

SECURITY

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No. 3-4 (88-89),
Summer/Fall 2009

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TURKEY, RUSSIA, THE CAUCASUS

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NEXT STEPS IN U.S.-RUSSIAN ARMS CONTROL

RUSSIA AND NATO: THE TAMING OF THE SHREW

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Ünal Çeviköz

George Perkovich

Edward Lfft

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The Journal of PIR Center

James Goodby

Dmitry Evstafiev

Vadim Kozyulin

Albert Zulkharneev

Alexander Golikov

That situation would be altered if expectations were reversed: that proliferation would not proceed and that the nuclear-armed states already had given up their ready-to-use nuclear weapons. The incentive structure would change completely. Instead of tolerance for infringement of global norms, there would be intolerance, simply because each of the former nuclear-armed states would have a major stake in preventing break-out and hence in cooperating with other states in quelling a threat to their mutual security.

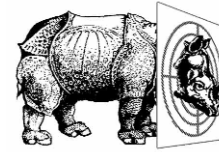
It would seem that the lack of hope does not have much to do with military-political or security issues. Yet it does: as soon as a system stops developing, there immediately are many those willing to destroy it. One should always remember that *hopelessness* is not when everything is bad. *Hopelessness* is when there is no hope. *The end of history* is not when opposing ideological systems disappear but when social degradation sets in. The winner in the new *big game* will be the one who will give the world a new hope. So perhaps Russia should try to do so?

The region becomes a destination for heavy weapons. Machine guns, grenade launchers, mortars – this armament of the jeep detachments is available to everyone, it can good for tactical success, but real power is brought by armored vehicles. The 2011 referendum in Sudan is approaching. According to various observers, its outcome is clear – the Southerners will vote for complete independence. Such result would mean the resumption of civil war, so tanks arrive in South Sudan.

Today the common interest of Iran and other nations in the Caspian region is to get Tehran involved in the system of economic, political, cultural, and other ties in Central Asia and in the Caucasus, in the system of interdependence, the functioning of which will be impossible without Iran. Tehran no longer strives for domination in the energy sector. However, it would like to consolidate its participation in production and transit, strengthen its positions on the Caspian Sea, deliver its gas to Europe and take an active part in creating the unified electric power system in the Middle East, in order to solve the problems of the Iranian energy sector.

In Russia, about half the crops is lost in the fields, even before harvesting. Some 20 percent is lost to weeds, 14 percent to pests and 15 percent to pathogens. There is no doubt that using GM crops resistant to insect pests, plant diseases and herbicides would radically improve productivity, as well as provide significant cost and labor savings.





ON PLAGUE AND WAR



In Hiroshima, 30 days after the first atomic bomb destroyed the city and shook the world, people are still dying, mysteriously and horribly – people who were uninjured in the cataclysm – from an unknown something which I can only describe as the atomic plague.

Wilfred Burchett

War is the greatest plague that can afflict humanity, it destroys religion, it destroys states, it destroys families. Any scourge is preferable to it.

Martin Luther



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on International
Security**

Published since November 1994
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IND 

SECURITY

EX

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Non multa, sed multum

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Publisher

PIR Center – Center for Policy Studies (Russia)

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Translators

Ivan Khokhotva
Yekaterina Gruzdeva

Editors

Vladimir A. Orlov, Editor-in-Chief (orlov@pircenter.org)
Dmitry V. Polikanov, Editor of the International Edition
Yevgeny N. Petelin, Assistant Editor (petelin@pircenter.org)
Tatiana Yu. Kotelkina, Technical Editor
Galina D. Rasskazova, Accountant
Konstantin A. Sirikov, Distribution Manager

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Contact Information:

Mailing Address:
Security Index Editorial Board
4th Dobrynsky pereulok, 8
Moscow 119049, Russia
Telephone: +7-495-987-1915 (Moscow)
+ 41-79-736-9034 (Geneva)
FAX: +7-495-987-1914 (Moscow)

Website: <http://si.pircenter.org/eng>

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FEAR HATH A HUNDRED EYES...

The PIR Center is 15. Is it a lot?

15 years is a clear adolescence. However, our work has been so intense all this time that each year may count for two. Then one would realize that the PIR Center does not behave like a teenager. It is a well-established institution with significant track record and full of energy, new projects and creativity.

Since its establishment in April 1994 the PIR Center has become a respected, internationally recognized leading Russian research institution in the area of WMD nonproliferation. Its priorities for the last decade and a half have been arms control (especially with respect to nuclear weapons), WMD nonproliferation, and international security. In the recent years we have broadened the scope of research projects and paid attention to such issues, as global energy security; strategic challenges in Central Asia; small arms and light weapons; new European security architecture, and so on.

Meanwhile, traditional nuclear nonproliferation matters remain in the focus of our studies. A telling example is two round tables that we held in early 2009 within the framework of the “*Ways to Nuclear Disarmament*” project. They were devoted to the U.S.-Russian disarmament dialogue, one of the most debated topics today.

The PIR Center also continues to develop its educational programs. The International Summer School on Global Security has become one of the most successful and visible projects. In total, in the last 15 years various PIR educational programs have enrolled over 650 young experts from the government and academic institutions, Russian and CIS universities. In June-July this year we will conduct the 9th Summer School.

The key event of the coming months is the international conference on “*Multilateral Approaches to Nuclear Disarmament: Planning the Next Steps*”, which will take place in Moscow on July 3. The PIR Center organizes it together with its old partners. This important event will bring together politicians, diplomats, military and academics from Russia, the United States, the U.K., France, China, India, Norway, Switzerland, and some other countries and international organizations.

We have chosen this working, businesslike format, in order to celebrate the 15th anniversary of the PIR Center. We will also keep up with the good old tradition (which was established five years ago at the celebration of the 10th anniversary) and will give awards – the *PIR globes* for special merits and achievements in the area of WMD nonproliferation. The winners have nominated and selected by our readers, friends and partners of the PIR Center.

This row of celebrations will continue into the next months. We will launch it in Moscow, but it will end up in fall in Geneva. In late September – early October friends and members of our European branch – Centre russe d’études politiques (CREP) – will get together to discuss and



sum up three years of CREP's activities and exchange their views on the ways to form new mechanisms of European security and the role of Russia in this process. I have no doubt that this event will help to make long-term plans for our European branch and integrate it fully into the mainstream work of the PIR Center. This will be another proof of the international character of our work at the PIR Center.

As one may see, the PIR Center has recently drawn much attention to nuclear disarmament issues. I write this editorial in New York where the 3rd PrepCom session has just finished. Nuclear disarmament matters (Article VI of the NPT) were the main topic here as well. For the first time after a decade of stagnation many disarmament issues are on the agenda and have a chance to be implemented. Contrary to the previous PrepCom sessions, this year the participants were chiefly optimistic. There is a feeling of change – at least, at the emotional level. The discussion was substantive and none demonstrated any desire to bury it under various alleged procedural pretexts. The PrepCom participants welcomed the launch of the U.S.-Russian negotiations on further strategic offensive arms reduction, received with pleasure some positive news from Washington concerning potential progress in ratification of the CTBT in the next 12 months. The echo of positive dynamics can be heard in Geneva, where for the first time in many years there emerges a real chance to resume in full swing the work of the Conference on Disarmament. In early 2010 there may start official talks on the Fissile Material Cut-off Treaty (FMCT).

The current issue of the *Security Index* journal focuses on the U.S.-Russian dialogue on strategic offensive arms. We publish the articles by James **Goodby**, a veteran of arms control negotiations, and Edward **Ifft**, a connoisseur of Russia and a renowned arms control expert. Meanwhile, Gennady **Evstafiev** speaks in his short comment about the controversies behind the U.S. initiatives, while Sergey **Smirnov** dwells on the interconnection between offensive and defensive weapons and its impact on the negotiations.

It will be also quite thought-provoking to learn the opinion of the Russian governmental and nongovernmental experts – from Deputy Director of the MFA Department of Security and Disarmament Affairs Sergey **Koshelev** and Advisor to the Chief of the General Staff Alexander **Radchuk** to Vladimir **Dvorkin** and Anatoly **Diakov**, who represent the expert community. The situation changes quickly, so when you read this article, the United States and Russia are at the peak of negotiations. And this will hardly be an easy talk.

We try to look ahead and to see beyond the horizon of decades – this helps to overcome the effect of transitory decisions and conclusions. So in this issue the question that we pose is the future of nuclear arsenals possessed by Russia, the United States, other nuclear-armed nations. Will we be closer to the *nuclear zero*? Or will the next generation of experts make jokes about our naivety? George **Perkovich** in his commentary makes an attempt to suggest some practical solutions, or at least, specific first steps to be taken.

“Russia... will continue to create appropriate conditions providing for the nuclear arms reduction without detriment to international security and strategic stability,” says the National Security Strategy until 2020 approved by the presidential decree on May 12.

At the same time, when one reads it thoroughly, it becomes clear that along with traditional threats Russia starts to pay more attention to new challenges.

“The protection of national interests of the Russian Federation will suffer from the negative impact of recurring unilateral force approaches in international relations, contradictions among the key actors in world politics, the threat of WMD proliferation and its seizure by terrorists, as well as new advanced forms of illegal activities in the area of cyberspace, biotechnologies, hi-tech. Global information struggle will intensify, there will be more threats to the stability of industrial and developing countries, their socioeconomic progress and democratic institutions. Nationalistic sentiments, xenophobia, separatism and violent extremism (including the slogans of religious radicalism) will grow. The demographic and environmental situation in the world will deteriorate; the challenges related to uncontrolled and illegal migration, drug trafficking and trafficking in human beings, other forms of transnational organized crime will aggravate. The emergence of epidemics caused by new unknown viruses is quite probable. The shortage of fresh water will be more tangible.”

Moreover, traditional challenges are slowly being moved into the background.

Fear hath a hundred eyes. When one works all the time with security issues, sometimes he forgets about this popular saying.


The lists of challenges and threats are large, they become longer and longer all the time. There is a serious risk that the international security debate is *sold better* when there is more fuss about this or that aspect of security, when people start playing with the very words – *challenges, threats, dangers...* The global excitement about the *swine flu* is another indication how quickly and easily the proliferation of human fears, not even weapons, goes on and how they can be manipulated – nowadays in global scale.

The fears are not only the means of manipulation; they are the means of earning.

What is the role of this or that new challenge? How does it affect the *international security index*? We try to solve this problem without panic or whining. In our previous issue we spoke about water and energy security. This time we attempt to address the matter of food security and start the discussion on this topic, thanks to Alexander **Golikov**.

We also proceed with the polemics on European security. Dmitry **Polikanov** in his article reviews the current state and potential future of the NATO-Russia relations and makes some optimistic policy recommendations on how to improve the relationship. Meanwhile, Chairman of the Duma Defense Committee Victor **Zavarzin** in his interview presents the official Russian point of view and draws much gloomier picture.

We intend to continue the discussion on hopes, not only on threats. Our observer, Dmitry **Evstafiev**, points out that “*hopelessness* is not when everything is bad. *Hopelessness* is when there is no hope.” He assumes that the new intrigue, new *big game* is unfolding in the world – nations strive for global supremacy during some protracted transition period. The winner in this struggle will be the one, who “will give the world a new hope.”

If only this new *big game* is really under way... Businesslike celebration of the 15th anniversary of the PIR Center will be a good platform to discuss this matter as well. 

Vladimir Orlov



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Nuclear Nonproliferation Encyclopedia

Published by the PIR Center and ROSSPEN publishing house the encyclopedia contains over 250 articles on key issues related to the history and current state of nonproliferation regime and nuclear weapons development:

- Major types of strategic arms;
- Nuclear programs and facilities of over 30 countries;
- International negotiations and agreements on arms reduction and disarmament;
- Functioning of national and international nuclear safety, security and nonproliferation institutions;
- Elementary nuclear physics.

Each term is provided with its English translation. All articles are complemented with a bibliographical note.

The authors of the book are famous Russian military and diplomats, experts in international relations and nuclear physics. Among them are Associate Professor of the MGIMO University Ildar **Akhtamzyan**, Lt. Gen. (ret.) Gennady **Evstafiev**, Col. Gen. (ret.) Victor **Yesin**, Lt. Gen. (ret.) Vasily **Lata**, IAEA Deputy Director General (1996-2003) Professor Victor **Mourogov**, Deputy Foreign Minister of the U.S.S.R (1989-1992) Alexey **Obukhov**, Ambassador Extraordinary and Plenipotentiary Roland **Timerbaev**, et als. The encyclopedia was edited and prepared for printing by PIR Center Executive Director Anton **Khlopkov**.

The encyclopedia is the perfect reading for students and professors, diplomats and lawyers, journalists and engineers, i.e. all those who need accurate and complete information on nuclear nonproliferation.

The publication has been made possible thanks to the generous support from the Ford Foundation and JSC **TENEX**.

If you have further questions on the encyclopedia, do not hesitate to contact Albert Zulkharneev by e-mail zulkharneev@pircenter.org or by phone +7-495-987-19-15. To obtain the copies of the encyclopedia, please send your requests to ROSSPEN publishing house at phone/fax +7-495-334-82-42 or by e-mail market@rosspen.su



Alexander Plugarev¹

CHEMICAL WEAPONS DESTRUCTION: WILL RUSSIA AND THE UNITED STATES FULFILL THEIR COMMITMENTS BY 2012?

