheless remains unclear what kind of political process will emerge in Iraq and this uncertainty is an additional negative picture for the Gulf region. Meanwhile, the main security challenge of the Iranian nuclear program remains unresolved. While new sanctions have been passed, this will not create new flexibility as far as Iran is concerned, in fact, the opposite reaction of further intransigence is likely. The possibility of a conflict with Iran remains on the table. In addition to those two factors, the situations and Afghanistan and Yemen contribute to fears over renewed extremist activity which could reach into the Arab Gulf states.

I expect there to be little movement towards resolving any of the outstanding security dilemmas facing the region with positions rather hardening by the actors involved. While Iraq will continue to linger politically, Iran will pursue its nuclear program and make occasional statements about its retaliatory capability in case of a U.S. or Israeli military strike. Afghanistan could be particularly unsettling and NATO casualties could see an increase.

Dayan **Jayatilleka,** Ambassador, Professor of Colombo University (**Sri Lanka**)—by e-mail from **Colombo**: *There has been a deterioration in two theatres—the Middle East and the Far East. The use of lethal force by Israel against the Gaza flotilla has led to a sharp decline in relations between Israel and Turkey. In the Far East, the sinking of the South Korean naval ship has caused a spike in tension: the belligerent attitude of the Government of Israel, the hawkish attitude of the United States towards Iran and North Korea, and the critical statements about China made by U.S. Secretary of Defense Robert Gates.*

The positive factors are the visit of the Indian Foreign Minister to Washington DC, the UN resolution on the attack on the Gaza flotilla and U.S. pressure on Tel Aviv leading to a relaxation of Israel's Gaza blockade as well as United States–Russia–China cooperation on Iran sanctions and the role of Russia and China in moderating their content.

The security situation in aummer 2010 will depend on developments in two possible flashpoints: Israel–Hezbollah–Lebanon–Tehran and United States–Afghanistan.

Evgeny **Satanovsky**, President of the Institute for Middle East Studies (**Russia**)—by e-mail from **Moscow**: *The international security situation has deteriorated. The negative developments in the Middle East include the events in Yemen, especially the conflict on the border with Saudi Arabia, and Iran's progress in developing its nuclear program. On the plus side is the liquidation of Mahmoud al Mabhouh and the decision, after lengthy negotiations, to impose new sanctions on Iran. But the situation continues to deteriorate due to the continuing conflicts in Afghanistan, Yemen, Iraq, and Somali.*

LATIN AMERICA

Irma **Arguello**, Research Fellow of the NPS Global Foundation (**Argentina**)—by e-mail from **Buenos Aires**: *The security situation at a global level shows a negative trend. Positive signs could have medium- and long-term impacts, but they are overcome in the short term by negative ones. Iran continues its nuclear program and achieves support from Brazil/Turkey concerning its rights to enriching despite its violations of the nonproliferation regime. There is a lack of support by the P5 for the Brazil–Turkey–Iran nuclear agreement, which was a good idea poorly implemented.*

In the region of Latin America we can see the constant increase of arms purchases throughout the region, increasing dangers in Mexico related to the narco-violence, and increase of small arms traffic throughout the region. Brazilian diplomacy loses credibility because of the failure of the nuclear Tripartite Agreement with Turkey and Iran. Chavez in Venezuela increases populism and repression (increasing erosion of human rights). The dispute between Argentina and the UK about the Malvinas/Falkland islands escalated. Santos won the Presidential election in Colombia and it opens doors to a smooth transition from the Uribe administration. Improvement of relations between Chile and Peru also appeared to be a positive trend as well as the defense cooperation agreement between Brazil and the United States.

Antonio Jorge **Ramalho** da Rocha, Professor of International Study Institute of Brasil University (**Brasil**)—by e-mail from **Brasilia**: *The acceleration in the deterioration of the Venezuelan economy raises concerns throughout Latin America. Chavez's answers to these problems help increase regional apprehension, particularly because his government attributes all responsibilities to foreign agents and increases its weapon acquisitions. The deal on the S-300 surface-to-air missile with Russia, which may involve strengthening also the presence of Iran in the region, received attentive analyses from policymakers and specialists.*

The most important positive factor was the result of the elections in Colombia, which points to the continuation of the combat against transnational illicit activities by one of the most important regional actors in this issue area. The UN Report on the production of drugs, which recorded a relative success by governments in controlling the areas used for illegal crops, has also been significant. Finally, the United States–Brazil military agreement, the first in more than 30 years, signaled the intensification of the process conducted by local governments to allow for a controlled engagement of the United States in regional security processes. The idea behind these agreements is that the U.S. government will not feel isolated from local processes, but will not be able to influence more actively the definition of national policies.

The most important source of concern is the situation in Venezuela, which tends to become worse: economic inefficiencies increase; economic agents escape the country; and the nationalization programs render the economy even less capable of meeting social expectations. The risk of internal unrest that may spill over to neighboring countries is a matter of concern, as much as the possibility that Chavez could flirt with a local war to enhance social cohesion. On the positive side, the South-American Defense Council is improving the dialogue involving member countries and starting to figure out an agenda for long-term cooperation.

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Roland Timerbaev[1]

FIRST ATTEMPTS TO MOVE TOWARDS ARMS LIMITATION

The initial attempt to prevent the arms race undertaken by the UN Atomic Energy Commission in 1946–1949 was not successful, as we all know. The Truman Administration, by proposing the so-called Baruch Plan, in actual fact tried to preserve the U.S. nuclear monopoly. The Soviet Union, meanwhile, put all its energies into its own nuclear program. Britain soon followed. The UN Commission found itself in a deadlock and was soon dissolved.

The Soviet Union very quickly mastered the ''secret of the atomic bomb,'' as the phrase went at the time. In 1949 it tested its first nuclear device, and in 1953 detonated a hydrogen bomb. That meant that we had essentially caught up with the United States in terms of the science and technology of producing nuclear and thermonuclear weapons, though we were still behind in terms of the size of our arsenal. That progress towards nuclear parity laid the ground for the beginning of a dialogue of equals with the United States on the nuclear issue and disarmament as a whole.

This kind of dialogue was also facilitated by the political changes in both countries: Stalin's death and the arrival of the new Soviet leadership, as well as the election of President Dwight Eisenhower, a soldier who well knew the consequences of using weapons—especially weapons of mass destruction.

Another development that encouraged the two sides to negotiate was the U.S. and Soviet research into new means of delivering nuclear devices which were far more effective and therefore more dangerous than bombers: namely, intercontinental ballistic missiles and nuclear-powered submarines carrying ballistic missiles. Each of the two sides tried to prevent the other from achieving any advantage in that new weapons area.

The UN Disarmament Commission, which was set up by the UN General Assembly in January 1952 to replace the defunct Atomic Energy Commission and the Commission for Conventional Armaments, was hardly making any progress at all. A new, more convenient format for negotiations was required. To this end, and in accordance with the General Assembly's resolution of November 28, 1953,[2] the Disarmament Commission set up a separate subcommittee that included representatives from the Soviet Union, the United States, the U.K., France, and Canada.

The idea of creating a subcommittee was proposed by the French representative on the commission, Jules Moch, a prominent politician who had held such posts as minister of the interior and minister of defense. France had not yet acquired nuclear weapons, and although it was a NATO member it was trying to adopt a relatively flexible position in the Commission and the subcommittee. In 1956 Jules Moch received an invitation from the Soviet government to visit the Soviet Union. He came for a long trip around the country, during which I accompanied him. Upon returning to France he wrote a book in which he spoke favorably of what he saw in our country.[3]

An important consideration behind the parties' approaches to the negotiations was that the Soviet Union and the Western nations had retained large armed forces after World War II, and it was obvious that the nuclear problem should be resolved in tandem with conventional weapons reductions.

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That is how the General Assembly formulated the task it set before the Disarmament Commission and its subcommittee. In the already mentioned General Assembly resolution of November 1953, and (in more detail) in another resolution adopted in November 1954, the Commission and its subcommittee were requested to produce a draft of an international convention on disarmament, which would include:

- ❑ substantial reduction of armed forces and conventional arms;
- ❑ a complete ban on using and producing nuclear weapons; and
- ❑ an effective system of international verification and a special control organ to ensure compliance with the agreed arms reductions and the nuclear weapons ban.[4]

THE WORK OF THE SUBCOMMITTEE IN 1954

The first sitting of the subcommittee was held in London on May 13–June 23, 1954. The meetings were held in private. The Soviet delegation was led by the Soviet Ambassador to London, Y.A. Malik, the Americans by M. Patterson, the British by Minister of State S. Lloyd, the French by J. Moch, and the Canadian by Foreign Minister L. Pearson (who later left London and was replaced as head of the Canadian delegation by N. Robertson, the High Commissioner in the U.K.).

The meeting focused on the proposed ban on nuclear weapons, which was the issue the Soviet Union was insisting upon. The United States adopted the stance outlined in the Baruch Plan, arguing that prohibiting and eliminating nuclear weapons should be the very last stage of the process, once the system of international control is in place.