The Chemical Weapons Convention (Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, CWC), signed in 1993, is one of most effective instruments of nonproliferation of weapons of mass destruction (WMD). One of the key CWC compliance criteria is the destruction of the declared chemical weapons arsenals by the agreed deadline. The deadline was set at 10 years from the date when the CWC entered into force on April 29, 1997, with the possibility of extending the deadline by another five years – that is, until 2012.²

Six countries have declared possession of chemical weapons since the convention was ratified: Albania, India, Libya, Russia, the United States and one other country which asked to remain unnamed. According to the Stockholm International Peace Research Institute (SIPRI), that sixth country is South Korea. According to a report published at the 13th CWC conference in December 2008, two countries had completely destroyed their chemical weapons stockpiles as of October 31, 2008 – Albania and the sixth unnamed country (Albania had completed the destruction of its stockpiles by July 4, 2007, and the unnamed country by July 10, 2008.) India had destroyed 97.3 percent of its Category 1 chemical weapons (expected completion date April 28, 2009) and all its Category 2 and 3 stockpiles. Libya had destroyed 39 percent of its Category 2 weapons, but had not even started on Category 1 (expected completion date December 31, 2011). Russia had destroyed 29.79 percent of its Category 1 weapons and all its Category 2 and 3 stockpiles (expected completion date April 29, 2012). The United States had destroyed 55.79 percent of Category 1 weapons and all its Category 3 stockpiles (expected completion date April 29, 2012).³

Based on these figures, some experts are worried that the United States and Russia, owners of the world's two largest chemical weapons arsenals, are in danger of missing the CWC deadline.⁴ Failure by one or both of the two largest chemical weapons powers to meet CWC requirements would be a severe blow for the convention and seriously undermine chemical weapons control process in the 21st century.

STATE OF U.S. CHEMICAL WEAPONS ARSENAL IN 2008

Under the CWC, all toxic chemicals posing a risk to the object and purpose of the convention are listed as Schedule 1, 2 and 3 depending on how hazardous they are.⁵ Based on that classification, all chemical weapons are also divided into 3 categories.



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Table 1. Categories of chemical weapons⁶

Category 1 weapons	Chemical weapons on the basis of Schedule 1 chemicals and their parts and components
Category 2 weapons	Chemical weapons on the basis of all other chemicals and their parts and components
Category 3 weapons	Unfilled munitions and devices, and equipment specifically designed for use directly in connection with employment of chemical weapons

After the CWC entered into force, the United States declared possession of 28,572 metric tons⁷ of Schedule 1 chemicals: mustard gas and mixtures based on it, VX and Sarin. Over 60 percent of it was stored in 1-ton containers, and the remaining 40 percent in munitions.⁸

Preparations for the destruction of American chemical weapons began in 1986, after the U.S. Congress passed a bill ordering the Pentagon to destroy all chemical weapons.⁹ At this moment (as of June 1, 2008) the destruction of American chemical weapons is the responsibility of the U.S. Army Chemical Materials Agency (CMA) set up in 2003.¹⁰

The CMA runs two chemical weapons destruction projects:¹¹

- Chemical stockpile elimination project – manages the safe treatment and disposal of stockpile chemical agents and weapons at processing facilities built close to the storage sites, without removing the chemicals to remote facilities;
- Non-stockpile chemical materiel project – the elimination of America’s remaining non-stockpile chemical materiel.¹²

The agency itself is directly accountable to the assistant secretary of the army for acquisition, logistics and technology.

A small part of America’s chemical arsenals (about 10 percent) is being disposed of under another program, the Assembled Chemical Weapons Alternatives (ACWA).¹³ This is a separate Department of Defense program whose original mission was to test and demonstrate alternative technologies to the incineration process for the demilitarization of assembled chemical weapons. In 2002, two sites were chosen for the application of selected technologies – the Pueblo stockpile in Colorado and the Blue Grass facility in Kentucky.¹⁴

The United States uses high-temperature incineration as the main disposal technology. Alternative technologies, including chemical neutralization followed by biotreatment or super-critical water oxidation, are used in those states where there is strong public opposition to incineration.

All American Category 1 weapons are being stored and disposed of at nine facilities. As of October 23, 2008, the United States had achieved the following results:

Table 2. Progress of American chemical weapons destruction:¹⁵

Facility	Technology	Tons of weapons and app. share of total	Percent destroyed	Start date	Completion date
1	2	3	4	5	6
Johnston Atoll Chemical Agent Disposal System – JACADS	High-temperature incineration	2,031 (6 percent)	100 percent	1990	2000
Aberdeen Chemical Agent Disposal Facility – ABCDF	Neutralization followed by off-site biotreatment	1,625 (5 percent)	100 percent	2003	2006



1	2	3	4	5	6
Anniston Chemical Agent Disposal Facility (ANCDF)	High-temperature incineration	2,254 (7 percent)	51.4 percent	2003	After 2012
Newport Chemical Agent Disposal Facility (NECDF)	Neutralization with off-site hydrolysate disposal	1,269 (4 percent)	100 percent	2005	By end of summer 2008
Pine Bluff Chemical Agent Disposal Facility (PBCDF)	High-temperature incineration	3,850 (12 percent)	16.4 percent	2005	After 2012
Umatilla Chemical Agent Disposal Facility (UMCDF)	High-temperature incineration	3,717 (12 percent)	36.5 percent	2004	After 2012
Tooele Chemical Agent Disposal Facility (TOCDF)	High-temperature incineration	13,616 (44 percent)	73 percent	1996	After 2012
Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP)	Neutralization followed by biotreatment	2,611 (8 percent)	0 percent	2011/2015	After 2012 By 2017/2020
Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP)	Neutralization followed by supercritical water oxidation	523 (2 percent)	0 percent	2011/2015	After 2012 By 2017/2023

According to these figures, as of October 31, 2008, the United States had destroyed 55.79 percent of its declared Category 1 chemical weapons.¹⁶

As for non-stockpiled munitions, the following results had been achieved by May 1, 2008 as part of the non-stockpiled chemical materiel project:¹⁷

- Binary chemical weapons¹⁸ completely destroyed in 2007;
- Former chemical weapons production facilities completely destroyed in accordance with CWC requirements in 2006;
- Various chemical military objects, including unfilled munitions, devices and other equipment specifically designed to aid in the deployment of chemical weapons (Category 3 chemical weapons) destroyed within the CWC-stipulated terms;¹⁹
- Recovered devices intended for use in connection with employment of chemical weapons (for example, chemical weapons identification kits) are being destroyed at the Pine Bluff facility. As of this moment, over 86 percent of materiel covered by the project has been destroyed at the facility, including 71 percent of materiel subject to declaration to the Organization for the Prohibition of Chemical Weapons (OPCW).²⁰

STATE OF RUSSIA'S CHEMICAL ARSENALS AS OF 2008

Russia inherited the world's largest chemical weapons arsenal from the Soviet Union – a total of 40,000 tons of Schedule 1 toxic agents, including 32,200 tons of organophosphorus chemical agents (OPCA), including Sarin, Soman and V-gases. The rest was vesicant/blister agents such as mustard gas, lewisite and their mixtures.²¹ All OPCA agents are being stored in munitions and devices. As for vesicant/blister agents, all of Russia's mustard gas is stored in containers; 2 percent of lewisite is stored in munitions and the remaining 98 percent – in contain-

ers; 40 percent of mustard gas/lewisite mixtures are in munitions and 60 percent in containers.²²

Russia's schedule for the implementation of its chemical weapons destruction program was much tighter than that of the United States because it was only in late 2002, five years after ratifying the CWC,²³ that Russia began the actual destruction process, in accordance with a law passed in 1996.²⁴

The practical fulfillment of Russia's commitments under the CWC is now the responsibility of the Russian Ministry of Industry and Trade, which is also the national body in charge of compliance with the CWC.²⁵ A special department for the implementation of CWC commitments was set up within the ministry to coordinate the activities of Russian ministries, agencies and other entities participating in the implementation of the federal program "Elimination of Chemical Weapons Arsenals in Russian Federation".²⁶ The body directly in charge of practical work on fulfilling Russia's commitments on chemical weapons destruction is the Federal Directorate for Safe Storage and Disposal of Chemical Weapons.

The technology used for chemical weapons destruction in Russia is two-stage chemical neutralization, with various modifications depending on the type of the chemical agent and the method of its storage.²⁷ The first stage consists of chemical neutralization of the toxic agent,²⁸ while the second includes processing of the reaction mass,²⁹ depending on its type, using hot bitumen with calcium oxide or high-temperature plasma with subsequent disposal at a burial site for low-toxic waste.³⁰

All of Russia's chemical weapons are being stored and destroyed at seven facilities. As of October 31, 2008, Russia had destroyed 29.79 percent of its declared arsenal of Category 1 weapons³¹ (see Table 3).

Table 3. Russia's progress in chemical weapons destruction³²

Facility	Tons of weapons and app. share of total	Tons and percent destroyed	Start date	Completion date
1	2	3	4	5
Experimental facility at Gornyy settlement, Saratov Oblast	1,125 (2.9 percent)	1,143.2 (100 percent)	2002	2005
Chemical agents disposal facility (CADF) in the town of Kambarka, Republic of Udmurtiya	6,575 (15.9 percent)	6,325 (96.2 percent)	2006	2010
CADF in the settlement of Maradykovskiy, Kirov Oblast	6,900 (17.4 percent)	4,402 (63.8 percent)	2006	2012
CADF in the settlement of Leonidovka, Penza Oblast	6,795 (17.2 percent)	0 (0 percent)	First stage launched in September 2008	2012
CADF in the town of Shuchye, Kurgan Oblast	5,462 (13.6 percent)	0 (0 percent)	Start-up using real materiel to begin in December 2008	2012
CADF in the town of Pochep, Bryansk Oblast	7,500 (18.8 percent)	0 (0 percent)	2009	2012
CADF in the settlement of Kizner, Republic of Udmurtiya	5,700 (14.2 percent)	0 (0 percent)	2011	2012

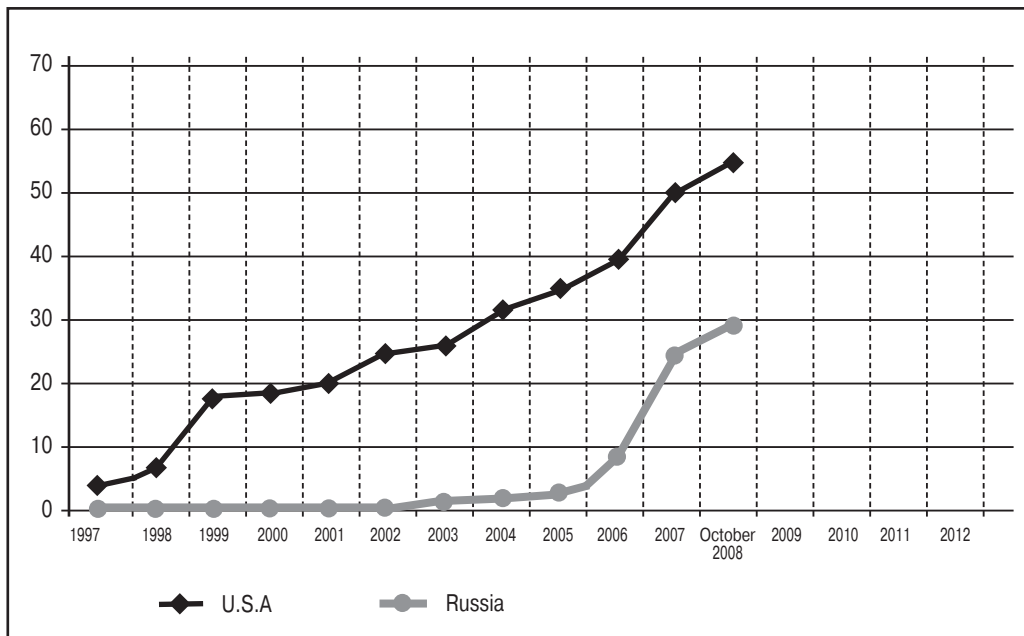
In addition, out of Russia's 24 former chemical weapons production facilities, seven have been destroyed (and OPCW certificates to that effect have been obtained); one other facility has been destroyed but the certificate for that was still pending as of February 26, 2008.³³ Conversion has been completed at 15 of the remaining facilities (OPCW certificates obtained for 13 of them),³⁴ conversion³⁵ is still under way at one last facility.³⁶

Russia's Category 2 and 3 chemical weapons have been destroyed ahead of the deadline (by 2002).³⁷ From that moment onwards Russian chemical weapons no longer posed any threat to neighboring countries. The propellant charges in all chemical munitions have been destroyed and unfilled munitions have been remelted, so the remaining toxic agents can no longer be used as weapons. Now more than ever the remaining chemical weapons are an environmental hazard for Russia itself rather than a military threat to its neighbors.³⁸

CHEMICAL WEAPONS DESTRUCTION IN THE UNITED STATES AND RUSSIA

Over the 11 years since the United States and Russia ratified the CWC, both countries have been employing what they thought were adequate resources and technology to overcome the difficulties and achieve the common goal of complete elimination of chemical weapons.

*Figure 1. Rate of chemical weapons destruction in the United States and Russia in 1997–2008*³⁹



When the CWC entered into force, the United States had all the conditions in place to meet all the chemical weapons destruction deadlines. Its chemical weapons disposal program had already been approved, the disposal technology had been chosen and tested on an industrial scale, the actual disposal process had been under way for seven years, and the required funding had been made available. Unlike other countries, which had only just started their chemical weapons disposal programs, the United States already had two disposal facilities up and running (the Johnston Atoll facility had been in operation since 1990 and the Tooele facility since 1996). But despite the good start, it soon turned out that the United States was not destroying its chemical arsenals fast enough to comply with intermediary CWC deadlines, even as costs continued to creep up. As Table 4 demonstrates, the funding of the program has roughly doubled in the past few years compared to 1997.



Table 4. Funding of the U.S. chemical weapons disposal program in 1997–2007⁴⁰

Fiscal Year	Funding, millions of dollars
1997	759.847
1998	600.7
1999	803
2000	1,024
2001	980.1
2002	1,153.557
2003	1,490.199
2004	1,530.261
2005	1,371.990
2006	1,425.827
2007	1,277.304

Under the terms of the CWC, there are four [Category 1] chemical weapons destruction milestones:

Phase 1	1 percent (by April 2000)
Phase 2	20 percent (by April 2002)
Phase 3	45 percent (by April 2004)
Phase 4	100 percent (by April 2007)

The United States reached Phase 1 and 2 milestones ahead of the deadline, the first in 1997 and the second in 2001.⁴¹ But suggestions appeared as far back as 1999 that the United States would be able to destroy only 90 percent of its chemical weapons during the 10 years allotted by the CWC to destroy all the existing arsenals. The remaining 10 percent (at the Colorado and Kentucky facilities) would have to be destroyed later. According to the National Research Council,⁴² disposal at these two facilities is expected to be completed by May 2011–December 2015.⁴³ An ACWA representative confirmed this information in 2000, saying that the Colorado and Kentucky facilities would not be launched before 2007. The main reason for that was the need to finish the trials of the technologies selected as alternatives to incineration, and to obtain all the permits for their application.⁴⁴ By April 2004 it became clear that the United States had failed to meet Phase 3 deadline. The Government Accountability Office (GAO) named the following reasons for that:⁴⁵

- several emergency situations at the disposal facilities;
- the need for more stringent work safety and environmental requirements;
- the need to implement emergency prevention measures at the disposal facilities;
- unforeseen costs.

According to GAO estimates, complete destruction of chemical weapons could not be achieved before 2012. That is why the United States submitted a request to the OPCW for an extension of intermediary deadlines. December 31, 2007 was proposed as the new deadline for Phase 3 destruction.⁴⁶ But calculations made by the GAO in 2005 indicated that previous estimates were too optimistic and the United States would not be able to complete the destruction of its chemical weapons by 2012. An announcement to that effect was made by the Department of Defense in 2006. New estimates indicated that by 2012, about 34 percent of the original stockpiles would still be left to process.⁴⁷ The same year, the United States

requested the OPCW for a maximum possible extension (five years) of the final deadline for the destruction of all its chemical weapons.⁴⁸ It named the following reasons:⁴⁹

- ❑ delays in obtaining permits⁵⁰ for beginning the disposal process at some facilities;
- ❑ the need for additional public safety measures in case of emergencies;
- ❑ maintenance at the facilities was taking longer than expected and had to be performed more often;
- ❑ disposal process taking longer than expected;
- ❑ unforeseen technical problems;
- ❑ the need to put in place better work safety measures and emergency procedures at the disposal facilities;
- ❑ old munitions were proving more difficult than expected to destroy;
- ❑ the need for additional public safety training for possible emergency situations.

At a CWC conference on December 8, 2006, the final deadline for the destruction of American chemical weapons was pushed back to April 29, 2012.⁵¹ In July 2007, the United States reached Phase 3 milestone (destruction of 45 percent of chemical weapons) ahead of the revised December 31, 2007 deadline.⁵²

But is it plausible that technical difficulties alone had jeopardized Washington's compliance with the CWC deadlines? After all, the United States has vast resources and even renders assistance to several other countries (Russia, Libya and Albania) in the destruction of their own chemical stockpiles. It is entirely possible that the implementation of America's chemical weapons disposal program was affected by certain military and political considerations.

First, there is the lack of trust in U.S.-Russian relations, and the "trust but verify" principle reigns supreme. The United States has repeatedly questioned whether Russia has fully declared its chemical weapons arsenals.⁵³ Suggestions have been made that the former Soviet Union had been developing binary chemical weapons, just like the United States had. But whereas the United States has declared its binary weapons arsenals, Russia said it had not inherited any such weapons from the Soviet Union. Some experts in the United States question that claim. The lack of trust between the two countries and doubts over each other's commitment to full elimination of chemical weapons could prompt the United States to try to keep some of its chemical weapons, as well as to obtain more detailed information about the Russian chemical weapons arsenal than warranted by Russia's international commitments.

Second, the CWC has not yet become a universal international treaty – 10 countries have not signed up to it.⁵⁴ Because the United States thinks of itself as the guardian of international security, it believes its moral imperative is to make sure that all the remaining countries sign up and destroy their chemical stockpiles. Only then will it consider itself in a position to complete the destruction of its remaining chemical weapons. But the situation is being complicated by the fact that for some countries that have not signed up to the CWC, chemical disarmament is inseparable from the issue of nuclear nonproliferation. For the Middle Eastern countries like Egypt and Syria, giving up the right to chemical weapons and signing up to the CWC is directly linked to Israel's willingness to give up the chemical and nuclear weapons it is presumed to have. That is why it is essential to find a common solution for both these problems, nuclear and chemical. Until the CWC becomes universal, countries such as Syria, Egypt and North Korea, which the United States is so worried about, will not sign up. And as long as they remain outside the CWC regime, the United States is unlikely to destroy all its remaining chemical weapons.

Third, some Russian experts believe that the United States is trying to acquire special legal status within the OPCW (just like in other international organizations), which would enable Washington to exert unilateral influence on other signatories using various OPCW mecha-



nisms, acquire access to technical information the organization has, and to lighten the burden of OPCW inspections on U.S. facilities. That would essentially turn the OPCW into a pliant instrument of American foreign policy.⁵⁵ That goal has been partially achieved with the arrival of the current OPCW Director General, Rogelio Pfrter, enabling the United States to obtain favorable conditions for keeping some of its chemical weapons indefinitely. In future, failure by one or, in the worst-case scenario, both of the two largest chemical weapons powers on the planet (the United States and Russia) to comply with the CWC requirements could lead to a serious crisis in the OPCW. The United States would then be able to take advantage of that crisis to either strengthen its own position in the OPCW even further or weaken the organization itself. Such a development would also draw the attention of the CWC countries from problems such as the development of new non-lethal toxic agents and their possible deployment; the impact of recent advances in biology and nanotechnology on issues covered by the CWC; the impact of technological advances on verification procedures, etc.

All these speculations are corroborated by the history of the United States pushing back the deadline for the elimination of its chemical weapons stockpiles prior to the CWC entering into force. Under Public Law 99–145, which was enacted in 1986, all American chemical weapons were to be destroyed by September 30, 1994, “unless a treaty banning chemical weapons is ratified or a threat arises to national security of the United States.” That is an important qualification, suggesting that political considerations played a significant role in setting the deadline for the destruction of chemical weapons. In 1988, the deadline was pushed back to April 30, 1997 (Public Law 100–456). In 1991 it was pushed back yet again, this time to July 31, 1999 (Public Law 102–190). And in 1992 it was postponed until December 31, 2004 (Public Law 102–484)⁵⁶. It is worth noting that under a Soviet-American agreement⁵⁷ signed in 1990, both countries undertook to cut their existing stockpiles of toxic agents to 5,000 tons by 2002. And finally, in 1997, following the ratification of the CWC, the deadline for the destruction of all chemical weapons was pushed back yet again to 2007.

Since then, the deadlines for the destruction of American chemical weapons were set by the terms of the CWC, and they have already been pushed back at least twice. As Figure 1 suggests, there is a certain correlation between the progress of American and Russian chemical weapons disposal programs. At first (in 1997–1999) the size of American stockpiles was rapidly going down – but by 1999 it had become clear that Russia would be unable to meet the CWC requirements. It had not even started the actual destruction of its own stockpiles and applied to the OPCW for an extension of intermediary deadlines for Category 1 weapons destruction. From that moment onwards and until the end 2001, the destruction of American stockpiles was virtually put on hold. What is more, understanding full well its status as the largest donor of the Russian chemical weapons disposal program, the United States nevertheless froze its assistance to Russia, leading inevitably to the Russian program falling behind schedule. Also in 2001, first statements were made in the United States that the 10-year term set out in the CWC was not sufficient to complete the destruction of American chemical weapons.

However, in 2001 Russia introduced serious changes into its chemical weapons disposal program and, making use of more generous international assistance, started the destruction of Category 2 weapons. It seriously increased the program’s funding and by April 26, 2003, it had successfully achieved Phase 1 milestone. As shown on Figure 1, at about the same time the United States speeded up the implementation of its own program, which from then on kept making steady progress until 2006.

In 2005, it became clear that the Russian program was in jeopardy yet again because the construction of the key disposal facility in the town of Shuchye was falling behind schedule (largely because the United States was not properly fulfilling its commitment to fund the construction of part of the facility). Once again Russia had to introduce significant changes into its program (to rely less on foreign assistance) in order to meet Phase 2 deadline. As a result of those efforts, the rate of Russian chemical weapons disposal surged rapidly in 2006–2007, as shown on Figure 1. Meanwhile, also in 2005, the United States reassessed the expected terms for the completion of chemical weapons destruction, and starting from late 2006, there has been a sharp increase in the rate of American chemical weapons destruction as well.

Russia

At the time of the ratification of the CWC, Russia was not as well placed as the United States to proceed with chemical weapons disposal. The country was in the throes of an economic and social crisis. In 1998, only 3.9 percent of sum earmarked for the program in the federal budget was actually disbursed – \$7.7 million in real terms. Washington's decision to freeze the funding of Russian chemical weapons destruction in 2000–2002 was a serious blow for the program – the United States was its biggest foreign donor. Washington said it gave \$192.1 million⁵⁸ to the Russian program in 1999, and the figure for 2000 was expected to be about \$130 million.⁵⁹ A sharp contraction of the already insufficient international assistance and lack of own financial resources meant that much of the work fell severely behind schedule and Russia had to make serious changes to the 1996 federal program of chemical weapons disposal.

When the CWC was ratified, Russia's technology of chemical weapons disposal had not yet been tested on an industrial scale – only laboratory tests⁶⁰ had been successfully completed, and the federal program of chemical weapons destruction had only just been launched. In addition to that, Russia was in the throes of an economic crisis that had put it on the brink of survival, relegating chemical disarmament down the list of priorities. The political will Russia had demonstrated when it signed the CWC had for a certain period lost its urgency. Because of all that, Russia was unable to meet Phase 1 and 2 deadlines,⁶¹ and asked the OPCW for their extension in 1999. And in 2001, it asked for the final Phase 4 deadline for the elimination of chemical weapons to be pushed back by 5 years until 2012. Both requested were granted.⁶²

To summarize, it was the severe underfunding of the chemical weapons disposal program by the central government, inadequate international financial assistance and a severe political and economic crisis that had led to the intermediate deadlines being missed. However, as Russia's economy and the state of its finances began to improve, funding became available to put into practice the political will Russia had demonstrated when it signed the CWC to destroy all chemical weapons by the agreed deadline. As Table 5 indicates, there has been a dramatic increase in the government funding of the Russian chemical disarmament program starting from 2000.

Table 5. Russian spending on chemical weapons disposal program⁶³

Year	Funding, million U.S. dollars
1998 ⁶⁴	7.7
1999	13.7
2000	16
2001	96.6
2002	186.8
2003	190.7
2004	186
2005	400
2006	644
2007	1,073
2008	1,400

The improvement is obvious, as the program's funding has been growing every year. Back in 1998, only \$7.7 million dollars was spent on chemical weapons disposal, whereas in 2003 the figure had reached \$190.7 million dollars, and as much as \$1,073 million (26 billion rubles)⁶⁵ in 2007. In 2008, spending is expected to reach 28.3 billion rubles (about \$1.4 billion) [at the pre-crisis exchange rate]. Looking at Tables 4 and 5, it becomes obvious that Russia has practically reached parity with the United States in terms of annual funding for chemical weapons



disposal. And of the total amount of money spent on the Russian program of chemical weapons disposal by the end of 2008, 84 percent had been contributed by Russia itself.⁶⁶

The remaining 16 percent is technical assistance from other countries, including the United States. The total cost of the program is now estimated at 224 billion rubles, including 42.7 billion in foreign technical assistance, of which Russia has actually received about 30 percent, or 16.4 billion rubles,⁶⁷ as of July 1, 2008. Foreign assistance is mainly channeled into the construction of Russian chemical weapons disposal facilities. It covered about 17 percent of the cost of the Gornyy facility and 20 percent of the Kambarka facility. It is also expected that 48 percent of the cost of the Shuchye facility will be met by foreign donors. Because foreign funds constitute part of the Russian program's budget, their full and timely payment is crucial for its orderly implementation. Russia has already had to make changes to this program in the past,⁶⁸ delaying the launch of disposal facilities and revising intermediary deadlines for chemical weapons destruction due to problems with foreign funding.

But despite all the problems, Russia has met the extended Phase 1 and 2 deadlines. Russia is also expected to meet Phase 3 deadline (destruction of 45 percent of chemical weapons by December 31, 2009) and the final Phase 4 (elimination of all chemical weapons by April 29, 2012).

FUTURE OF AMERICAN CHEMICAL WEAPONS DESTRUCTION PROGRAM

The current situation is rather strange. At the time of the ratification of CWC, the United States was well-placed (in terms of financial resources, technology and experience) to meet all of the convention's requirements. But American officials are now saying that at the current rate, their country will be unable to meet the CWC deadline for the complete elimination of chemical weapons. In their 2006 request for an extension of the final deadline, the United States said that six out of its nine chemical weapons disposal facilities would not have completed their work by 2012. It said that elimination of chemical stockpiles would be finished only in 2017⁶⁹ – and judging from the wording of the document, even that is not the final estimate. And although the United States has repeatedly issued assurances that those estimates are based on current figures and that everything possible would be done to meet the CWC deadlines, it cannot be ruled out that despite the progress achieved over the past two years, the deadlines would have to be pushed back even further.