But the situation has already changed since the 1940s, when the issue was discussed at the UN Atomic Energy Commission. The hydrogen bomb now had to be taken into account. In November 1952, the Americans detonated a 10mt hydrogen device code-named Mike at Eniwetok island in the Pacific. In August 1953, the Soviet Union tested its first 400kt hydrogen device (which was not yet a fully fledged hydrogen weapon—it was Sakharov's ''layer cake'' device). A proper 1.6mt Soviet hydrogen bomb was tested a bit later, in November 1955. As U.S. researcher B. Bechhoeffer, one of the members of the US delegation at the London Subcommittee, rightly said at the time, the arrival of the hydrogen bomb ''made us reassess all our previous positions on arms control,'' because ''the thermonuclear revolution had dismantled all the technology foundations of the Baruch proposals.''[5]

Predictably, the French and the British representatives essentially admitted during a meeting of the subcommittee that the Baruch plan now belonged in an antiques shop, and that another framework was needed to resolve the nuclear problem. ''The Baruch Plan no longer exists,'' Moch said.[6]

The most significant event during the first session of the subcommittee was the introduction by the British and the French delegations of a joint memorandum on disarmament at one of the last meetings on June 11, 1954.

The memorandum began by declaring that all states should regard themselves as prohibited under UN Charter from using nuclear weapons, except in defense against aggression. That part was nothing new. But the document went on to say that until such time as all nuclear weapons are banned and eliminated, as stipulated in the memorandum, Britain and France ''recommend the inclusion in the disarmament treaty of a provision on immediate and definite recognition of that ban by all the signatories of that treaty.''

The memorandum also proposed disarmament measures to be taken ''once the control organ has been set up within a specified timeframe, and as soon as it has reported that it is able to enforce the measures.'' These disarmament measures would be implemented in several phases. During phase one, the overall manpower of the armed forces and total military spending would be limited to the level of December 31, 1953.

That would later be followed by implementing half of the agreed reductions in manpower and conventional arms;[7] once that measure has been implemented, manufacture of all nuclear weapons would cease.

The final phase of the process would include implementing the remaining half of the agreed cuts, and then a complete ban and elimination of nuclear weapons, with all existing stocks of nuclear materials be converted to peaceful use.[8]

The U.S. delegation was not a co-author of the Franco-British memorandum. But, as one member of that delegation recalls, ''the US took part at every stage of drafting the document, and it was fully in line with the US policy.''[9] Presumably the Americans decided not to become one of the official co-authors so as to create an impression that the memorandum was the product of a compromise, and thereby facilitate the beginning of negotiations.

Soviet representative Y. Malik was informed by S. Lloyd and J. Moch of their intention to introduce the memorandum. Speaking at a meeting of the subcommittee, he said that his delegation had not been given enough time to study the document, then went on to lambast it in the spirit of his previous statements. The session of the subcommittee soon ended.

So what was Moscow's reaction to the memorandum? In the Soviet publications of that time, the harshest criticisms were reserved for the fact that ''the memorandum is based on the old adage of the Western nations: verification first, then disarmament.'' It was noted, however, that ''for all the drawbacks of the Anglo-French proposals, they signaled a certain degree of convergence between the positions of the Western powers and the Soviet Union on disarmament issues.''[10] At that time, the Soviet leadership was energetically promoting the principle of peaceful coexistence, which undoubtedly had a positive influence on our political line and diplomatic tactics at the disarmament talks.

Internal documents of the Soviet Foreign Ministry said that the French and British initiative was ''different from the previous Western proposals on this issue inasmuch as the new proposals include a provision on ending production of all types of nuclear weapons and other banned types of weapons once the first half of the agreed cuts has been implemented.'' Another difference was ''the inclusion of a clause on a complete ban and full elimination of nuclear weapons and all other types of banned weapons once the remaining half of the agreed cuts of conventional arsenals and manpower has been implemented.''[11]

The official Soviet reaction to the Franco-British memorandum was announced at the next session of the UN General Assembly in the autumn of 1954. On September 30, the Soviet delegation tabled a motion proposing an international convention on arms reduction and prohibition of nuclear, hydrogen, and other types of weapons of mass destruction. The Soviet proposal said the Franco-British initiative of June 11, 1954 could be ''used as a basis'' of the new convention. The details of the proposal were as follows.

- Simultaneously implementing over a period of six or 12 months the first half of the agreed reductions in conventional arms and military spending, and setting up a *temporary* international control commission under the UN Security Council to collect information from the nations about the implementation of the reductions and monitor compliance.

- Once that first phase was completed, the states should implement the remaining half of the agreed cuts in their conventional arms and military spending; a complete ban would then be introduced on nuclear and hydrogen weapons; manufacture of those weapons would cease and all existing stocks would be eliminated; a *permanent* international control organ would then be set up, with standing authority to conduct inspections.[12]

It is clear from the text of the Soviet proposal that Moscow had taken into account the Western position on a number of important issues. The draft resolution tabled by the Soviet delegation obviously had a lot in common with the Anglo-French memorandum of June 11, 1954. France's *Le Monde* wrote at the time: ''It is admitted in the UN circles that of all the steps made in the past several years towards resolving the problem of disarmament, this is the biggest.''[13] And speaking during a debate at a UN session, American researcher Bernhard Bechhoeffer made this conclusion: ''The main import of the new Soviet approach is that it opened up huge opportunities for future detailed negotiations.''[14]

According to the Foreign Ministry analysis, for the United States and some other Western powers the most contentious issue in the Soviet proposals was ''about the two forms of verification: the temporary control commission, which is set up during phase one, and the permanent international control organ to be set up during phase two.'' From the Soviet Union's point of view, the main obstacle was America's and Britain's insistence that the permanent Security Council members

should not be able to use their veto on the issue of sanctions for any possible violations of the convention, and that the control organ should have the right to impose such sanctions.[15]

Following a General Assembly debate of a motion tabled by all five subcommittee members—the Soviet Union, the United States, Britain, France, and Canada—a unanimous resolution was passed instructing the Disarmament Commission and its subcommittee to undertake new attempts to reach an agreement, taking into account all the proposals made by the member states, including the Soviet draft resolution.[16]

In view of the upcoming next stage of the negotiations, the U.S. administration made the decision to bolster its team of disarmament negotiators and strengthen its delegation at the subcommittee. The head of the U.S. delegation, M. Patterson, who no longer had much influence in Washington (some say he was no longer received in the White House or even in the office of the Secretary of State[17]) resigned his position in late 1954. In March 1955, the main disarmament job in the U.S. administration was given to Harold Stassen, a senior Republican, who was appointed special presidential aide for disarmament and member of the Cabinet. Stassen became the chief U.S. representative on the subcommittee in the spring of 1957. In the interim, the U.S. delegation was led by Ambassador H.C. Lodge. His deputy was Ambassador J. Wadsworth.[18]

Y. Malik remained the Soviet representative on the subcommittee. Meanwhile, the Soviet Foreign Ministry decided to set up a small disarmament group within its Department for International Organizations, led by S.K. Tsarapkin. The group included experienced diplomats P.F. Shakhov and I.G. Usachev (who later became an advisor at the Soviet Mission to the UN), as well as your correspondent, who was then a young member of staff at the Ministry.[19] Disarmament issues were supervised by the deputy head of the Department, A.A. Roschin, who was appointed Minister-Councillor to London in 1956. In 1955, the Department received a new member of staff, K.V. Novikov, who became head of the Department in 1964 and devoted many years of his life to the cause of disarmament.

A.A. Gromyko, first Deputy Foreign Minister and then Foreign Minister since 1957, was well versed in disarmament issues. He kept a close watch on the work of the subcommittee and directed the work of our delegation. For a short period in 1955 (February to March) Gromyko led our delegation at the subcommittee. An important role in implementing government policy on disarmament was also played by deputy minister V.A. Zorin, who led the Soviet delegation at the London Subcommittee in 1957.

In the Defense Ministry the person in charge of disarmament was Col. Gen A.A. Gryzlov, deputy chief of the General Staff. He was aided by other generals and officers of the Main Directorate of Operations. Later on, a special department for arms limitation (the Department for Treaties and International Law) was set up at the Defense Ministry. Meanwhile, at the Ministry of Medium Machine Building (the nuclear ministry) these issues were supervised either by the minister (V.A. Malyshev, A.P. Zavenyagin, Y.P. Slavskiy) or by one of the deputy ministers (most often V.S. Yemelyanov).

THE SUBCOMMITTEE IN 1955

In 1955, the Subcommittee of the Disarmament Commission met in London from February 25 to May 18, and then in New York from August 29 to November 7. Disarmament issues were also discussed in Geneva during a summit meeting in late July and a foreign ministers' meeting from October 27 to November 16.

On March 29, 1955, Britain and France tabled a memorandum on armed forces reductions with a proposed ceiling of 1.5 million people for the armies of the Soviet Union, the United States, and China, and 650,000 for Britain and France. The size of the other nations' armies would in any event be much lower than the levels agreed for the permanent Security Council members.[20] Western members of the subcommittee also proposed to agree on a deadline for implementing those reductions.[21]

The most significant event of that session of the subcommittee was the Soviet Union's proposal, tabled on May 10, 1955 to conclude an international convention on arms reductions and nuclear weapons ban. The draft text of the convention included the following measures, to be implemented in two stages.

First, to introduce before the end of 1956 a ceiling of 1–1.5 million people for the armies of the United States, the Soviet Union, and China, and 650,000 people for Britain and France; to implement 50 percent of those reductions, as well as a commensurate reduction in conventional arms and military spending. The ceilings for the armies of the other nations defined by the conference for disarmament would be substantially lower than the P5 ceilings.

Simultaneously with the beginning of the implementation of the first 50 percent of the reductions, the nuclear powers would undertake a commitment not to use nuclear weapons; those weapons would be considered banned. An exception could be made only for the purposes of self-defense from aggression, and would require a Security Council authorization. All military bases on the territories of other states would be dismantled, and the list of the bases to be dismantled during the first stage would be the subject of a separate agreement.