Table 6. Comparison of older and more optimistic recent estimates for the completion of chemical weapons destruction⁷⁰

Disposal Facility	2005 CMA estimate	2005 independent DoD estimate	2007 current program estimate	Difference between 2007 and CMA estimate	Difference between 2007 and DoD estimate
Anniston	Sep 2016	Jun 2016	May 2015	16 months	13 months
Newport	Oct 2011	Feb 2012	Oct 2009	24 months	28 months
Pine Bluff	Jan 2015	Nov 2015	Jun 2013	19 months	29 months
Tooele	Oct 2014	Sep 2015	Nov 2014	1 month	10 months
Umatilla	Jun 2017	Mar 2017	Dec 2014	30 months	27 months

The table suggests that over the period of 2005–2007, the rate of chemical weapons disposal at U.S. facilities had increased.

But even if the United States manages to maintain the current trend – or speed up the destruction of chemical weapons at these five facilities even further in order to finish by 2012 (which GAO specialists think is unlikely⁷¹) – there will still be the two facilities at Pueblo and Blue Grass, which will definitely not finish by 2012. According to the information the United States submitted to the OPCW in 2006, these two facilities will not be launched before 2011,⁷² and the destruction of chemical weapons there will be complete some time in 2012–2017.⁷³ And according to current estimates of the ACWA project (which runs these two facilities), destruction of chemical weapons there is expected to start only in 2015 and finish by 2020.⁷⁴ This means that unless serious changes are made to the American chemical weapons disposal program or its funding is drastically increased, especially for the Pueblo and Blue Grass facilities, at least 10 percent of deployable American chemical munitions will still be awaiting disposal by 2012 – and that is the best case scenario. Under the worst case scenario, that figure could be as high as 34 percent.⁷⁵

At this moment, the United States has not announced any official plans for the destruction of chemical weapons after 2012, so only an informed guess can be made about when exactly the last American chemical weapons will be destroyed. According to official data cited above, that could happen some time in 2017–2020. A 2008 estimate by the non-governmental Nuclear Threat Initiative suggests that chemical weapons disposal will not be completed until 2023.⁷⁶ The Federation of American Scientists believes the deadline set by the U.S. Congress – 2017⁷⁷ – is the more plausible date.

All this raises the question of how exactly the United States is planning to address the situation whereby it will find itself in technical breach of CWC requirements. Unofficially, experts suggest several possibilities.

First, the United States could try to amend the text of the CWC and extend the deadline for eliminating chemical stockpiles. Considering America's political weight in the OPCW, that could be pulled off, although other chemical weapons powers could then similarly delay their own chemical weapons disposal programs. Given Washington's aspiration to be the last to destroy its chemical arsenals, such a development would not seem entirely acceptable to the United States.

Second, the United States could leave the terms of the CWC unchanged and cite the Albanian precedent as an excuse. Albania missed the deadline for the elimination of its chemical weapons by more than six months. But taking into account the obvious efforts made by the Albanian government and the full elimination of its chemical arsenals that was eventually achieved, it was decided to overlook the delay. The United States could try to follow the same path. In return for speedier progress in chemical weapons destruction and more stringent controls by the OPCW, Washington could ask for the same kind of exception that was made for Albania. That could enable it to achieve a situation whereby the United States alone would be allowed to finish the destruction of its chemical weapons arsenals after 2012. But in order to obtain the reprieve, Washington, which is now at least five years behind schedule, would have to catch up a bit. The shorter the extension it asks for, the more likely the other OPCW countries are to accept it.

Third, as of this moment, 10 countries have yet to sign up to the CWC. There are serious suspicions that at least four of them (Syria, Egypt, North Korea and Israel) possess chemical weapons. If and when those countries become members of the OPCW, they would have to be given more time to destroy their chemical weapons. The United States could try to use this situation to extend its own deadline. But that will depend on how soon those countries join and whether they actually have chemical weapons.

Several changes could be made to the American chemical weapons disposal program to speed up its progress.

- Allowing the transportation of chemical weapons. At present, all chemical weapons are being destroyed on site. If the U.S. Congress allowed transporting toxic agents from one facility to another, that could speed up the disposal program. The Pentagon is already considering such a solution. Furthermore, suggestions have been made that without allowing the transportation of toxic agents, the United States will not be able to



complete the program even by 2017.⁷⁸ But such a move is strongly opposed by the local population.

- ❑ Drastically increasing the funding of the program and improving efficiency. Unofficial estimates suggest that \$1.5–1.9 billion has to be spent every year to make sure that all chemical stockpiles are destroyed no later than 2017. Also, according to GAO specialists, much of the available funding is being wasted by contractors, with cost overruns of up to 400 percent in some cases. In addition, because the chemical weapons disposal program was extended for another several years in 2006, its total cost has gone up as well, and speeding up the disposal work has proved more expensive than initially thought. The facilities that will have to stay open beyond 2012 also require more funding. DoD officials have said that lack of funds is slowing down the preparations at the Pueblo facility.⁷⁹
- ❑ Exchanging experience with Russia. The main difficulty the American program is now facing is the disposal of chemical munitions stored at Blue Grass and Pueblo. The technology the Americans have chosen for this is chemical neutralization. But the problem is that the Americans have so far used this technology only on chemicals stored in containers, as opposed to various munitions with the propellant charges and detonators still in. Russia, however, has successfully tested on an industrial scale the technology of destroying toxic agents without removing them from munitions at the Maradykovskiy facility (Kirov Oblast). Sharing technology (once patents have been taken out, of course) could help the two countries overcome their difficulties.
- ❑ The presence of clear political will. Only that can allow the U.S. government to step up its efforts in this area and take radical, even unpopular steps (such as allowing the transportation of chemical agents) in order to meet the CWC deadlines. In this light, following Barak Obama's victory in the American presidential election there is now hope that the necessary funding will be made available and American chemical weapons stockpiles will be destroyed no later than 2017.

FUTURE OF RUSSIAN CHEMICAL WEAPONS DISPOSAL PROGRAM

Russia has served an example of how important strong political will can be. At the time of the ratification of the CWC, the country had neither the financial resources, nor the industrial-scale technology of chemical weapons disposal. It was in a dire economic crisis – but thanks to its clear political will to destroy all existing chemical stockpiles, at the start of the 21st century Russia managed to turn the situation around and destroy 29 percent of its Category 1 stockpiles within six years. The country has met Phase 1 and 2 requirements and is on track to meet Phase 3 and 4 deadlines.⁸⁰ Russia is now destroying its chemical weapons at the fastest rate in the world, and its spending on the chemical weapons disposal program is one of the highest among all the other countries. Barring serious unforeseen problems, Russia is well on track to meeting the CWC deadlines. Statements to that effect have been made by deputy prime minister Sergey Ivanov,⁸¹ the director of the department for CWC compliance, V.I. Kholstov,⁸² the head of the federal department for safe storage and disposal of chemical weapons, V.P. Kalashin,⁸³ and his deputy N.Y. Khlebnikov.⁸⁴ Even the director-general of the OPCE, Rogelio Pfirter, said he was confident that if the current rate of chemical weapons disposal was maintained, Russia would meet the CWC deadline.⁸⁵

A timely completion and launch of chemical weapons disposal facilities is crucial if those deadlines are to be met. Another three disposal facilities are scheduled for launch in 2008–2010. These few years will be very important for the success of the program. Unless the three facilities are delayed, Russia will be well on track to meeting the deadlines.

Foreign countries have been and still are rendering certain assistance in the construction of Russian disposal facilities, and this assistance is budgeted for in the program. As already noted, 48 percent of the cost of the Shuchye facility is being met by foreign countries. In the past, significant delays and shortfalls in foreign funding have led to some facilities coming on line far later than originally planned, and the chemical disarmament program had to be modified to take account of that. As of July 1, 2008, Russia had received only 38.4 percent of the expected

42.7 billion rubles⁸⁶ of foreign funding. But Russia's finances have now improved to the extent that the country can afford to cover the shortfall in funding from donor countries from its own budget, which has made its position much stronger. For example, 2,015,042,100 rubles was allocated from the federal budget⁸⁷ to cover the shortfall which had resulted from Italy's failure to disburse funds for the construction of the Pochep facility in 2006–2007. According to the Russian Audit Chamber, the shortfall of foreign funding for the program is now estimated at 19.43 billion rubles. Some 4.8 billion rubles was earmarked in the 2008 budget to cover that shortfall, and another 16.4 billion rubles⁸⁸ in the draft 2009–2011 budget.

Russia is currently on track to meeting Phase 3 requirements. The main precondition for that was the launch of the Leonidovka and Shuchye facilities before the end of 2008. The Leonidovka facility,⁸⁹ which is crucial for the fulfillment of Phase 3 requirements, was launched in September 2008. At Shuchye, start-up work using real materiel was expected to commence in December 2008. That means that Russia is on schedule to fulfill Phase 3 and – barring any problems with the funding of the program from the Russian budget – Phase 4 requirements. The chemical disarmament program could run into financial difficulties both in Russia and the United States if the ongoing financial crisis becomes a serious threat for the wellbeing of the two countries – though even then they would still be bound to honor their OPCW commitments.


Russia and the United States hold the two largest chemical weapons arsenals in the world. The future of chemical disarmament depends on their timely fulfillment of the CWC requirements. At the current rate, the United States is not going to complete the destruction of its chemical weapons arsenals within the already extended 15-year term stipulated by the CWC unless serious changes are made to the American chemical disarmament program (including a serious increase in funding and certain technical changes).

Russia, however, is well on track in terms of resources and technical capacity to meet the CWC deadlines. It is obvious that the Russian policy goal is to fulfill CWC commitments (witness the numerous statements to that effect by foreign and Russian officials, as well as the successes already achieved). That will deprive the United States of the chance to use Russia's failure to meet the CWC deadlines (and Washington's *friendly support* has often pushed Russia towards such failure) as a justification for America's own fiasco in this area. That is the right policy. If Russia and the United States both fail to complete the elimination of their chemical arsenals by 2012, Russia will become a bit player in Washington's ongoing political game, which is aimed at achieving the following:

- Finding an excuse not to comply with CWC requirements, citing Russia as precedent and pointing at the complexity and expense of the task;
- Keeping some of its deployable chemical munitions indefinitely and waiting until the remaining countries join the CWC; Russia, meanwhile, will be left with containers and unusable shells (whose detonators and propellant charges have already been destroyed) filled with toxic agents that pose a threat primarily to Russia itself;
- Using OPCW mechanisms to try to obtain more detailed information about Russian chemical arsenals, as any country that fails to meet CWC deadlines will probably have to accept more frequent and rigorous inspections;
- Using the crisis of the OPCW resulting from the failure of the two main chemical weapons powers to comply with CWC requirements as an opportunity to either strengthen America's own positions in the organization or weaken the OPCW itself; the crisis would also draw attention from other important issues such as the development of new non-lethal chemical agents.

The Russian strategy will throw a big spanner in those plans if not thwart them altogether. Furthermore, it will augment Russia's reputation as an OPCW member and international player, as well as bolster the CWC itself. These effects will depend on two key factors. One is Russia's ability to choose the best policy for a situation whereby it is close to completing the destruction of its chemical weapons on time while the United States is missing the deadline.



The other is the strategy the OPCW opts for in dealing with a nation that has failed to meet the CWC deadline. 

Notes

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² CWC. Verification Annex. Part IV (A): Destruction of chemical weapons and verification under Part IV. C. Destruction.

³ Note by the Director General. Status Report on the progress made by those states parties that have been granted extensions of deadlines for the destruction of their category 1 chemical weapons. OPCW, http://www.opcw.org/index.php?eID=dam_frontend_download&fileID=12497 (last visit – December 16, 2008).

⁴ For example: Oliver Meier, “CWC Review Conference Avoids Difficult Issues,” *Arms Control Today*, May 2008 – http://www.armscontrol.org/act/2008_05/CWC.asp?print (last visit – November 17, 2008); Malcolm Dando, “Missed opportunities at the chemical weapons treaty meeting,” *Bulletin of the Atomic Scientists*, May 12, 2008 – <http://www.thebulletin.org/node/2479> (last visit – November 17, 2008).

⁵ OPCW. Annex on Chemicals. A. Guidelines for Schedules of Chemicals. See also: OPCW. Verification Annex. Part IV (A). Destruction of chemical weapons and verification under Part IV. C. Destruction.

⁶ *Ibid.*

⁷ For historical reasons, stocks of toxic agents are measured in short tons in the United States. A short ton equals 2,000 pounds or 907.18 kg. Therefore American stocks of toxic agents equal 31,496 short tons or 28,572 metric tons. Russia measures its own stocks in metric tons – 40,000 tons.

⁸ Federation of American Scientists, United States: Chemical Weapons. <http://www.fas.org/nuke/guide/usa/cbw/cw.htm> (last visit – November 17, 2008).

⁹ Public Law 99–145 “Department of Defense Authorization Act, 1986” November 8, 1985. Public Laws Authorization and Appropriation Acts 1969–2007. CMA. Washington, DC, <http://www.cma.army.mil/include/docrendition.aspx?DocID=003674063> (last visit – November 17, 2008).

¹⁰ The agency took over the responsibility for chemical weapons destruction and storage, which was previously divided between the Program Manager for Chemical Demilitarization and Soldier Biological and Chemical Command). <http://www.cma.army.mil/questions.aspx#1> (last visit – November 17, 2008).

¹¹ CMA – Our Mission. CMA. <http://www.cma.army.mil/fndocumentviewer.aspx?docid=003674450> (last visit – November 17, 2008).

¹² A small part of chemical weapons is made up of non-stockpile materiel held at various facilities. It is thought that this materiel is stored at over 100 different locations. Non-stockpile chemical materiel includes 5 categories: a) binary weapons; b) miscellaneous chemical warfare materiel (Category 3); c) recovered chemical warfare materiel, such as chemical agent identification kits; d) former production facilities; e) old chemical weapons (CWC deadlines do not apply to their destruction).