Before the end of 1957, manufacture of all nuclear and hydrogen weapons would cease with immediate effect. The United States, the Soviet Union, China, Britain, and France would implement the remaining 50 percent of the agreed cuts to bring the size of their armed forces below the agreed ceilings. All the remaining bases on foreign territory would be dismantled. Once 75 percent of the agreed cuts had been implemented, a complete ban on the use of nuclear and hydrogen weapons would come into effect. Decommissioning of those weapons and their elimination, as well as reductions of manpower and conventional weapons, would begin simultaneously and end in 1957.

The new Soviet proposal also included setting up an international control organ.

During Phase One (1956) checkpoints would be set up at large ports, railway stations, motorways, and airports. The international control organ would have the right to demand information from the states concerned regarding the implementation of reductions in manpower and conventional arms. It would also have unrestricted access to documents on government spending.

During Phase Two (1957) the international control organ would introduce control measures, including inspections on a permanent basis and to the scope required to ensure compliance with the convention. Inspectors would have unrestricted access to all facilities subject to verification. The control organ would also make recommendations to the Security Council concerning the nations found to be in breach of the convention.[22]

The Soviet initiative was an attempt to meet the Western powers halfway on many issues. The proposal on introducing ceilings on the size of the armed forces voided the Western argument that the Soviet Union's larger conventional forces made it necessary for the Western nations to keep nuclear weapons in order to ''maintain the balance.'' The proposal also said that the use of nuclear weapons could be allowed to defend against an aggression, if such use were authorized by the Security Council. Measures on ceasing the manufacture of nuclear weapons and their elimination would be introduced during Phase Two, and implemented in two stages. A serious concession was made on the issue of verification: an international control organ would be set up during Phase One, and during Phase Two its powers would be expanded very radically.

The new Soviet proposals opened up the possibility of serious talks to reach a negotiated solution. Representatives of France (J. Moch), Britain (A. Nutting), and Canada (D. Johnson) were quite positive about the initiative. Moch said that ''almost all of our proposals have been accepted.''[23] The U.S. representative, Wadsworth, said that on the whole he agreed with his three Western counterparts.[24]

An advisor with the U.S. delegation, Meyers, said in a conversation with Soviet advisor I.G. Usachev on May 19 that his delegation was ''stunned by the level of detail in the document.'' But, he added, the U.S. delegation believed that the control provisions in the Soviet document ''are insufficient and do not lead to the creation of an effective international system of control.'' According to Meyers, after the text of the Soviet proposals made on May 10 was transmitted to U.S. Secretary of State J.F. Dulles, the U.S. delegation was instructed to avoid anything that could give an impression that the United States was rejecting Moscow's proposals.''[25]

The subcommittee soon closed for a recess ahead of the meeting of the Soviet, American, British, and French governments in Geneva on July 18–23, 1955.

As part of the preparations for the summit, the Foreign Ministry reported to the Soviet leadership:

> The results of discussions on arms reductions and prohibition of nuclear weapons suggest that a certain convergence has been achieved between the Soviet Union and the Western powers on a number of disarmament issues, including the key issue of military manpower of the five great powers. But serious differences remain in other crucial areas, most importantly on the issue of the rights and the remit of the control organ, the timeframe for the introduction of controls, the requirement to dismantle military bases on foreign territory, and the schedule for arms reduction measures and the prohibition of nuclear weapons.[26]

The Foreign Ministry took special note of an article in the *Christian Science Monitor*, which argued that as part of the preparations for the Geneva summit, the United States was ''looking for a way to change its stance on disarmament and nuclear energy'' because ''for the first time since 1946, an arms reduction agreement with the Soviet Union—as part of a wider political settlement—appears a distinct possibility.'' But the article expressed doubts that Washington was ready to accept the Soviet proposals:

> Suppose that one fine day the Soviet Union accepts all the other US proposals on disarmament. That would mean relinquishing the entire US nuclear arsenal. Is the United States truly ready to accept such a settlement? The same question can be phrased more directly. Is control of nuclear energy in America's interest? There are people in the Pentagon whose feelings on disarmament are a mixture of skepticism and alarm—just as there are people in the Department of State and Harold Stassen's agency who are completely dedicated to that cause.[27]

The Soviet position on disarmament at the Geneva summit was based on the May 10 initiative. Meanwhile, the U.S. president put forward a plan for mutual aerial surveillance of Soviet and U.S. territory—the so-called ''Open Skies Plan,'' which included unrestricted aerial surveillance of the entire Soviet and American territory to spot any preparations for a sudden attack or mobilization. However, the U.S. military bases in foreign countries would not be subject to such surveillance measures. Naturally, the Soviet Union did not support the U.S. plan, and offered its own counterproposal, which was part of the May 10 initiative: setting up checkpoints on key transport arteries.

Britain put forward the idea of setting up an armed forces inspection zone in Central Europe, and France tabled a proposal on reducing military spending and using the funds released to offer aid to developing countries (the so-called Faure Plan proposed by the French prime minister).

Although no specific results were achieved on disarmament at the Geneva summit, the event itself helped defuse international tensions to some extent, which seemed to create a good atmosphere for the continued work of the subcommittee for disarmament.

Unfortunately, the next session of the subcommittee held on August 29–November 7 in New York yielded no tangible results. The Soviet representative, A.A. Sobolev (the then permanent representative to the UN), proposed that the sides put on paper their agreement on those issues where their positions either coincided completely or were very close—so that ''the issues which require new efforts to bring our positions closer could be clearly defined.''[28] But H. Stassen, during his first speech at a subcommittee meeting, said that the United States wished to reserve ''all its earlier positions and proposals.''[29]

Looking back, it is safe to assume that there was a debate at the time in the U.S. administration about what the next steps should be: whether to push for a negotiated solution on comprehensive or even partial disarmament measures, or to scale back the serious dialogue that began in 1954–1955.

In that situation, the Soviet government, represented by its chairman N.A. Bulganin, sent a message on September 19 to President Eisenhower with a proposal to sign a treaty on issues where an agreement could be reached (such as the levels of manpower, the time frame for implementing a ban on nuclear weapons, or setting up checkpoints).[30] The ensuing exchange of correspondence did not produce any results. The meeting of the foreign ministers of the four great powers held in early October in Geneva was also fruitless. The Soviet representatives wanted to continue the discussion of the proposals outlined in the Soviet initiative of May 10, as well as the Western proposals on aerial reconnaissance and certain other disarmament issues. But the Western delegations were interested only in control measures. And while the Soviet Union was prepared to discuss the wider disarmament program as well as the individual steps, the West did not have a ''consistent position,'' as U.S. researchers later admitted.[31]

THE SUBCOMMITTEE IN 1956

The London Subcommittee sat from March 19 to May 4. On March 27 the Soviet delegation made a proposal that, in order to break the impasse, the sides should first reach an agreement on cutting their military manpower and conventional arms over the period of 1956–1958 to the previously discussed levels, under proper international controls, without linking that agreement to banning nuclear weapons.

The controls section of the Soviet proposal mentioned that ''at a certain stage of a comprehensive disarmament program, once trust has been established between the nations, all interested parties will consider the possibility of using aerial surveillance as one of the control mechanisms.'' The proposal went on to say that the international control organ ''will station its inspectors in advance so that they could get to work immediately after the nations begin the implementation of the agreed measures.'' That was a significant effort to meet the United States and other Western powers halfway, which met with a positive reaction from J. Moch and H. Stassen.

In addition to that, the Soviet proposal urged all nations, regardless of whether a comprehensive agreement on disarmament could be reached, to agree on partial measures such as ending tests of thermonuclear weapons, withdrawing nuclear weapons from German territory and cutting military spending by up to 15 percent.[32]

The Soviet government backed its proposals on cutting the armed forces by making some practical steps. On May 14 it announced that it would be cutting the size of the Soviet army by 1,200,000 people on top of the 1955 cut of 640,000, and that there would be a commensurate cut in conventional arms and military spending.[33]

The fact that the Soviet Union focused its attention at that session of the subcommittee on reducing conventional arms did not mean in any way that the idea of banning nuclear weapons had been abandoned. Moscow continued to look for new diplomatic approaches to the entire issue of disarmament. Nevertheless, it has to be said in connection with the new Soviet initiative at the subcommittee that by the time it was put forward the Soviet Union had conducted more than 25 nuclear and hydrogen detonations, including the first detonation of a missile-launched warhead.[34] We were also steadily gaining on the Americans in terms of the size of our nuclear arsenal. According to independent American researchers R. Norris of the Natural Resources Defense Council, and H. Christensen of the Federation of American Scientists, in 1950 the United States had 369 warheads, while the Soviet Union had only five. By 1956 the situation had changed drastically: the United States had 4,618 warheads, and the Soviet Union 426. Experts believe that later on, in the 1970s, the Soviet Union was substantially ahead of the United States in terms of the numbers of nuclear warheads.[35]

Meanwhile, the Western powers on the subcommittee continued to play for time. The U.S. delegation introduced new proposals[36] to set the ceiling for the size of the U.S. and Soviet armies at 2.5 million people during Phase One, and at 750,000 for Britain and France. Washington had therefore withdrawn its earlier proposals, which contained substantially lower ceilings. It must be said that even the media in the United States recognized that ''the new U.S. proposal cannot be viewed as a serious step towards conventional arms reductions.''[37]

This is how the UN Secretariat assessed the results of the talks:

This year (1956) was notable with regard to the issue of disarmament for three main reasons:

a) A new and increasing focus on limited or partial disarmament measures rather than a comprehensive agreement.

b) A more pronounced trend in military planning towards focusing on new types of armament and delivery systems rather than raw manpower. More emphasis has been made on proposals to implement conventional arms reductions, either through unilateral measures or agreements on limited first steps.

c) There has been a greater understanding of the dangers of radiation, and a greater recognition of the need for international measures on the issue of nuclear tests.