¹³ Tooele Desert Chemical Depot – safely eliminating the nation’s largest stockpile of chemical weapons. CMA. January 3, 2007 <http://www.cma.army.mil/fndocumentviewer.aspx?docid=003676596> (last visit – November 17, 2008).

¹⁴ PL.107–248, Defense Appropriations Act for FY 2003 October 23, 2002. Public Laws Authorization and Appropriation Acts 1969–2007. CMA. Washington, DC, <http://www.cma.army.mil/include/docrendition.aspx?DocID=003674063> (last visit – November 17, 2008).

¹⁵ Table based on data from: Federation of American Scientists, FAS: (Chemical Weapons; Chemical Weapons Convention Archive). ; <http://fas.org/blog/cw/> (last visit – November 17, 2008); U.S. Department of State. <http://www.state.gov/documents/organization/64997.pdf> (last visit – November 17, 2008); U.S. Army Chemical Materials Agency, CMA. <http://www.cma.army.mil/home.aspx> (last visit – November 17, 2008); Assembled Chemical Weapons Alternatives, ACWA <http://www.pmacwa.army.mil> (last visit – November 17, 2008); *Nuclear Threat Initiative, NTI*. <http://www.nti.org> (last visit – November 17, 2008).

¹⁶ OPCW. Note by the Director General. Status Report on the progress made by those states parties that have been granted extensions of deadlines for the destruction of their category 1 chemical weapons. http://www.opcw.org/index.php?eID=dam_frontend_download&fileID=12497 (last visit – December 16, 2008).

¹⁷ Non-Stockpile Chemical Materiel Project Overview. CMA. <http://www.cma.army.mil/fndocumentviewer.aspx?docid=003671053> (last visit – November 17, 2008).

¹⁸ Binary chemical weapons are made up of two or more non-toxic precursors that are stored in separate containers within a single weapon. Once the weapon is in flight, the precursors are mixed up, producing a highly toxic agent

¹⁹ Non-Stockpile Chemical Materiel Project Overview. CMA. <http://www.cma.army.mil/fndocumentviewer.aspx?docid=003671053> (last visit – November 17, 2008).

²⁰ CMA News, May 2008, CMA. <http://www.cma.army.mil/fndocumentviewer.aspx?docid=003678150> (last visit – November 17, 2008).

²¹ Russian chemical weapons stockpiles. Russian agency for ammunition. www.munition.gov.ru/rus/zapasho.html (last visit – November 17, 2008).

²² Federal program “Destruction of chemical weapons stockpiles in the Russian Federation” (Edition 21 of March 21, 1996). Annex 1. http://www.munition.gov.ru/rus/36_5.html (last visit – November 17, 2008).

²³ Federal law on destruction of chemical weapons. *Compendium of Russian laws*, Issue 19, May 5, 1997, p. 2105.

²⁴ Federal law on the ratification of CWC. *Bulletin of international agreements*, Issue 2, 1998, pp. 65–68.

²⁵ Resolution 438 of the Russian government of June 5, 2008 – Statute of the Ministry of Industry and Trade of the Russian Federation. <http://www.minprom.gov.ru/ministry/docs/25>.

²⁶ Order 16 of the Ministry of Industry and Trade of the Russian Federation of July 11, 2008 “On forming the staff schedule of the Ministry of Industry and Trade of the Russian Federation”

²⁷ V.P. Kapashin, V.D. Nazarov, G.N. Bezrukov, “The facility in Gornyy, Saratov Oblast, is Russia’s first chemical weapons destruction facility,” *Information and Analysis Compendium “Federal and regional problems of chemical weapons destruction,”* Volume 5, <http://www.chemicaldisarmament.ru/print/98.html> (last visit – November 17, 2008).

²⁸ The process reduces the toxicity by a factor of tens of thousands, and completely destroys the toxic agent.

²⁹ Once confirmed by OPCW inspectors, the reaction mass is not considered to be a toxic agent and its destruction is not subject to CWC deadlines.

³⁰ V. Petrunin, “Technologies of chemical weapons destruction,” *Chemical Weapons and Problems of Their Destruction*, Issue 1, Spring 1996, p. 19.

³¹ OPCW. Note by the Director General. Status Report on the progress...

³² Table based on information from: Federal program “Destruction of chemical weapons stockpiles in the Russian Federation” (Edition 21 of March 21, 1996), Annex 1 and 2, http://www.munition.gov.ru/rus/36_5.html (last visit – November 17, 2008); Federal program “Destruction of chemical weapons...; *Chemical Disarmament*, <http://www.chemicaldisarmament.ru> (last visit – November 20, 2008).

³³ “Chemical disarmament: the process of chemical disarmament in Russia “is moving ahead at a brisk pace” – representative of the Russian president,” *Chemical Disarmament*, February 26, 2008, <http://www.chemicaldisarmament.ru/print/1202.html> (last visit – November 17, 2008); Federal program “Destruction of chemical weapons...”.

³⁴ Federal program “Destruction of chemical weapons...”

³⁵ According to Bulletin 3 (123)/2008 of the Russian Audit Chamber, 92.26 percent of special equipment at JSC *Khimprom*, Novocheboksarsk, had been destroyed as of September 2007. Russian Audit Chamber, <http://www.ach.gov.ru/bulletins/2008/3-8.php>

³⁶ Federal program “Destruction of chemical weapons...”



³⁷ Russian Federation and the situation in nonproliferation of weapons of mass destruction and delivery means: threats, assessments, objectives and ways to achieve them (*Open White Book of the Russian Ministry of Defense*), p. 32.

³⁸ "Sergey Kiriyyenko: Russia's Category 3 chemical weapons have been completely destroyed," Official web site of the presidential plenipotentiary in the Volga federal district, <http://www.pfo.ru/?id=3361> (last visit – November 17, 2008).

³⁹ Figure based on: Reports of United States General Accounting Office, <http://www.gao.gov/> (last visit – November 17, 2008); SIPRI annual reports for 1998, 1999 (Moscow: *Nauka*, 2000 and 2001); Reports of the OPCW on the implementation of the CWC in 2000, 2001, 2007, <http://www.opcw.org> (last visit – November 17, 2008).

⁴⁰ Table based on information from Public Laws authorization and appropriation acts 1969 – 2007 for the U.S. Army chemical materials agency. CMA, <http://www.cma.army.mil/fndocumentview-er.aspx?docid=003674063> (last visit – November 17, 2008).

⁴¹ "45 Percent Chemical Weapons Convention Milestone," CMA, <http://www.cma.army.mil/fndocumentviewer.aspx?docid=003677032> (last visit – November 17, 2008).

⁴² In order to finish by 2007, destruction of chemical weapons at these facilities should have started before June 30, 1999.

⁴³ As of January 31, 2000. Report to Congressional Committees. Chemical Weapons Disposal: Improvements Needed in Program Accountability and Financial Management. United States General Accounting Office, May 2000, <http://www.gao.gov/new.items/ns00080.pdf> (last visit – November 17, 2008).

⁴⁴ *Ibid.*

⁴⁵ "Destruction Schedule Delays and Cost Growth Continue to Challenge Program Management," GAO, April 1, 2004, <http://www.gao.gov/new.items/d04634t.pdf> (last visit – November 17, 2008).

⁴⁶ Report of the OPCW on the implementation of the convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction in 2003, <http://www.opcw.org/docs/csp9/c905.pdf> (last visit – November 17, 2008).

⁴⁷ "Additional Management Actions Needed to Meet Key Performance Goals of DoD's Chemical Demilitarization Program," (GAO-o8-134 Chemical Demilitarization), United States General Accounting Office, December 2007, <http://www.gao.gov/new.items/d08134.pdf> (last visit – November 17, 2008).

⁴⁸ "U.S. request for establishment of a revised date for the destruction of category 1 CW in the U.S.A.," U.S. Department of State, <http://www.state.gov/documents/organization/64997.pdf> (last visit – November 17, 2008).

⁴⁹ *Ibid.*

⁵⁰ The request did not specify this, but it was probably referring to obtaining permissions from environmental safety agencies.

⁵¹ Decision: requested by the United States of America for establishment of a revised date for the final deadline for destroying all of its category 1 chemical weapons. Eleventh Session of Conference of the States Parties. 5–8 December 2006. OPCW. [http://www.opcw.org/docs/csp/csp11/en/c11dec17\(e\).pdf](http://www.opcw.org/docs/csp/csp11/en/c11dec17(e).pdf) (last visit – November 17, 2008).

⁵² "45 Percent Chemical Weapons Convention...."

⁵³ D. Litovkin, A. Braterskiy, "Americans to play chemistry in Russia," *Izvestia.Ru*, <http://www.izvestia.ru/russia/article25520/index.html>

⁵⁴ As of December 20, 2008, 10 countries had not signed up to the CWC: Angola, the Bahamas, Dominican Republic, Egypt, Israel, Iraq, North Korea, Myanmar, Syria and Somalia.

⁵⁵ M.V. Berdnikov, "U.S. Policy on Chemical Disarmament (from the mid-1960s to 2007)," Doctoral thesis, ISKRAN.

⁵⁶ Public Laws Authorization and Appropriation Acts 1969–2007, CMA. Washington, DC. November 9, 2006, <http://www.cma.army.mil/include/docrendition.asp?DocID=003674063> (last visit – November 17, 2008).

⁵⁷ The Soviet-American treaty on the destruction and non-production of chemical weapons and on promulgation of multilateral convention banning chemical weapons never entered into force because it was

superseded by the ratification of the CWC. http://www.nasledie.ru/politvne/18_24/18_24_3/article.php?art=1 (last visit – November 17, 2008).

⁵⁸ Natalya Kalinina, “On international assistance to Russia in chemical disarmament,” *PIR Study Paper*, Issue 13, 2000, p. 47.

⁵⁹ Issue Brief. The Nuclear Threat Initiative, http://www.nti.org/e_research/e3_62a.html (last visit – November 17, 2008).

⁶⁰ V. Petrunin, “Technologies of chemical weapons...,” p. 19.

⁶¹ April 29, 2000 – first milestone (1 percent) and April 20, 2002 – second milestone (20 percent).

⁶² The deadline for reaching the first milestone (1 percent) was pushed back to April 29, 2002, and for the second milestone (20 percent) to April 29, 2007 – “OPCW Council Recommends Accepting Delay in Russian Chemical Weapons Destruction,” OPCW press release. http://www.opcw.org/html/global/press_releases/2k/pr13_2000.html (last visit – November 17, 2008); OPCW. Eighth Session of the Conference of the States Parties: A Summary, http://www.opcw.org/cdq/html/cdq4/cdq4_art4.html (last visit – November 17, 2008).

⁶³ Table based on information from: the Russian State Duma hearing on CWC ratification (verbatim record), October 30, 1997, p. 7; SIPRI annual reports for 1999, 2000 and 2005; open electronic journal *Chemical Disarmament* <http://www.chemicaldisarmament.ru/> (last visit – November 17, 2008); OPCW – <http://www.opcw.org/> (last visit – November 17, 2008); J. Tucker, *The Chemical Weapons Convention: implementation challenges and solutions*, Monterey Institute of International Studies, April 2001, p. 35; Center for Arms Control, Energy and Environmental Studies, <http://www.armscontrol.ru> (last visit – November 17, 2008); *Arms Control Today*, <http://www.armscontrol.org> (last visit – November 17, 2008); Strengthening the Global Partnership, SGP, <http://www.sgpproject.org> (last visit – November 17, 2008); “Kholstov confirms Russia’s intention to destroy its chemical weapons by 2012,” <http://www.rosprom.gov.ru/news.php?id=1344> (last visit – November 17, 2008).

⁶⁴ The table contains no data for 1995, 1996 and 1997 because Russia ratified the CWC only in November 1997.

⁶⁵ “Russia has destroyed a third of its chemical weapons arsenal – Agency for Industry,” *Chemical Disarmament*, April 29, 2008, <http://www.chemicaldisarmament.ru/print/1242.html> (last visit – November 17, 2008); “Chemical disarmament: the process of chemical disarmament in Russia “is moving ahead at a brisk pace” – representative of the Russian president,” *Chemical Disarmament*, February 26, 2008, <http://www.chemicaldisarmament.ru/print/1202.html> (last visit – November 17, 2008).

⁶⁶ “Russia is solving most serious challenges of chemical weapons destruction – head of the state commission for chemical disarmament,” *Chemical Disarmament*, December 2, 2008, <http://www.chemicaldisarmament.ru/print/1382.html> (last visit – December 17, 2008).

⁶⁷ “Chemical disarmament: the process of chemical disarmament in Russia...”

⁶⁸ Editions of July 5, 2001, October 24, 2005, June 21, 2007, December 29, 2007 and September 12, 2008.

⁶⁹ “U.S. request...”

⁷⁰ Table based on: GAO analysis of DoD and CMA data. Additional Management Actions Needed to Meet Key Performance Goals of DoD’s Chemical Demilitarization Program (GAO 08–134, Dec.2007). United States General Accounting Office, <http://www.gao.gov/new.items/d08134.pdf> (last visit – November 17, 2008).

⁷¹ Source: GAO analysis of DoD and CMA data. Additional Management...

⁷² That is primarily because alternative technologies first had to be tested at the Newport and Aberdeen facilities, and then adapted to destroying toxic agents in munitions.

⁷³ “U.S.A Request...”

⁷⁴ Blue Grass Army Depot, Kentucky – Project Stages. ACWA, http://www.pmacwa.army.mil/ky/project_stages.htm (last visit – November 17, 2008); Pueblo Chemical Depot, Colorado – Project Stages. ACWA, http://www.pmacwa.army.mil/co/project_stages.htm (last visit – November 17, 2008).

⁷⁵ Source: GAO analysis of DoD and CMA data. Additional Management...

⁷⁶ “Progress Reported in CW Disposal Across U.S.,” NTI, April 29, 2008, http://www.nti.org/d_newswire/issues/2008_4_29.html (last visit – November 17, 2008).



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⁷⁷ “Pentagon Plans to Transport Chemical Weapons Across the U.S.” FAS: Chemical Weapons Convention Archive, <http://fas.org/blog/cw/2008/07/pentagon-plans-to-transport-chemical-weapons-across-the-us.html> (last visit – November 17, 2008).

⁷⁸ The Pentagon has recognized that it may not be able to complete the destruction of its chemical arsenals by 2017. *Chemical Disarmament*, July 7, 2008, <http://www.chemicaldisarmament.ru/print/1306.html> (last visit – November 17, 2008).

⁷⁹ “Colorado wants mustard gas destroyed,” *Los Angeles Times*, June 19, 2008, <http://www.latimes.com/features/healthmedicine/la-na-pueblo19-2008jun19,0,7289585.story> (last visit – November 17, 2008).

⁸⁰ December 31, 2009 and April 29, 2012 accordingly.

⁸¹ “Russia must destroy its chemical weapons stocks by 2012 – Ivanov,” *Chemical Disarmament*, February 19, 2008, <http://www.chemicaldisarmament.ru/article/1/1199.html> (last visit – November 17, 2008).

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⁸³ “Russia has everything it needs to fulfill its chemical weapons destruction commitments by 2012 – V. Kapashin,” *Chemical Disarmament*, June 3, 2008, <http://www.chemicaldisarmament.ru/print/1267.html> (last visit – November 17, 2008).

⁸⁴ “Russia on track to completing chemical weapons destruction by the 2012 deadline – federal agency,” *Chemical Disarmament*, November 15, 2007, <http://www.chemicaldisarmament.ru/print/1140.html> (last visit – November 17, 2008).

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⁸⁶ “Audit Chamber finishes inspection of chemical weapons destruction program,” Audit Chamber information department, September 30, 2008, <http://www.ach.gov.ru/news/show/?2705> (last visit – November 20 2008).

⁸⁷ Report on the results of the audit of the presidential program of Russian chemical weapons destruction to verify compliance and use of federal budget and foreign aid funds in 2006–2007. *Audit Chamber Bulletin*, Issue 3 (123)/2008, <http://www.ach.gov.ru/bulletins/2008/3-8.php> (last visit – November 17, 2008).

⁸⁸ “Audit Chamber finishes...”

⁸⁹ Almost all the funding used in the construction of the facility came from the Russian budget – only 0.9 percent of the cost of the construction was covered by a \$66-million grant from Switzerland. See: “First stage of a chemical weapons destruction facility launched in Penza Oblast,” *Chemical Disarmament*, June 17, 2008, <http://www.chemicaldisarmament.ru/print/1275.html> (last visit – November 17, 2008).



Vasily Lata and Vladimir Maltsev

GALILEO PROJECT IN AMERICA-EU-RUSSIA RELATIONS

The impact of the *GALILEO* project on the relations between the United States, the EU and Russia should be discussed in the context of the geostrategic situation and military balance. That is why this article looks at the growing role of space and its impact on future military capability of the leading nations.

KEY ADVANTAGES OF SPACE CAPABILITY IN A MULTIPOLAR WORLD

The world is going through a period every bit as momentous as the late 1980s-early 1990s, which saw the collapse of the world order dominated by two superpowers – a bipolar world. The reign of a single superpower that came to replace it – a unipolar world – is now beginning to crumble. But the new world order that is now taking shape can best be described as “dynamically unstable”¹ rather than multipolar.

The leading nations are ramping up their military spending,² which, according to the Stockholm International Peace Research Institute (SIPRI), surpassed Cold War levels in 2006.

The old idea of creating a large-scale missile defense system is gaining traction among the American politicians and top brass, while the European nations are pondering a similar system for their own region. The reason for that, it seems, is recent breakthroughs in information and space technology, rather than the proliferation of missile technology itself.

Given all this, the new American space strategy³ adopted in 2006 deserves careful study.

The situation in space exploration is quite unique. Space is becoming ever more important for the United States. Global economic interests in a globalizing world require real-time global control. For its part, such control requires an accurate monitoring system on a planetary scale, including near-Earth space, which enables rapid decisionmaking and swift action. This kind of system can be deployed only in space. And interest in this system has been coming mostly from big business – that is why it is chiefly the private sector that has been funding space programs in recent years, not the government or the Pentagon. But big business always requires defense – and in this particular case, it is space defense we are talking about.

The Pentagon, however, also has important interests in space. The Department of Defense primarily requires the information component of these space systems, most of which are funded by the private sector. The hopes of transforming the American armed forces depend on making use of the information potential of space systems.

A global space-based information and control super-system is required to implement the fundamental idea of network wars.



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Careful study reveals that the modern American space program is not just a set of separate systems, each serving its own function. It is in fact a unique information super-system making use of the synergies between its individual elements.⁴

For example, the Russian *GLONASS* can never achieve the military capability of the American *GPS* system, because *GPS* is part of an overarching super-system, while *GLONASS* is just a separate hi-tech system.

This space-based information super-system offers America a new global competitive edge, and it was achieved thanks to America's competitive advantages in other areas such as finance and technology. The new American national space strategy aims to reinforce this new competitive edge and make use of it.

SPACE TURNING INTO KEY PLATFORM FOR FUTURE WARFARE

The leading nations of the world believe that the idea of network-centric warfare based on global information capability will be at the core of the armed forces of the future multipolar world.

The essence of network warfare is making use of superior information capability and networked military formations to achieve victory rather than relying on sheer numbers or superior firepower.

In a network war, the combat field is transformed into a new combat space. In addition to traditional targets for conventional weapons, this space includes new virtual targets such as emotions, perceptions, the mind of the enemy, etc. Network warfare is impossible without global communication between geographically dispersed combat units that work as a single network rather than relying on the traditional top-down command system. Making use of space capability to create a global communication system is the best way of turning information superiority into military superiority, by linking intelligent objects into a single information system on the theater of military operations.⁵

The first space system that can be classified as a true system (a system that has reached the limit in at least one characteristic) is the Space-Based Radio Navigation System (SRNS) based on a layered and differentiated fleet of satellites.⁶

Once this navigation system becomes part of the weapons control circuit, all the connected weapons systems immediately become true systems. The effects of that will become ever more significant as space communication, relay and information-gathering systems reach their full potential.

This process marks the beginning of the formation of a new information-warfare technosphere of true multi-level weapons systems.⁷

The U.S. leadership believes that America's experience in information warfare will enable it to make a big step forward in shifting the strategic balance of forces in America's favor.

It must also be taken into account that the orbital fleet of each space-based information system that becomes part of the information-warfare weapons control circuit must have at least three layers. So it is no coincidence that the United States plans to deploy more than 1,800 satellites over the next decade.⁸ However, using only military satellites for that purpose could be undesirable for economic and diplomatic reasons.

The alternative to that is the dual-purpose space-based information systems which, in addition to their civilian and commercial uses, also serve the needs of the military. The potential for such dual use of these systems has been repeatedly demonstrated, and to great effect, during the local wars and armed conflicts of the late 20th and early 21st century.

That is why America's new strategy of using its space forces includes the concept of "global partnership" in addition to "control of space", "global power projection" and "full integration of

the armed forces.” This concept is based on pooling the capabilities of civilian, commercial, scientific and international space systems to boost America’s military space capability.

The space effort is also helping the spread of information technology around the globe. Nations are deploying expensive systems in orbit, which constitute an important part of their national infrastructure.

The scale of this effort is illustrated by the fact that roughly 180 nations are participating in some kind of space-related projects.⁹ About 40 of them are working on developing military uses of space technology, 30 have their own national space programs, and 19 have the facilities and technology to build their own space vehicles. But apart from Russia, only the United States, France, China, Japan, and India have the kind of space infrastructure that is required for independent exploration and practical use of space.

The world now has a total of about 700 satellites in orbit, worth billions of dollars. A large part of those is military satellites. More than a thousand companies around the globe are involved in the space sector. Massive amounts of money are being spent on military space programs – \$21 billion a year in the United States alone. The spy satellite program accounts for about 20 percent of that figure.

U.S. experts are reviewing the forecast for the total number of satellite launches made in the U.S. Space Command’s “*Vision for 2020*”. They now believe that a total of 2,200 payloads will be put into orbit in the next decade rather than 1,800.

Space is becoming a serious and profitable multi-billion-dollar sector, and the platform for the armed forces of the future.

EU – NEW POWERFUL PLAYER ON GEOPOLITICAL ARENA

During the 1990s, European nations saw no real reason to worry about their own security. The Soviet threat had disappeared, and NATO was taking care of long-term strategic tasks. Not until 1999, when the Kosovo crisis broke out, did the Europeans remember about the so-called Petersberg tasks, and put the idea of a European armed force back on the agenda.

The central element of the European security and defense policy is the creation of an efficient command system for the European rapid reaction force. The EU Council of Ministers also approved the creation of the Military Committee and Military HQ of the European Union.¹⁰

In June 2003, following a request from the United Nations, the EU sent 1,800 servicemen into the Democratic Republic of Congo. The operation, codenamed *Artemis*, became the first precedent of the EU using its military strength outside the European continent.

Although the creation of a rapid reaction force became the first common European military initiative, it is still a far cry from a true European army. The national governments still retain command of their own forces in the European rapid reaction force, and essentially the EU member states are merely allowing Brussels the use of their own troops. Meanwhile, the EU is increasingly becoming a single state, and the creation of a proper European army at some point seems inevitable.

That necessitates a change of emphasis for the European space effort from research and commercial space launches to military applications. The key requirement for the new European space strategy is ending the dependence on the United States and preventing other competitors from building their own space infrastructure.

The *GALILEO* program is the first practical step in this effort. Proposed by the European Commission and the European Space Agency (ESA), the program is designed to build Europe’s own global satellite navigation system that would compete primarily with *GPS*.

The EU Council of Ministers approved the decision to build a civilian satellite navigation system in February 1999.¹¹ The new program, with a budget of €80 million, was soon named *GALILEO*. The total cost of the fully deployed system (30 satellites and the ground segment) is estimated at €3.8 billion.



The project's official aim is to facilitate the development of a new generation of international services in transport, telecommunications, environment and maritime navigation.

But few were deceived by the proclaimed *humanitarian* purpose of *GALILEO*. Although the system is designated as civilian, its specifications are designed for military use. America's *GPS* system and Russia's *GLONASS* were also designed primarily for military purposes. Even now the American armed forces consider *GPS* to be one of their key advantages in modern warfare, enabling them to use reliable and relatively inexpensive precision weapons.

The geography of the nations involved in *GALILEO* is not confined to the European Union. China, India, Ukraine, and Israel have already become active participants in the project. Negotiations are under way with Argentina, Morocco, Mexico, Norway, Chile, South Korea, Malaysia, Canada, and Australia.

The EU and other nations who want their own place in the sun need their own space capability that is not dependent on the United States or Russia. France's former president Jacques Chirac reflected the prevailing mood among the project's participants when he said back at the start of this decade that *GALILEO*'s failure would eventually turn Europe into an economic vassal of the United States. "We don't like monopolies," was the EU leaders' response to Washington's attempts to block the project.

Despite Washington's assurances that the existence of the American *GPS* (*NAVSTAR*) system makes *GALILEO* redundant, the Europeans and their partners in the project are rightly concerned by the possibility of being made hostage to the sharp turns of America's foreign policy. The United States reserves the right to switch the system off or degrade the accuracy of its positioning signal over those regions that it deems "problematic" – the *GPS* system has that functionality built in.

Analysts say the global satellite navigation market will continue to grow over the next decade. According to the Center for Industrial Economics and Knowledge at the Taiwan Institute of Technology Research, the total satellite navigation market will be worth \$10 billion by 2010, and then pick up the pace even more to reach \$750 billion by 2017. The size of the market was estimated at about \$3.5 billion dollars in 2003.

PricewaterhouseCoopers, and international consulting agency, estimates that the project's yield ratio over a 20-year period will be 4.6 – much better than any other large European infrastructure project. *GALILEO* is expected to create more than 100,000 jobs and support a market for equipment and related services worth some €9 billion.

GALILEO will be run by a civilian agency. However, in addition to the mass market consumers and commercial customers it will also be used by special high-level customers such as the police, the emergency services, etc. That suggests that in addition to the open signal, *GALILEO* will also have a restricted signal, just like America's *GPS* or Russia's *GLONASS*.

Developers are also mindful that over the past few years the emphasis in navigation services has shifted from aviation and shipping to land transport.

There are also numerous non-transport applications for *GALILEO*, including agriculture, sea shelf and open seas exploration, land surveying, etc. The market for an accurate timing signal service, used primarily by the telecommunications industry and for accurate frequency alignment in powerful energy systems, also holds great promise.

In civil aviation, *GALILEO* is expected to augment air traffic control, reduce travel time, improve airport access and generally facilitate more efficient use of aircraft and ground infrastructure. The system will meet the CAT-I precision approach and landing requirements in most airports, improve safety and substantially reduce the cost of the ground infrastructure.

The macroeconomic benefits of *GALILEO* include sales within the EU, exports to other regions and services that will create jobs within the European Union. Experts have looked at two scenarios for Europe – using *GALILEO* along with *GPS*, and relying solely on *GPS*.

They found that the use of *GALILEO* will give Europe greater social benefits. Cutting journey time for land transport by just 1 percent will ease congestion, reduce pollution, cut the number of traffic accidents and provide other benefits worth a total of €200 billion.