The overall conclusion made by the UN Secretariat was this:

> ...the chances of an agreement being reached, even on the limited reductions being discussed for Phase One, are not great. At present there are, of course, additional difficulties as the pre-election

period in the United States is not conducive to undertaking political initiatives. The situation around the Suez Canal does not help the cause of disarmament, either. (doc. PSCA/DAG/33, August 23, 1956)[38]

The disarmament discussions at the London subcommittee in 1956, and later at the Disarmament Commission and the UN General Assembly, remained fruitless—but they did lay the ground for a serious dialogue in 1957.

THE SUBCOMMITTEE IN 1957

The subcommittee session of 1957 was the longest, lasting from March to late August. The Soviet delegation was led by V.A. Zorin, and the American by H. Stassen. At first, the subcommittee discussed the previous proposals on comprehensive disarmament measures, but it soon became clear that the impasse remained. Nevertheless, the general atmosphere was quite productive. The discussions were becoming increasingly structured, and there were frequent informal meetings between the Soviet and Western delegations[39] as well as between the Western four. We knew that the reason for those latter meetings was a certain straining of the relations between the Western powers amid the Suez crisis of October 1956.

In those circumstances, the Soviet Union undertook another step. On April 30, it tabled a memo from the Soviet government on implementing partial disarmament measures. The memo proposed a limited number of disarmament steps that were actually realistic under the existing conditions. The novelty and originality of the Soviet proposals was that while they focused mainly on the initial steps, they also outlined clear targets for more comprehensive measures in the future, including radical arms reductions and a complete elimination of nuclear weapons.

Moscow proposed a ceiling of 2.5 million people for the American, Soviet, and Chinese armed forces, and 750,000 people for Britain and France. Those reductions were supposed to be the first step towards the eventual ceilings of 1–1.5 million people for the United States, the Soviet Union, and China, and 650,000 people for Britain and France.

The first stage would also include a commitment not to use nuclear or hydrogen weapons. The participants would pledge to work towards an agreement on a complete ban on nuclear and hydrogen weapons. Those weapons would be decommissioned, their production would end, and the existing stocks would be eliminated.

The Soviet Union also proposed that the issue of ending nuclear tests be separated from the larger problem of nuclear weapons, so that a resolution could be found as soon as possible. Even before the April 30 initiative was tabled, V.A. Zorin said during a conversation with G. Stassen on March 21 that ending nuclear tests should become the subject of a separate agreement. He said that such a move would ''slow the development of nuclear weapons in all the nations.'' Right now, the decision depended on ''the United States, the Soviet Union and Britain,'' he added. ''If these three powers reach an agreement, a vast majority of UN members will support such a decision by the three.''[40]

As for control measures, the Soviet delegation proposed that during Phase One, checkpoints should be deployed, on a mutual basis, at large seaports, railway stations, and motorways along the Western borders of the former Soviet Union, as well as in France, Britain, other NATO and Warsaw Pact members, and the eastern seaboard of the United States. Under the Soviet proposal, checkpoints at the airfields would be deployed during the second stage. That step would be linked to the implementation of measures on a complete ban on hydrogen weapons, which would be decommissioned from the armed forces of all nations. The proposal regarding aerial surveillance was that such a measure should be allowed in certain parts of Europe, to the east and west of the demarcation line in Germany, as well as in the Far East, in parts of Alaska, and in Eastern Siberia.[41]

For the Western powers, the new Soviet proposals were a tough nut to crack. President Eisenhower said during a news conference that the Soviet disarmament plan required ''careful study.'' The Secretary of Defense, E. Wilson, recognized that the Russian proposal had created an atmosphere that was ''conducive to peace in the whole world.''[42]

Lengthy unofficial talks then began between the delegations at the subcommittee, primarily between the Soviet and the American representatives. On May 31, H. Stassen gave V.A. Zorin

(''unofficially'') a memorandum on signing a partial agreement on verifiable first steps towards disarmament. In a number of areas, the American memorandum ran counter to the Soviet plan of April 30. For example, it proposed that the ceiling for the Soviet and American armed forces be set at 1.7 million people during Phase Two, rather than the 1–1.5 million proposed by Moscow. As for nuclear weapons, the memorandum stated quite clearly that the United States ''considered the Soviet proposal to impose a complete ban on the use of those weapons unacceptable.'' The U.S. delegation also rejected the proposal to stop all nuclear weapons testing, saying it was only prepared to suspend tests for 10 months.[43] Nevertheless, the introduction of an unofficial memorandum by H. Stassen was taken as a sign that the U.S. delegation was ready to continue serious dialogue on disarmament.

In the opinion of V.A. Zorin:

> . . . the formulation of those proposals was taking place in an atmosphere of serious disagreements and bitter rivalry between various groupings in the US government. As one member of the US delegation admitted, Eisenhower's and Stassen's intention to seek common ground with the Soviet Union met with resistance in the Pentagon and the Department of State. Any slightest step towards an agreement with the Soviet Union was steadfastly opposed by the Chairman of the Joint Chiefs of Staff, Redford, Vice President Nixon, the head of the US Atomic Energy Commission, Strauss, and some others.[44]

In an effort to achieve some progress at the talks, on June 7 the Soviet delegation handed an unofficial memo on disarmament from the Soviet government to the U.S. delegation. The memo offered some concessions to the Americans, though not to the detriment of our national security, of course.

The new proposal was to implement a reduction of U.S. and Soviet armed forces in three phases: first to 2.5 million people, then to 2.1 million, and during Phase Three to the ceiling proposed by Washington itself—1.7 million. On the issue of banning nuclear weapons, the proposal reaffirmed the need for a complete ban. On nuclear testing, the document also reaffirmed our position of principle that the tests should be banned completely—but also said that Moscow was prepared to consider the U.S. proposal on establishing international controls over the implementation of that commitment. (Some time later, on June 14, Moscow also agreed to a temporary suspension of testing, but for a period of two or three years rather than 10 months.[45]) On aerial surveillance, the Soviet memo said that the search for a solution should focus on ''extending the aerial controls provisions rather than narrowing them down.''[46]

At that point the talks hit another snag. A few days later, on June 12, V.A. Zorin received a letter from the acting head of the U.S. delegation, C. Owsley, which stated that the U.S. ''unofficial document of May 31 which you refer to in your memorandum of June 7, does not exist as far as correspondence between the two governments goes. For that reason, the U.S. delegation is asking you to return the document.''[47]

We were astounded by such an unprecedented step by the U.S. delegation. None of the members of the Soviet delegation had ever seen anything like it—either before those talks, or afterwards. On June 16, Zorin sent a letter to Stassen in which he expressed ''bewilderment at such a step, which is extremely unusual in international practice, and which only delays the disarmament talks.'' ''The Soviet delegation cannot accept such methods of negotiations because they only complicate the talks and hamper our efforts to reach an agreement on the extremely important issue of disarmament.''[48]

Unofficial consultations between the two delegations stopped, and we eventually learned that this was done on the orders of Secretary of State J.F. Dulles. Our U.S. counterparts were either unwilling or unable to explain what had really happened. But some information was leaked to the U.S. media to the effect that there were disagreements between Stassen and top Department of State officials about the negotiations and the possibility of achieving a mutually acceptable agreement with the Russians on disarmament measures.

It is quite interesting that B. Bechhoeffer, a member of the U.S. delegation who has already been mentioned in this article, says not a single word in his detailed description of the work of the London Subcommittee regarding the scandalous withdrawal of the unofficial U.S. document of May 31. He only makes a reference to Dulles's biographer John Robinson Beal, who wrote in the U.S. secretary of state's biography[49] published in 1959 that H. Stassen had committed ''a tactical error'' by handing over to V.A. Zorin a document ''that had not been agreed with the allies.'' Beal insists, however, that Stassen ''had not strayed by so much as a hair's breadth from the

official government line.'' Nevertheless, Stassen was ''summoned to Washington for a dressing-down.''[50]

Secretary of State Dulles, meanwhile, rushed to London, where in early August he and the other Western delegations tabled a document at the subcommittee entirely devoted to aerial and ground inspections covering the entire territories of the Soviet Union, the United States and Europe as a means of ''preventing the possibility of a sudden attack.'' The document did not contain any disarmament measures.[51]

In essence this meant that serious disarmament talks were over. The rest of the committee's session, which ended in late August, saw an exchange of various documents, which more or less repeated the previous proposals.

On August 27, the Soviet delegation at the subcommittee submitted a statement by the Soviet government which reiterated in great detail all the Soviet proposals on reducing manpower and conventional arms; banning and eliminating nuclear weapons; declaring a complete ban on nuclear tests (or at least a suspension for two or three years) as a stand-alone measure; and international controls mechanisms, including aerial reconnaissance in the agreed areas. The statement stressed the need for a link between ending production of fissile materials for weapons purposes, which had been proposed by the United States, and decommissioning of nuclear weapons with subsequent elimination of existing stockpiles. The statement also expressed doubts as to whether the Western delegations at the subcommittee were genuinely striving for a mutually acceptable agreement on disarmament.[52]

Two days later, on August 29, the Western powers introduced their own working document on partial disarmament measures which emphasized steps to prevent a sudden attack. It was also stressed that all the provisions contained in the document, including a 12-month suspension of nuclear testing and controls over fissile materials, were ''inseparable.''[53]

That, essentially, was the end of the talks. Later, during the 12th session of the UN General Assembly, the Soviet Union was forced to make a statement that all its efforts to use the subcommittee for productive work had come to naught, and that the Soviet delegation would no longer be taking part in the work of the subcommittee or the Disarmament Commission in their existing composition.