The European Global Navigation Satellite System (GNSS) will be implemented in two stages: GNSS 1 and GNSS 2. The first stage includes the creation of the European Geostationary Navigation Overlay System (EGNOS), which will offer the same services as *GPS* and *GLONASS* up until 2015–2018. GNSS 2, which is the main part of the project, is based on a new satellite constellation named *GALILEO*. The satellites were supposed to be deployed in 2007–2008, but there are only two that has been put into orbit so far, and even those satellites' signal access codes have already been hacked.

EGNOS offers improved *GPS/GLONASS* navigation (thanks to the addition of *GPS*-like signals generated by geostationary satellites) and timely reporting on the reliability and accuracy of the signals. Improving service in an individual geographic region is achieved with the help of an additional satellite (which is redundant to a certain degree). It sends a signal in the L1 band, available around the globe apart from the Polar regions.

The EGNOS orbital fleet consists of three Inmarsat-3 satellites, which will be equipped with a transparent transponder of navigation signals working in the C/L Band (6.4/1.5 GHz) on 1575.42 ± 2.2 MHz. It will transmit the C/A code, navigation signal and satellite constellation health status.

The navigation complex of the EGNOS system is far simpler than that of the *GPS* or *GLONASS* satellites. The C-band signal sent by the Inmarsat-3 satellites is received by the system's ground control stations. The L-band signal is received by *GPS/GLONASS* users. The additional navigation signal improves availability, while information about the integrity of navigation messages improves reliability and accuracy.

The structure of the EGNOS signal guarantees that the risk of loss of integrity will be below 2×10^{-7} at any given 150 second interval, while the maximum time-to-alarm will be no more than 6 seconds (loss of integrity is the inability of the system to alert the users in a timely manner about the possible inaccuracy of the signal). The estimated risk of interruption of the service is 10–5 per hour (uninterrupted service is defined here as maintaining functionality and quality of the service within specifications throughout the whole period).

GALILEO was designed to be interoperable with other communication and navigation systems, which is especially important when signal reception is poor or when additional information needs to be transmitted. *GALILEO* can be integrated with the Loran-C and EUROFIX terrestrial navigation systems, as well as the space communication systems which have their own positioning subsystems (*Globalstar*, *Orbcomm*), and wireless communication standards (*GSM*, *UMTS*) that store information about the handset's location.

The *GALILEO* system uses open architecture, which will facilitate interoperability with the existing systems such as *GPS* and *GLONASS*, with the EGNOS system, which is still under development, and with various search and rescue services. The list of the navigation services it will offer once fully deployed is much longer than that provided by *GPS* or *GLONASS*. *GALILEO* architecture includes three main segments: the satellite constellation, the ground infrastructure (ground control stations) and user equipment.

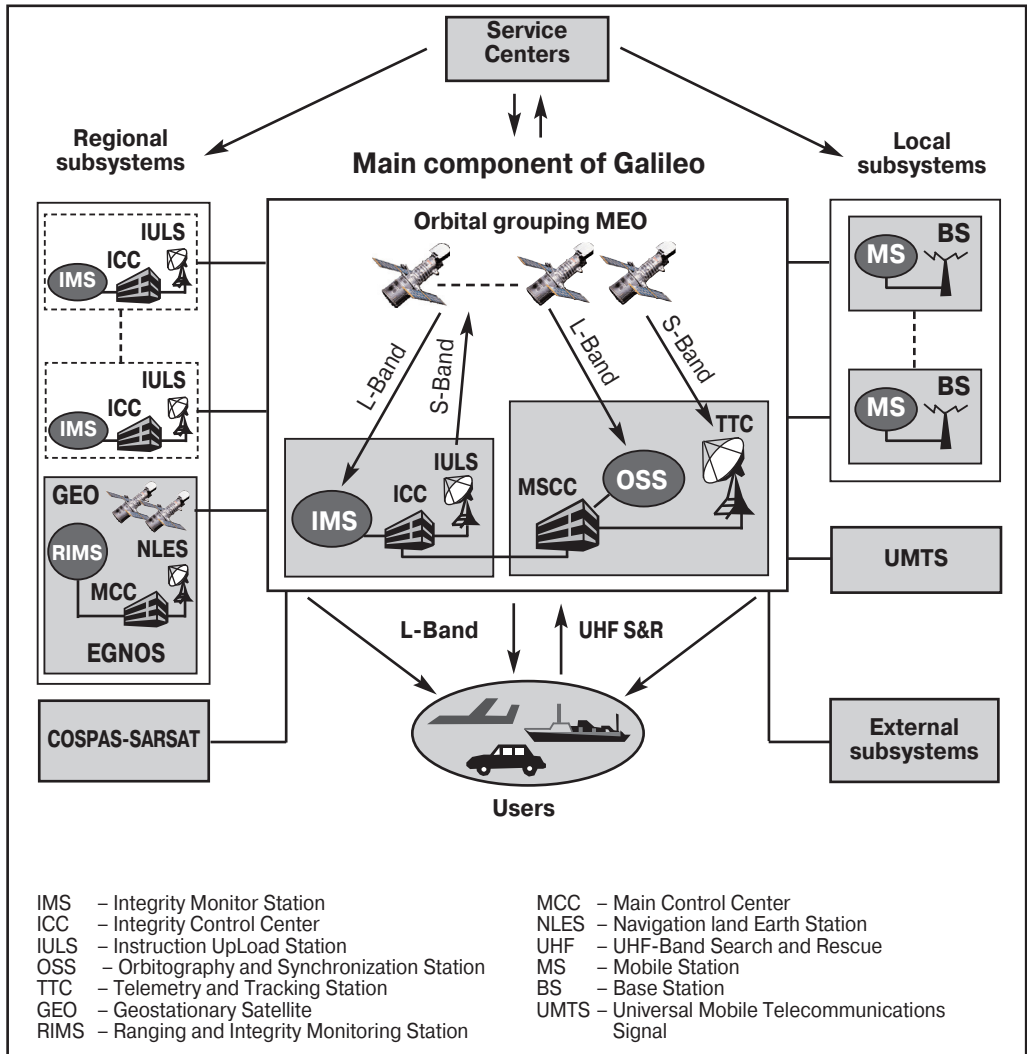
The orbital constellation will consist of 30 medium Earth orbit satellites providing global coverage and optimized for the northern latitudes.

The satellites weigh 725 and 1,350 kg (for medium Earth and geostationary orbits respectively). They are shaped as a hexagonal prism (with the base shaped as a trapezium). The wider lateral surface houses the antennas; the other surfaces hold the solar panels (four from each side) that unfold once the satellite is in orbit. Designers say this shape will allow up to six satellites to be put into orbit by a single launcher. The expected lifespan of the satellites is 10 years.

GALILEO's signal structure, which includes narrow-band and wide-band signals, is different from *GPS* or *GLONASS*. The main difference is the higher frequency, which allows for more accurate pseudo range measurements.



Figure 1. **GALILEO** architecture



The International Telecommunications Union (ITU) has allocated an unprecedented number of working frequencies and signals to *GALILEO*: a total of 10 navigation frequencies in the common band called RNSS (Radio Navigation Satellite Service) and one (for the S&R system) in the 1,544...1,545 MHz band.

The ITU has allocated six frequency segments in the L-band (for medium Earth orbit satellites) and one in the C-band (for geostationary satellites). Under the frequency allocation scheme, all three satellite navigation systems (*GALILEO*, *GPS* and *GLONASS*) use frequencies in closely spaced but non-overlapping segments.

Each navigation satellite of the *GALILEO* system will broadcast two noise-like radio signals in the upper and lower part of the L-band. General access services will rely on the E1 and E2 signals with a chip rate of 2–4 Mchips/sec. These signals are similar to the *GPS* system's C/A code. Two other signals, E5 and E6, will be transmitted with a higher chip rate for commercial customers.

Thanks to the availability of precise signal in two frequency ranges, *GALILEO* customers will be able to determine their position to within 4 meters horizontally and 8 meters vertically, with a confidence interval of 0.95. Using the EGNOS system will increase accuracy to within 1 meter, and to as little as 10 cm in special regimes.

GALILEO's ground infrastructure includes telemetry and ground control stations linked into a global monitoring network. This network will process information so quickly that any failures in the on-board equipment of the satellites will be identified within six seconds. The engineers are hoping that the time required to notify the users of any problems in the work of the navigation satellites will also be substantially reduced.

The ground control and monitoring segment of the system handles the launch of the satellites, their in-orbit validation and operation, and finally their de-orbiting. This segment includes the main Network Control Center (NCC) and the Navigation Systems Control Center (NSCC), which is subordinated to the NCC.

The NSCC coordinates the work of the Ground Control Segment, which includes:

- ❑ Tracking, telemetry and control (TT&C) stations, some of which will also handle the upload of navigation messages via the Upload Stations (ULS); the global component of the system will include five TT&C stations, though experts believe that their number could eventually be reduced to two;
- ❑ Orbitography and Synchronization Stations (OSS), which compute the ephemeris, synchronization and other data; the global part of the system will have 12 OSS stations;
- ❑ Integrity Determination System (IDS), which includes the Integrity Control Center (ICC) and Integrity Monitor Stations (IMS) – its regional component will have 15 IMS stations; the system also includes Integrity Upload Stations (ULS) – which ensure an uninterrupted upload of integrity data to geostationary satellites (up to three regional stations).

GALILEO's key difference from *NAVSTAR* and *GLONASS* is the use of the IDS system, which determines the precision of the navigation and timing signal based on data from the global component of the system, and calculates the necessary corrections and compiles data integrity alerts based on information from the regional component of the system.

The ground segment of the EGNOS system is expected to be integrated into the ground segment of *GALILEO*'s regional component. The architecture of the local component of the system will be defined for each class of users.

The system is expected to offer three levels of navigation service:

- ❑ The free Open Access Service will be available to all users, but it offers no guarantees of positioning or timing signal accuracy; the accuracy of the navigation signal at this level of service can be intentionally degraded in the event of war or international tensions, or if the provider decides to offer the service only to paying customers;
- ❑ Controlled Access Service Level 1 (CAS-1) will be offered to users who require guarantees of accuracy and availability of the positioning and timing signal, as well as commitments of an uninterrupted service from the provider; navigation accuracy can be intentionally degraded at this service level by the provider in the event of war or international tensions;
- ❑ The highest level of service is Controlled Access Service Level 2 (CAS 2) offered to government-financed users with stringent data security and integrity requirements, such as the police, emergency services, the armed forces and other strategic agencies; at this level of service the accuracy of the signal will not be intentionally degraded in the event of war or international tensions.

GALILEO will offer four core types of service. The basic Open Service will be used for positioning of moving objects (including positioning with the help of mobile phones), aviation and maritime navigation, as well as the Universal Time Service. These services will be free of charge.



The Safety-of-Life Service (SLS) will comply with the safety requirements specified by ICAO and other international organizations for applications such as docking ships in port or preventing train collisions. The required probability of successful position fix from the first try is no less than 0.999 for this service.

The third core service is the Public Regulated Service (PRS), which will provide navigation data to government agencies, police, civil defense, law-enforcement and emergency services, etc. The key requirement here is ensuring security from external interference and making it impossible for unregistered users to access the service.

And finally, the Commercial Service (CS) will be offered to paying subscribers. On top of the free Open Service, this will include transmission of additional encrypted data used for applications such as positioning of moving objects.

GALILEO will also implement a separate Search and Rescue Service. Each *GALILEO* satellite can rebroadcast signal from up to 300 distress beacons simultaneously. The signal will be passed on to search and rescue stations on the ground. Positioning accuracy of the existing COSPAS-SARSAT beacons is about 5 km, whereas the figure for *GALILEO*-equipped beacons will be less than 10 meters.

GALILEO will be interoperable with *NAVSTAR*, but the European system has four key advantages over the American one:

- ❑ Guaranteed level of service over an agreed period of time for some classes of civilian users in terms of accuracy, availability, continuity and integrity of the navigation and timing signal. The precise specifications of this guaranteed level of service will be agreed between the operator of the system, the service provider and the user. Such guarantee entitles the user to compensation if the quality of the service falls below the agreed specifications. The provision of service guarantees is made possible by data integrity control, which enables the user to rely on the service because the system will issue an integrity alert if the signal goes outside specification.
- ❑ Data integrity control, which improves the overall safety in critical applications; some of the satellites will be broadcasting encrypted integrity reports at the global level received from the ground segment of the system, including the SISA (Signal In Space Accuracy) signal with range error estimates and Integrity Flags in the navigation message, which warn the users about loss of integrity with time-to-alarm of 10 seconds (for normal aircraft landing) or 6 seconds (ICAO CAT-I requirements); the users will also receive warnings about the health of the satellite constellation;
- ❑ Better performance and signal quality because the signal is similar to that used in mobile communications, and also because the signal strength has been increased (in particular, *GALILEO* has higher bandwidth for the signal corresponding to L5 in *GPS*). For users of single-frequency receivers, *GALILEO* offers better ionospheric error correction, which improves navigation accuracy. *GALILEO* also implements user authentication, which ensures legal protection for both the user and the operator when guarantee of service issues arise;
- ❑ *GALILEO* satellites have improved search and rescue functionality – users can be located in real time with a probability better than 0.98 (the satellites pick up the SAR signal on the 406–406.1 MHz frequency and locate it to within 10 meters in less than 10 minutes, while the COSPAS-SARSAT system, which relies on low Earth orbit satellites, can take several hours to locate the signal);
- ❑ Another advantage of *GALILEO* advertised by its designers is accurate positioning in urban environment, where signal from satellites hanging low over the horizon is often obstructed by buildings. The improvement is achieved thanks to *GALILEO* having double the minimum number of satellites required for global coverage.