WHY DID THE LONDON SUBCOMMITTEE FAIL?

Now let us draw some conclusions and try to figure out why serious and committed dialogue on disarmament at the subcommittee eventually fizzled out and brought no results.

First, here is a very interesting (albeit lengthy) quote from B. Bechhoeffer, a U.S. researcher who studied the negotiations at the subcommittee:

> . . . the most discouraging feature of negotiations was that, commencing with July 1957 and more particularly through the General Assembly in the late fall of 1957, the West took a number of positions which called into question some of the most fundamental tenets underlying the negotiations. One example of this was the last-minute Western insistence on the inseparability of its proposals . . . .
>
> A second Western departure from previous fundamental tenets was the suggestion in the August 29 proposals that the United States and the United Kingdom might be permitted to transfer nuclear weapons to its allies.[54] Until this suggestion, the negotiations apparently had proceeded on the premise that both the Soviet Union and the West were firmly determined to do everything in their power to prevent additional countries from becoming nuclear powers.[55] Such was the basic philosophy of President Eisenhower's Atom for Peace Program, on which the Soviet Union and the West had already reached some measure of agreement. During the General Assembly, John Foster Dulles had called into question two fundamental tenets that President Truman had enunciated in 1949 and that thereafter had not been challenged. Dulles cast doubts on the desirability of further arms control negotiations until the international climate had improved. Ever since 1949, the Western position had been that any agreement on arms control in and of itself would improve the international climate, and therefore that arms control negotiations should proceed simultaneously with efforts to solve other outstanding political problems.
>
> Even more important, the West, by insisting on a General Assembly endorsement of their August 29, 1957 proposals, despite Soviet opposition, had brought into question another fundamental tenet of the negotiations. Since 1948, the West had recognized that any measures for arms control would be futile without the approval of both the Soviet Union and the chief Western powers. Therefore, the West had

> refrained from obtaining United Nations endorsements of their positions. The disastrous consequence of this change of Western position was that from this point on, the Soviet Union declined to discuss disarmament or arms control except in a commission consisting of the entire membership of the General Assembly, which was far too large a group for negotiations, or in a group where representatives of the Soviet bloc equalled in number the representatives of the West.[56]

Despite some inaccuracies, the American researcher offers a fairly sober assessment of how and why the talks at the London Subcommittee ended with no results. But in truth, as later events have demonstrated, the reasons why the first attempt at disarmament failed were much more fundamental.

In the second half of the 1950s, after a certain degree of strategic parity had been achieved between the two nuclear powers, the nuclear and missile race suddenly shifted into an even higher gear. The number of nuclear tests rose sharply. In the early 1950s, each nuclear power would hold 10–20 tests every year. In 1957, there were 55 such tests, including 16 in the Soviet Union. In 1958 there were a total of 116 nuclear detonations, including 34 in the Soviet Union.[57] The yield of some of the tests conducted by the United States in the Pacific reached several megatons. And, most importantly, a race had begun between the United States and the Soviet Union in a new area of military technology: intercontinental ballistic missiles and submarine-launched ballistic missiles carried by nuclear-powered submarines. At a critical juncture during the talks on August 27, 1957, the TASS news agency announced that the Soviet Union had successfully tested an intercontinental ballistic missile. Shortly afterwards, on October 4, came the Soviet launch of the world's first space satellite.

Then, in late October 1957, U.S. President Eisenhower met British Prime Minister Harold Macmillan in Washington to discuss concerns over the perceived weakening of the Western powers' political and military standing. A call was made to pool the efforts of the ''free world'' under the leadership of the United States and Great Britain. Commenting on the outcome of the meeting, J.F. Dulles said at a news conference on October 30: ''We must try to approach the new concept of common defense.''[58]

Given all that, the disarmament talks started to go around in circles. Meetings and consultations continued on some individual arms limitation measures, including the discussions on a nuclear test ban (1958–1962) and prevention of a surprise attack (1958)—but they proved unproductive. New proposals were also made on universal disarmament, and in 1961 the Soviet Union and the United States even agreed a joint statement on the principles of universal and total disarmament (the Zorin–McCloy Statement).

But the next stage of productive dialogue on arms limitation and disarmament began only later, in the 1960s, when a relative strategic balance had again been achieved between the two main nuclear powers on the new level of military technology. In 1963 they signed the Partial Test Ban Treaty, in 1968 the Nuclear Non-Proliferation Treaty, and in 1969 talks began on strategic offensive and defensive arms limitation. But that was another time and another era.

NOTES

[1] The author would like to thank N.V. Kochkin and N.P. Sherbinina for their assistance in researching this article.

[2] UN General Assembly Resolution 725 (VIII).

[3] Jules Moch, ''U.R.S.S: Les yeux ouverts. R.: 1956.'' On a visit by Jules Moch to the Soviet Union. See also: R.M. Timerbaev, *Stories from the Past* (Moscow: Rosspen, 2007), pp. 50–54.

[4] UN General Assembly Resolution 808 (IX) of November 4, 1954.

[5] Bernhard G. Bechhoeffer, *Postwar Negotiations for Arms Control* (Washington, DC: Brookings Institution, 1961), pp. 229 and 243.

[6] DC/SC.1/PV.18, p. 6.

[7] It became clear in the process of further negotiations that the agreed cuts were defined as the difference between the levels of late 1953 and the ceilings set for each individual state.

[8] DC/SC.1/10.

[9] Bernhard G. Bechhoeffer, *op. cit*., p. 228.

[10] A. Protopopov, ''Soviet Union at the United Nations: The History of the Soviet Union's Struggle for Peace and Independence of the Nations, 1946–1960'', in V.A. Zorin, ed., *The Soviet Union's Struggle for Disarmament, 1946–1960* (Moscow: Publishing House of the Institute of International Relations. 1961), pp. 172–173.

[11] Archives of Russian Foreign Policy (ARFP). F. OMO. Op. 1, P 45, D 194.111, L 23.

[12] Doc A/2742.

[13] Quote from: *The Soviet Union's Struggle for Disarmament, 1946–1960*, p. 175.

[14] Bernhard G. Bechhoeffer, *op. cit*., p. 234.

[15] ARFP, ibid, ll. 7–8.

[16] UN General Assembly Resolution 808 (IX) of November 5, 1954.

[17] Bechhoefer, pp. 234 and 237.

[18] On the disarmament apparatus in the Eisenhower administration, see Bechhoefer, pp. 261–269.

[19] In later years, the disarmament brief remained with the International Organizations Department, but the number of people working on it was increased substantially. Now there is a separate department for security and disarmament in the Foreign Ministry.

[20] DC/SC.1/20 of March 29, 1955.

[21] DC/SC.1/21of March 31, 1955.

[22] DC/SC.1/26/Rev.2 of May 10, 1955.

[23] DC/SC.1/PV.47/, pp. 56–57.

[24] DC/SC.1/PV.48/, pp. 12, 21, 23.

[25] ARFP, ibid, L 54.

[26] F. OMO, op. 1a, p. 45, d 194/111, l 75.

[27] Quote from: ARFP, F. OMO, op. 1a, p. 43, d 194/111, l00.

[28] DC/SC.1/PV.53, p. 19.

[29] DC/SC.1/PV.55, pp. 26–27.

[30] *Izvestiya*, September 25, 1955. Copies of the message were sent to the British Prime Minister and French Prime Minister Faure.

[31] See Bechhoeffer, p. 314.

[32] DC/SC.1/41 of March 27, 1956.

[33] *Izvestiya*, May 15, 1956.

[34] V.N. Mikhaylov, ed., *Nuclear Tests in the Soviet Union* (Moscow: IzdAT, 1997), p. 147.

[35] *Bulletin of American Scientists*, July–August 2006, p. 66.

[36] DC/SC.1/42 of April 3, 1956.

[37] *New York Times*, April 5, 1956.

[38] ARFP, F. OMO, op 3, p 52, d 192/111, ll. 2–3.

[39] A total of 31 unofficial meetings were held with the US delegation alone.

[40] ARFP, F, OMO, op 3, p 52, d 194/111, ll. 2–3.

[41] DC/SC.1/55, *Pravda*, May 5, 1957.

[42] Quote from: *The Soviet Union's Struggle for Disarmament, 1946–1960*, p. 226.

[43] The text of the U.S. memorandum was published in: *Compendium of Main Disarmament Documents, Vol. II (1957–1958)* (Moscow: Soviet Foreign Ministry, 1961) , pp. 109–120.

[44] ARFP, F. OMO, op 3, p 88, d 194/111. l 74.

[45] *Compendium of Main Disarmament Documents*, pp. 135–136. DC/SC.1/60.

[46] Ibid., pp. 121–132.

[47] Ibid., p. 132.

[48] Ibid., pp. 136–137.

[49] John Robinson Beal, *John Foster Dulles: 1888–1959* (Westport, CT: Greenwood Press, 1974), p. 324.

[50] Bechhoefer, pp. 405–406.

[51] DC/SC.1/Rev.1 of August 2, 1957.

[52] DC/SC.1/65/Rev.1, *Izvestiya*, August 29, 1957.

[53] DC/SC.1/66/Rev.1.

[54] This means that even back then, in 1957, the ground was being laid for the plan of creating the so-called NATO Multilateral Nuclear Forces. The United States' insistence on that plan in 1960–1965 delayed the signing of the NPT by several years. See: R.M. Timerbaev, *Russia and Nuclear Nonproliferation* (Moscow: Nauka, 1999), pp. 209–225.

[55] Bechhoeffer, who published his study in 1961, may have been aware that the Soviet Union was actively helping China develop nuclear weapons in the second half of the 1950s.

[56] Bechhoefer, pp. 434–435.

[57] Mikhaylov, *Soviet Nuclear Tests*, p. 187.

[58] Quote from: ARFP, F, OMO, op 3, p 88, d 194/111, l 102.

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Vladimir Gorbulin

TRUST BUILDING AND NUCLEAR DISARMAMENT

Ukraine's decision to relinquish its nuclear arsenal has still not been fully appreciated by the international community. At many an international conference I have heard delegates, including those from Russia, saying that the precedent was not unique. They often cite the example of South Africa. But the scale of the South African arsenal simply cannot be compared to Ukraine's. If one takes into account the number of warheads that were stationed on Ukrainian territory, the country undoubtedly holds a world record in nuclear disarmament.

Ukraine had 1,608 nuclear warheads, making it the world's third-largest nuclear power. The decision to relinquish that arsenal was preceded by heated political debate between the proponents of that move and those who wanted Ukraine to keep the warheads, under one pretext or another—even though Kiev lacked the capability to use those warheads as a weapon in any case. But eventually Ukraine made its choice, and that was the only right choice in those particular circumstances that came about immediately after the country gained independence. It proved instrumental for quickly obtaining international recognition of the newly independent country and securing the country's future. It was thanks to the decision to relinquish the nuclear arsenal that Ukraine immediately gained the trust of other countries and integrated into the international security systems.

TRUST IN INTERNATIONAL AFFAIRS

The preamble of the Non-Proliferation Treaty (NPT) states that the participants signed the document ''desiring to further the easing of international tension and *the strengthening of trust* between States in order to facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all their existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant to a Treaty on general and complete disarmament under strict and effective international control (emphasis added).'' At this stage, trust between nations is a key component of international security.

Take the situation with the Iranian nuclear program. If the nuclear powers trusted Iran, there would be no pressure on the Iranians over their nuclear enrichment program. Brazil also enriches uranium for its nuclear power plants, but nobody worries about the Brazilian nuclear program. Or take India: the country is not an NPT member, but an exception was made for it and the embargo on transferring nuclear technology to India has been lifted. Why such a difference then? It is because both Brazil and India are democracies, with all the usual parliamentary controls over the law-enforcement agencies, with free media and effective civil society institutions keeping a close watch on the government's military and national security policies. For all its culture-specific quirks and shortcomings, democracy makes a country transparent to its own people, and predictable and understandable to the international community.

But democracy is not a universal value for every single country on the planet—unlike such values as security. A nation like Iran has different civilizational approaches to national development. The West mistrusts Iran; Iran, for its part, mistrusts the West and fears for its own safety. Both sides

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have their reasons and logic. All that being said, I believe the nuclear powers should play the leading role in building trust between the nations.

Those powers have lately been more concerned with nuclear nonproliferation issues, while their own practical disarmament has not been very high on their list of priorities. Meanwhile, practical steps by the nuclear powers towards nuclear disarmament and a world free of nuclear weapons could be instrumental for gaining the trust of non-nuclear nations—including nations such as Ukraine, which has relinquished its nuclear weapons. It is precisely the nuclear powers who should shoulder the brunt of the responsibility for strengthening international security. So the onus is on them to demonstrate to the international community the morally sound nature of their approaches and their consistency in abiding by the international commitments they have undertaken, including the commitments under the Non-Proliferation Treaty, which is now going through a very difficult period.

UKRAINE'S NUCLEAR SYNDROME

The issue of nuclear disarmament continues to resurface in Ukrainian politics from time to time. The most emotional outbursts on this subject usually happen around the time of this or that foreign policy failure. The essence of the argument is, ''If we still had the nuclear bomb, they wouldn't have treated us that way.''

The phrase has become something of a cliche, used with worrying regularity by a variety of nuclear proponents, from senior politicians to people who even at school could not quite grasp the very basics of how the bomb works. In 1994 Ukraine took a series of crucially important steps on its strategic nuclear weapons, looking towards the future rather than the present. Those steps were preceded by the decision to relinquish tactical nuclear weapons—though that decision remains beyond the scope of this article, because your correspondent was not involved in making it.

On November 16, 1994 the Ukrainian parliament approved the bill on joining the NPT. Article 6 of the bill reads that it only enters into force once the nuclear powers have given Ukraine security guarantees by means of signing an international legally binding document.

On December 5, 1994, during the OSCE summit in Budapest, the sides exchanged papers on the ratification of the START I treaty, of which Ukraine is a member as a non-nuclear-weapon state.

Also during the summit, the leaders of four countries—Ukraine, the United States, Britain, and Russia—signed a memorandum on security guarantees to Ukraine. The document contained commitments by these three nuclear powers on Ukraine's national security, in accordance with the recognized principles of international law. On the same day, France and China gave Ukraine their own unilateral security guarantees.

What was the state of Ukraine's nuclear arsenal in 1994? What was it giving away? What were the potential problems Ukraine would have to face had it decided to keep the warheads? Which of those problems could Ukraine cope with? Which of them would be much more difficult to resolve? What could the country demand in return—politically, militarily, and economically?

When Ukraine declared independence, it had 220 strategic delivery vehicles on its territory, including:

- 176 deployed intercontinental ballistic missiles (130 liquid-fuel SS 19 ICBMs and 46 solid-fuel SS-24 missiles carrying a total of 1240 warheads);
- 95 SS-24 missiles without nuclear warheads stored at the Pavlograd mechanics plant;
- 44 heavy bombers, including 25 Tu-95 MS and 19 Tu-160 aircraft, carrying long-range air-launched cruise missiles with nuclear warheads; the number of those missiles is put at 1,081—though that figure is still disputed.

So what are the problems Ukraine would have to face if it were to maintain that strategic arsenal in a combat-ready state?

MISSILES

Before the collapse of the former Soviet Union the military began a program of replacing the old SS-19 missiles (developed and manufactured by the Central Machine-Building Design Bureau in Moscow) with the more recent SS-24 (developed and produced by the Yuzhnoye Design Bureau and the Yuzhnyy Machine-Building Plant in Dnepropetrovsk, Ukraine). The SS-24 had better specifications and could carry up to 10 warheads, while the SS-19 could be fitted with no more than six. The Soviet Union in general and Ukraine in particular had adequate technological capability to dispose of the liquid-fuel missiles. But claiming that the same was true for solid-fuel missiles would be irresponsible.

As Ukraine's SS-24 missiles were approaching the end of their guaranteed service life, they were turning into potentially hazardous shells, each loaded with about 100 tons of solid rocket fuel. Five of those missiles were due to reach the end of their service life in 1997, 14 in 1998, 17 in 1999, and the last 10 in 2002.

Theoretically, a decision could be made to extend the missiles' service life—but that would require additional research and development, most of which could only be done in Russia. Meanwhile, Russia's stance on the issue was no different from America's: both wanted Ukraine to relinquish its nuclear arsenal.

Also, an extension of the missiles' service life would require Ukraine to conduct at least two test launches every five years—but only Russia has the missile ranges onto which those missiles could be targeted.

And there is another important consideration. The range of the SS-24 missiles is 8,000–11,000 km, and the targets programmed into them were definitely outside the Eurasian continent. Was Ukraine truly prepared to blackmail the United States with those missiles?

Ukraine's missile specialists might have been able to find solutions to some of those problems—but only if they were given adequate funding, which Kiev could not afford.

NUCLEAR WARHEADS

The situation with the nuclear warheads was even more complex. Unlike the missiles, they were designed and manufactured in Russia before being brought to Ukraine and fitted onto the missiles by specialists of the Soviet Defense Ministry's 12th Directorate. That directorate did not have any offices in Ukraine itself.

The nuclear warheads also have a limited service life. Once their guaranteed term expires, they turn, to all intents and purposes, into highly radioactive nuclear waste. Building nuclear warhead regeneration facilities in Ukraine would have required time and serious financial resources. Ukraine had neither one nor the other, as the shelf life of some of the warheads had already expired by 1993.

But even that was not the greatest problem. Far more worryingly, some of the warheads started *breathing*, i.e. heating up.

The yield of one SS-24 nuclear warhead is 0.44mt. For reference, the yield of the American bombs dropped onto Hiroshima and Nagasaki was 0.02mt, i.e. lower by a factor of 20. That means that the combined yield of a single SS-24 missile carrying 10 warheads would be 200 times more powerful than the first American nuclear bomb.

So now would be the time to recall that 70,000 were people killed by the Nagasaki bomb, and ask the proponents of Ukraine maintaining its nuclear status: Are you truly ready to bear the responsibility for the very existence of your own country, knowing that you cannot even guarantee the physical safety of the nuclear weapons? By the way, the yield of one SS-19 warhead was 0.55mt. Each of the 130 missiles carried six of them.

THE DECISION

The final decision was based on the following set of considerations. We could not extend the service life of the nuclear warheads, because their developers and manufacturers were all in

Russia, between the river Volga and the Ural mountains. We had no warehouses to store the decommissioned warheads. We had no technology for the disposal of the old warheads. And we had no facilities to convert them into fuel for our nuclear power plants by downblending highly enriched uranium into LEU. So I ask our nuclear strategists: what were we supposed to do in that situation? Wrap ourselves up in our warheads, take a plane to Moscow and Washington, and there demand the preservation of Ukraine's nuclear status?

Fortunately, no one among Ukraine's political elite or the top brass had volunteered for such a suicide mission. Instead, our calm and intelligent policy gave us the following:

- ❑ America gave technical and financial assistance to dismantle the nuclear warheads safely and securely—and the resulting fissile materials were kept in Ukraine.
- ❑ Ukraine's Defense Ministry officials monitored the disposal and destruction of warheads on Russian territory, making sure that none of the components of those warheads can be reused.
- ❑ Russia took care of maintenance and safe storage of the nuclear warheads.
- ❑ The United States and Russia gave Ukraine fair compensation for the highly enriched uranium contained in the warheads removed to Russia for disposal; Russia provides fuel for the Ukrainian nuclear power plants by way of compensation, while the United States pays Russia's costs of dismantling the warheads and manufacturing fuel rods for Ukraine.

The main benefit for Ukraine, however, was political. The country was able to join the international community as a serious contributor to European and international security. The decision to become a non-nuclear-weapon state opened up before us far-reaching opportunities for international cooperation.

In the autumn of 2004, Kiev hosted representatives of the Japanese NGO ''For a Nuclear-Free World.'' The delegation included a Japanese man from Nagasaki who survived the bombing. I did not know why the Japanese delegation had asked for a meeting with me. We did not quite know what to say to each other until I was asked, ''Mr Gorbulin, we know that you were involved in the development of strategic weapons, and then became an active proponent of your country becoming free of nuclear weapons. What was the reason for such a turnaround?''

The question was not exactly new. I answered it several times during my reports to the Ukrainian parliament in the autumn of 1994. But it was quite a different matter to hear that same question from someone who survived the horrors of a nuclear bombing. I asked the Japanese visitors to have a look at the portrait hanging behind my desk. I told them that the name of the photo portrait was ''Sakharov leaving . . .'' The Japanese knew who Sakharov was, and they started nodding their heads. Andrey Sakharov knew all the possible consequences of nuclear war, and he had a great feeling of responsibility. Fortunately for Ukraine, the country's leaders felt the same responsibility during the difficult years of 1992–1995.

As for Ukraine itself, it remains a nuclear nation, and its entire nuclear program, its nuclear industry, and its power plants have been put under the IAEA safeguards system. The country has Europe's largest resources of uranium ore and zirconates, large deposits of thorium and hafnium, and large mining and processing facilities. It is a major producer of uranium and zircon, and has almost 20 academic institutions conducting nuclear energy research in cooperation with the industry.

There is only one thing missing: a clear national policy to wean the country off its dependence on energy imports. But that is the subject of a separate study. Based on Ukraine's experience of nuclear disarmament, one thing is clear: without measures to build trust between the nations, there can be no progress on international security.

For more information on disarmament, please visit the section ''Ways Towards Nuclear Disarmament'' on the PIR Center website at http://pircenter.org/view/disarmament/eng

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STEALING BEARD

Castro Fidel, Ramonet Ignacio. Fidel Castro. My Life. A Spoken Autobiography. Translation from Spanish. M.: RIPOL classic. 2009, 784 pp.

Reviewed by Vladimir Orlov

''Spoken language is not the same as written language – the accent, the tone of voice when you speak. When you see it written down, repeating a word throughout a paragraph may look unnecessary. But it's correct when you're speaking – you're emphasizing.'' So said Fidel Castro. Those words of his, along with the transcripts of 100 hours of conversations with the Cuban leader can be read in a huge tome released in 2009 by the Russian publisher *RIPOL classic*.

Speaking for myself, I would have preferred to listen to Fidel's memoirs rather than read them. In writing, the tone of this book does not simply change. It fades. Alas, there's no CD bundled with the book. But that is understandable. It would be unconscionable of me to demand Fidel's voice bundled with a Russian translation.

This book is a strange genre, an unusual mix. Its subtitle says it is a biography. It isn't. Ignacio Ramonet, the European journalist and left-wing philosopher who persuaded the Comandante to spend many hours reminiscing about the 79 years of his life, did no more than carefully arrange Fidel's texts dictated in 2004–2006. Ramonet himself admits that the resulting work was really a cross-genre of journalism and essay-writing.

The first edition of this book came out in Spain in 2006. Later on, Fidel himself cross-read the text, making some amendments and corrections. According to Ramonet, ''this version of the book has been totally revised, amended and completed personally by Fidel Castro, who finished rereading it in its entirety in late November 2006''. Since then, ''A Spoken Autobiography'' – which is essentially Fidel's only autobiography – has been published in more than 20 languages. The time has now come for a Russian edition.

Even those readers who do not closely follow the developments in Cuba will notice the date: ''late November 2006''. That means that the Cuban leader – or rather the former Cuban leader, a turn of phrase that still does not feel quite real – made his revisions after several extremely complicated surgeries starting from July 26, 2006 – the date he was forced by his illness to retire from governing the country. To all intents and purposes, we are in fact looking at the political will of one of the greatest political figures of the 20th century.

Only after reading ''My Life'' from cover to cover does one truly realize something that was actually supposed to be quite obvious: here is a true *giant*, now in forced retirement but still in a position to survey the second half of the 20th century from a lofty vantage point that no other living politician – with the possible exception of Nelson Mandela – has come even close to ascending.

Fidel muses a lot about power and the people who wield it. Many of them are no longer with us; Fidel pronounces his judgment on them, as well as the entire 20th century. Everyone and everything is gone – only he still remains. He goes over several US presidents, one after another, from Dwight Eisenhower to George Bush Jr. He is scathingly contemptuous of that last one, blasting him with the moniker ''little Bush''. But he has a lot of respect for JFK (despite the Cuban missile crisis) and Jimmy Carter, whom he once received in Havana. For me, the most memorable appearance was that of Franklin Delano Roosevelt, who shows up on one of the very first pages. It turns out that the boy Fidel once sent FDR a letter written in English. Here it is:

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> President of the United States...
> If you like give me a 10 dollars bill green american, in the letter, because never, I have not seen a 10 dollars bill green american and I would like to have one of them.
>
> My address is:
> Sr Fidel Castro
> Colegio de Dolores
> Santiago de Cuba
> Oriente, Cuba
>
> I don't know very English but I know very much Spanish and I suppose you don't know very Spanish but you know very English because you are American but I am not American.

Towards the end of the book, Fidel confides that his monthly salary as head of the Cuban state was 30 dollars (in Cuban pesos, of course: the dollar was banned on the island in 2004. The announcement was made in a notable and traditionally long TV interview which I happened to watch live sitting in front of a television in Havana with Fidel's own son).

Ignacio Ramonet often brings Fidel – and the reader – to the ''ruler or tyrant'' issue. He openly admires Fidel as a genius of our century – or should I say the past century? – and sees him as the Don Quixote of our days. He declares that admiration right from the start, from the very first page, in the intro, which paints the picture of Ignacio Ramonet talking to Fidel in the Comandante's office, where a wire statute of Don Quixote astride his steed Rocinante stands on display in the corner. Ramonet sees Fidel as a ruler of hearts and minds who has passed the test of time with flying colors.

It is on these terms that this book has to be taken – but that is also one of its fundamental weaknesses. Anticipating that charge, Ramonet warns the reader, or rather lays down the law:

> I have never liked those narcissistic interviewers who never stop attacking their interlocutor and are eager to demonstrate that they're cleverer, more intelligent and better prepared than the person they are interviewing. ... Nor do I like those who think of the interview as a police interrogation in which there's a cop on one side of the table and a suspect on the other. ... There is also the dishonest and cowardly notion of the interview as a genre that allows the person interviewed to be stabbed in the back by the interviewer, under the pretext that journalist is free and 'objective' (on behalf of the perverted notion of freedom of the press), and allows the interviewer to do what he or she likes with the interviewee's statements: keep certain passages and throw out the others, take a statement out of context, omit details, cut our qualifications and leave statements 'bald', and never allow the person interviewed to reread his or her own words before publication...

Well, the view is clearly stated, and for that clarity at least Ramonet has my respect. But is he actually right? Is he not simply trying to ease the task that would have been too much for him otherwise? I think that would be a good question to discuss at some journalism master-class. I took Ramonet's methodology on his own terms. But as I made my way through those 100 hours of conversations, I kept stumbling upon the obvious failings of this approach, and my disappointment grew. It wasn't Fidel I was disappointed with. It was his interviewer. The only purpose of his questions seemed to be propping up the structure of the future book, and facilitating smooth transitions from one scene to the next. Increasingly those questions degenerated into an impersonal echo of what Fidel had just said, as if Ramonet didn't quite catch that. But being a prominent left-wing intellectual, the interviewer must have realized the vulnerability – and sometimes the downright boredom – of his technique. Instead of sparkling dialogue, the reader is proffered a rehash of Fidel's previously published and fairly verbose orations, interspersed by insipid questions in a (failed) bid to inject some dynamism and make it all look like a proper interview. Ramonet must have felt something of this, for he made a few stabs at demonstrating (to his European readers, rather than the monolith named Fidel) his concerns about *certain aspects* of life in Cuba. He also kept returning to questions about the fate of this or another dissident – but Fidel parried those charges with the utmost ease. Only once, when questioned about the Ochoa case (portrayed in the book at the ''drug trafficking case'') he seemed a bit incoherent and annoyed, as if being attacked by a stubborn little mosquito.

In some episodes Fidel is very emotional – but those episodes are few and far between. He mainly reserves his vitriol for American imperialism and Cuban emigration to Miami. He sounds persuasive – but predictable, too. And nowhere does he really explode, rushing head-first into

a heated exchange. Ramonet's toothless questions simply fail to provide adequate challenge for Fidel's talent as a great debater to really shine in this book.

Maybe that is part of the reason why the pages about Fidel's early years are a plain bore. The Cuban leader recalls every slightest detail about his formative years – but how did he really become what he is? We have detailed descriptions, year by year, sometimes even month by month – but no real insights. Maybe that is just another side of Fidel's talent as a storyteller: he weaves his own story artfully, saying only what he wants to say, without losing his stride – while the interviewer just sits there and listens without making the slightest attempt to dig deeper. Only occasionally do we get a glimpse of the real Fidel. ''I loved to climb mountains. When I saw a mountain, I saw it as a challenge. I would be seized with the idea of climbing that mountain, getting to the top. Sometimes the bus would have to wait four hours because I was climbing a mountain.''

''All the glory of the world lies in a grain of corn,'' Jose Marti once said – and Fidel often recalls these words. It seems that thoughts about ''great deeds, virtue and glory'' simply won't let him rest, and he returns to them again and again. But then the interviewer asks him towards the end of the book: ''How do you think history will judge you?'' Fidel's answer to that is, ''That's something it's not worthwhile worrying about. You know why? (. . .) In 100 years people will look back on us as a tribe of barbarians and uncivilized cavemen who aren't worth remembering.'' And then, ''Napoleon talked about *la gloire*, he was constantly concerned with glory. Well, in lots of countries today the name Napoleon is known more for the cognac that bears his name than for all the things done by the real general and emperor. So I say, why worry?''

One of the final chapters, ''Summing up a life and a revolution'', is probably the most exciting in the whole book. Here one can finally hear Fidel's distinct voice behind the text – the voice one really begins to miss reading the previous hundreds of pages. I really wish I could learn Fidel's opinion about the Fidel brand of cigars – though I do release how tactless that question would be, especially coming from such a tactful interviewer. There is, however, a funny story of how Fidel quit smoking to give a good example to the Cubans. Here the Comandante seems to be shooting his own country's economy in the foot: ''When we give a box of cigars to a friend, we say, 'With this box, if you smoke, you can smoke, if a friend of yours smokes, you can pass it along to him; but the best thing you can do is give this box to your enemy.'' One begins to wonder whether any other world leader would dare say something like that about his own country's main export product – however well deserved that product's stellar reputation may be. You can't but admire the fact that this particular leader puts his nation's health above narrow economic interests.

In such a huge folio, everyone will find a few of Fidel's mini-gems, his famous short *mots*.

Here's the one about the two years he spent in jail in 1953–1955: ''I'm almost nostalgic for those years in prison, because that's the time in my life when I had the most time to read.''

Or this one about Marx: ''In the Communist Manifesto one can see the influence of Balzac's style – the clarity of the prose, the effectiveness and elegance of the simple expression.''

Or his admiration for French cuisine, which Fidel picked from French communist party chief Georges Marchais and the actor Gerard Depardieu, and which seems almost comical against the general background of the Comandante's Spartan ways: ''French wines, cheeses and foie gras are the best in the world. How delicious! And what variety! What flavor!''

Or maybe this reply to the question of what he thinks about Saddam Hussain, who was still alive at the time: ''How shall I put it . . . A disaster. An erratic strategist. Cruel with his own people.'' These words didn't make it to the book itself though – they were chucked out by Fidel when he was making his revisions.

There are also some historical anecdotes in this autobiography which deserve detailed critical analysis and even verification, because their veracity – with all due respect for Castro's powers of recollection and Ramonet's diligent editing – is not immediately obvious. For example, speaking about the war in Angola, Castro claims that Cuba's and Angola's adversary, South Africa, possessed ''eight atomic bombs'' at the time, ''provided to them by the United States'', ''similar to those they exploded in Hiroshima and Nagasaki''. ''The South Africans had had atomic bombs supplied by the United States? I didn't know that,'' – Ramonet says, politely. ''Not many people do, but it's the truth,'' Castro insists – and then recounts his conversation with Nelson Mandela after his coming to power in South Africa. ''Mr. President, do you know where the nuclear

weapons that South Africa had are? – No, I don't know.'' Nonproliferation specialists will be happy to say that this particular anecdote may safely be disregarded.

The impression Fidel creates is that of a lonely monolith towering over the 20th century, which has passed right before his eyes. That impression is only reinforced by the chronology section at the end of the book. It is not always strictly relevant to Fidel himself, and here at least Ramonet's voice is much more distinct than in the rest of the book. Maybe that is because he did not feel burdened by the need to agree than secondary part of the work with Fidel? Ramonet lays down before our eyes the entire political theatre of the last 70 years of the 20th century, and of the first six years of the 21st. It includes the execution by the shooting squad of Zinovyev and Kamenev (a year after Castro entered a Catholic college); the Yalta conference (Fidel receives his Bachelor's degree); Mao's triumphant march into Beijing (a month after the birth of Fidel's first child, Fidelito Castro Dias-Balart)...Year after year, name after name. Names from the past, from a century that is already gone. Che Guevara – killed. Kennedy – killed. Hemingway – shot himself. Khrushchev – deposed, dead. Ho Chi Minh (whom Fidel probably mentions more than anyone else among his heroes) – dead. Olof Palme – killed. Francois Mitterrand, Pierre Trudeau, John Paul II – to whom Fidel devotes many pages in his memoirs and whom he truly respected as prominent thinkers – dead, dead and dead. Past century, indeed.

Some of those who are given warm praise in Fidel's memoirs are still with us, including Jimmy Carter, Jiang Zemin (who has already retired) and Hugo Chavez (who is still very much at the helm). The Venezuelan leader is spoken of very fondly, and mentioned far more often than Castro's own brother and successor Raul (who was also asked to cross-read the book). On the other hand, do those fond affections truly matter? Fidel's young ally Felipe Perez Roque is also quoted very often in this book – but where is he now that Raul has come to power?

It is in this chronological bolt-on to the memoirs themselves that the reader actually gets the glimpses of the political kitchen in Cuba and around it – while the main body of the book is quite bereft of such things. It is here that we see the only mention of Alina Fernandez Revuelta, the ''rebel daughter''; or the series of sackings of former allies in 2003 – some were ousted for ''corruption'', others were charged with ''embezzlement''. Ramonet does touch upon the subject of corruption – but he gives the issue of the Comandante's personal life a wide berth, and he warns the reader about this in the preface, just like he does about his interviewing technique. So it comes completely out of the blue when you read this in the chronology: ''February 1980: Fidel Castro marries Dalia Soto Del Valle, a teacher from the city of Trinidad, with whom he has had a relationship since 1961 and with whom he has had five children. The marriage is not made public.'' That immediately makes one feel how one-sided this autobiography is, albeit understandably and predictably so. And it makes one wish for a new book: it should be just as comprehensive, but it should also be a proper biography.

The Russian readers will obviously be especially interested in the parts of the book dealing with Cuba's relations with the Soviet Union and Russia. They will hardly fail to notice that this is a rather painful subject for Fidel. Recounting the events of the Cuban missile crisis, he speaks quite respectfully about the Soviet Union and Nikita Khrushchev. But he does make the eventual conclusion that Khrushchev did not take advise from his allies; he ignored Cuba, and all the agreements with the Americans were done behind Cuba's back. There is bitterness and sorrow here. There is even more of them in Fidel's views of Gorbachev and Perestroika: ''If we'd had that perestroika, the Americans would have been delighted, because, as you know, the Soviets destroyed themselves''. It even comes as a bit of a surprise after those words that Fidel then relents, describing Gorbachev as ''a man with good intentions''. One cannot help the feeling that the Comandante would have really liked to finish that phrase and say outright what destination those good intentions had paved the road to.

He also talks in great detail about Cuba's military help to Angola and other African nations. He makes no secret of how proud he is of that ''internationalist'' stance. He seems to contrast it with the Soviet position:

> ...We became convinced that if we were directly attacked by the United States, the Soviets would never fight for us, nor could we ask them to. (...) We asked Soviet comrades several years before the collapse of the USSR: Tell us honestly – are you going to help? And they said, no. And we knew that was going to be the answer.

Looking back at the late 1980s and early 1990s, I see the Soviet Union's and Russia's role in Cuba differently that I did back at the time. I regret that our country essentially turned its back on Cuba.

We felt that we were up to our ears in our own problems, so Cuba was not a priority. We are now paying the price for that political selfishness – or short-sightedness. So I can understand Fidel's bitterness and sometimes even sarcasm, as well as the bitterness of ordinary Cubans. The fact alone that a country that found itself still under a US blockade and now abandoned by its main ally has managed to survive through that extremely difficult decade is worthy of respect and admiration.

But the key problem with this book is that the image of the Great Beard does not really become any clearer once you have read it. He talks and he talks, but nowhere does he actually reveal himself. He doesn't want to. He want to exit the stage still obscured by the legend of him, which no-one will soon be able to separate from reality. At one point, Ramonet seems finally to stop beating about the bush: ''At the age of 79, [as of the writing of the book], when you look back over your life . . . what are you sorry that you did do?'' ''Well, let me think. What do I have to regret, something to be sorry about'', Castro begins – only to plunge into several pages of recollections that have nothing to do with either regret of repentance. Then he suddenly cuts his monologue short: ''I don't regret anything''.

A nice answer. Nice and short.