DIFFERENCES OVER SATELLITE NAVIGATION BETWEEN THE UNITED STATES AND EUROPE

On December 28, 2005, Russia's Space Agency (*Roskosmos*) launched the first experimental *GALILEO* satellite, *GIOVE-A*. The satellite was put into orbit by the *Soyuz-FG* carrier with the *Fregat* upper stage, launched from the Baikonur Cosmodrome, Launch Pad 6, Area 31. The carrier was manufactured by *Progress* design bureau (Samara), and the upper stage by NPO Lavochkin (Khimki). The customer for this launch was *Starsem*.

GIOVE-A (which stands for *GALILEO* In-Orbit Validation Element) was put into its projected orbit of 23,000 km, inclination 56 degrees. The mass of the satellite is 660 kg, length 1.2 meters, diameter 1.1 meter, service life 12 years.

The launch of *GIOVE-A*, its in-orbit testing and validation pursue three tasks. First, it allows Europe to claim the frequency spectrum allocated to *GALILEO* by the ITU. Second, the experimental satellite will be used for validation of critical technologies. And third, the satellite will study the radiation on *GALILEO*'s working orbit.

Although the European civilian system of satellite navigation is only making its first steps, the Americans are worried by *GALILEO*'s potential for competing with *GPS*. The United States has worked against the approval of the decision to deploy the European system, but to no avail.

The Americans have also begun to modernize their own system to raise the accuracy of positioning, synchronization and timing, improve availability of the signal and expand the monitoring and control functionality of the system. The Pentagon spent about \$234 million on *GPS* research and development in 2004, \$289 million in 2005 and \$401 million in 2006.

Experts name two reasons for America's hostility to the European satellite navigation system. The first is that *GALILEO* will compete with *GPS* in the civilian sector. The second is that the deployment of *GALILEO* will have serious implications for the military use of *GPS*. The problem is that the frequency range of the *GPS* military signal (M-code) overlaps with the PRS signal of *GALILEO*. Apart from interference, that will create difficulties for American and allied troops trying to use precise navigation information at times of crisis.

For several years U.S. officials have been using this argument in their discussions with the European Union, urging America's NATO partners to show solidarity. After a number of meetings between European and U.S. representatives, a 10-year agreement on *GPS-GALILEO* cooperation was signed in Dublin on June 26, 2004 by the U.S. Secretary of State and the Vice President of the European Commission for transport and energy, as well as by the Irish foreign minister.

It would have been natural to assume that the agreement signed by these senior officials would put an end to differences between the United States and Europe over satellite navigation. Instead, there have been reports of a very serious confrontation.

Right after the agreement was signed, a deputy chief of the U.S. Air Force issued an official document that essentially defenestrated the deal with the Europeans. Meanwhile, U.S. experts started dropping heavy hints that *GALILEO* signals would have to be jammed in the event of a conflict, and even the *GALILEO* satellites themselves might have to be destroyed.

RUSSIA-EU COOPERATION PROSPECTS IN SPACE AND SATELLITE NAVIGATION: WHAT NEXT?

Speaking about Russia's European policy in 2007, the Russian president's special representative for relations with the EU, Sergey Yastrzhembskiy, said that relations between Russia and the European Union were improving. Bilateral trade was up from \$48 billion in 2000 to \$231 billion in 2006. Trade turnover had risen by \$60 billion in 2005–2006. The EU has become Russia's biggest trading partner.

There is a lot of potential for cooperation with Europe in the space industry. This cooperation goes back to the early days of the Russian space program.¹² The number of joint EU-Russian



projects has grown in recent years. These include the Automated Transfer Vehicle (ATV), a supply ship; science missions such as *Integral*, *Mars-Express* and *Venus-Express*; joint projects in telecommunications such as the *Express* satellites; Russia's participation in *GALILEO*; and the joint project to build a launch pad for the *Soyuz* carriers at Kourou (Guiana Space Center). *Roskosmos* also cooperates with ESA on the long-term Solar system exploration program *Aurora*.

On the whole, cooperation between *Roskosmos* and ESA encompasses almost every field of space exploration and offers substantial benefits to both parties.

Russia will launch several more *Express-AM* satellites as part of its Federal Space Program. It is expected that the transponders for these satellites will be supplied by *Alcatel*.

The Russian space program also includes the development of *Sterkh*, a small satellite that will be used in the Russian segment of the international search and rescue service COSPAS-SARSAT. The Russian space equipment designer *RNII KP* is the lead bureau for the entire Russian segment, while the *Polet* bureau is responsible for *Sterkh*.

Roskosmos is also working with *ASI*, *Alenia Spazio* and *NPO PM* on developing a satellite communication and relay system for air traffic control called SDRS. The system will offer a wide range of communication services to mobile users, and will be used primarily for guiding air traffic over the Polar regions and for maritime navigation in the northern seas. The developers have already finalized the key design principles of the system.

Russia and the EU are now discussing cooperation in the following key areas:

- Satellite broadband access (Digital Divide);
- Joint multifunctional system of data communication via a relay satellite;
- Multiservice satellite communication system for the northern latitudes that would serve the needs of transport, environmental research and monitoring of industrial facilities.

Russia and the EU have set up a working group on cooperation in satellite navigation and augmentation systems. The group has already begun its work.

Another key area of cooperation is manned space missions, including the International Space Station (ISS). ESA's contribution to the project is the *Columbus* module and the ATV supply vehicle, which docks to the Russian segment of the ISS. That makes cooperation between the EU and Russia all the more important, and serious work is under way to integrate the ATV with the Russian segment.

The *Soyuz-Kourou* project has great political significance. The decision to include the *Soyuz-2* carrier in the lineup of European carriers along with *Arian 5* and *Vega*¹³ is a key strategic element of our partnership and a very important political step.

Using Russian carriers to put European research, remote-sensing and navigation satellites into orbit is another important area of scientific and commercial cooperation. This includes projects such as *Integral*, *Venus Express*, *Mars Express*, etc.

One other key area of future cooperation is exploration of the outer space, including manned missions. Russia and the EU are working together on the *Aurora* program. The first element of this program, the interplanetary station *ExoMars*, was approved by ESA nations at the ministerial level. The launch of the mission is planned for 2013. Negotiations are now under way with Russia on its participation in various parts of the mission.

Russia and the EU can also cooperate in developing next-generation space transport vehicles. Russia is proposing the *Klipper* and *Parom* vehicles, the modified *Soyuz*, and others. Discussions in this area have been under way for quite some time. Last year, ESA ministers approved funding for the next 18–24 months period of studies on creating a joint transport vehicle of the future. Cooperation with Russia in this area will be on a non-commercial basis: each side will pay for its own part of the project. The design specifications require the vehicle

to be able to serve the near-Earth orbits as well as travel to the Moon. It must also be capable of launching not just from Baikonur but also from Kourou.

Cooperation in this area holds strategic importance for both the EU and Russia as it offers them a space capability that is not dependent on the United States. Everyone realizes that depending on just one system is not in their interests, however reliable that single system might be – witness the International Space Station, which would have already been abandoned if it weren't for the Russian *Soyuz* rockets. The same requirement applies to future missions to the Moon and Mars. There must be more than one system, and there must be a certain degree of compatibility and interoperability between these systems.

In March 2007 the Russian Federal Space Agency and the European Space Agency signed a protocol on cooperation during a ceremony at the *Roskosmos* HQ. The protocol outlines several areas of cooperation between *Roskosmos* and ESA, including manned missions.

ESA will use the Russian *Soyuz* carries to put *GALILEO*, *Mars Express* and *Venus Express* spacecraft into orbit, according to ESA Director General Jean-Jacques Dordain. He added that *Roskosmos* and ESA were discussing the possibility of jointly developing a next-generation vehicle to deliver cosmonauts to the ISS. The Russian navigation system *GLONASS* and Europe's *GALILEO* will be complementary, compatible and interoperable, *Roskosmos* head Anatoly Perminov told journalists.

He also said that during the talks at *Roskosmos*, an agreement had been reached that "in the future, users will be able to use a single receiver to pick up *GLONASS* and *GALILEO* signals." Under the agreement, designers from both sides will work to ensure compatibility. He added that satellite navigation is just one individual area of cooperation between *Roskosmos* and ESA. The *GALILEO* project was launched in 2000. The system was expected to become operational in 2008, but because of differences between the ESA nations over the funding of the project, the system may not reach full operational capacity for another several years. Negotiations on compatibility and interoperability of *GALILEO* and *GLONASS* are already under way.

Roskosmos and ESA have also decided to begin space flight testing of a big reflector antenna, another joint project. As part of the fundamental space exploration program, the two sides have decided to complete the preparation of an agreement under which Russia will provide a scientific instrument for *BepiColombo*, the European mission to *Mercury*. *Roskosmos* and ESA will also finalize proposals on Russia's participation in *ExoMars*. The two sides will continue the implementation of the project to build a *Soyuz* launch pad at the Guiana Space Center. The agreement stressed "the importance of joint projects in future space launcher technologies."

The two space agencies will carefully study all the aspects of developing a next generation space ship. They have also agreed to set up the eighth working group on standardization.

An agreement has been reached on the directions of international integration in satellite navigation:


- Integration of the Russian *GLONASS*, the American *GPS* and Europe's *GALILEO* to ensure their interoperability and compatibility in the interests of improving the quality of positioning and timing services (accuracy, integrity, availability, etc);
- Integration of the EGNOS augmentation system for *GPS* and *GLONASS* with Russia's SDKM (System of Differential Correction and Monitoring) for *GLONASS* to substantially improve the accuracy of *GLONASS* positioning and improve the monitoring of *GLONASS* satellites and the entire *GLONASS* system.

Several factors necessitate and facilitate the integration of the two satellite navigation systems:

- Similar orbital parameters of the two constellations (altitude 19,000–23,000 km, inclination 55–65 degrees, orbital period 11–14 hours, etc);



- ❑ Similar frequency spectrum (1560–1605 MHz L1 and 1150–1280 MHz L2 and L5), as well as similar signal code structure which uses phase manipulation and pseudo random sequences;
- ❑ Similar strength of the main signals (-163...-152 dBW), which is below the level of self-noise;
- ❑ Similar principles of synchronization and measurement of navigation parameters;
- ❑ Similar system of coordinates;
- ❑ The *GPS* and *GLONASS* systems were created and modernized almost simultaneously; the experience gained during the development of these systems can be used by the designers of *GALILEO*;
- ❑ The U.S., Russian and EU authorities are prepared to offer their systems' services internationally to various groups of users.

Despite the spirit of competition between *GPS* and *GALILEO*, increasing the number of navigation satellites in orbit can only improve the quality of the service for the end user in terms of accuracy of positioning, continuity of the signal, noise tolerance, etc. And if the Russian *GLONASS* system is also fully deployed before the end of this decade (which looks entirely realistic), there will be 80 navigation satellites of the three different navigation systems in orbit, offering users truly unique opportunities. 

Notes

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- ⁴ I. Lisov, "National Space Challenge," *Space Industry News*, Issue 1, 2007, pp. 66–67.
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Albert Zulkharneev

IRAN'S ENERGY INTERESTS IN THE CASPIAN: THE WINDOW OF LOST OPPORTUNITIES¹

For 15 years now Iranian experts have been outlining Tehran's grand designs for engagement with republics in Central Asia and the South Caucasus, building plans for joint energy and transport projects, and proposing integration strategies. But being realists, they also took into account the factors that could stymie those plans, giving rise to the pragmatism of the Iranian policy towards the newly independent states. This pragmatism is based on careful analysis of all policy factors, opportunities and limitations. It links Iran's interests in Central Asia and the South Caucasus to domestic economic and social policy goals – including development of the northern and eastern parts of the country, and modernization of its energy and transit industries. Iran is still pursuing this pragmatic course, but in recent years this policy has been facing serious difficulties. Its interests in the Caspian region have become hostage to other domestic and international developments. The wars in neighboring Afghanistan and Iraq have shifted the geopolitical situation, the pressure of American and international sanctions has increased, and Iran's own ideologically-driven regime is stubbornly keeping the country in an international isolation. Meanwhile, other nations of the Caspian region have already set their policy goals, and the role Iran has been assigned in their plans is fairly limited.

Right now, every Caspian nation shares the common interest of drawing Iran into a system of economic, political, cultural and other ties in Central Asia and in the Caucasus. They would like to see the country become part of a system of interdependencies in the region, which cannot function properly without Iran.

Tehran is no longer striving to become the lead player on the world's energy arena. But it is still interested in increasing its share of the market for oil and gas production and transit, which necessitates a more active role in the Caspian. Other interests include winning a share of the European market for Iranian gas, and turning Iran into a regional energy transit node; securing a role for itself in building and operating a united regional electricity grid in the Middle East; and channeling the dividends of international activity into resolving the structural problems of the Iranian energy sector.

ANY RESULT IS A GOOD ONE

Like any other Caspian nation, Iran is interested in developing the region's oil and gas reserves. But unlike the four other Caspian states, Iran has not actually made too many practical steps in this direction. One of its key policy goals here, pursued by the reformist and conservative administrations alike, is *saving face*, especially on the domestic front. But even that is not the whole story. Unlike the other Caspian nations, Iran does not stand to lose anything it may have had before the collapse of the former Soviet Union, whatever the outcome of the division of the Caspian Sea – simply because it has never had any serious oil or gas exploration program in this region in the first place.



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The struggle to secure access to the resources of the Caspian is not nearly as crucial for Iran as it is for its Caspian neighbors. For Azerbaijan, it is a matter of life and death because the region's oil and gas account for some 40–50 percent of the country's revenue.² For Turkmenistan and Kazakhstan, it is a key pillar of their economies. But Iran's economy in its current shape does not depend on Caspian oil and gas. Any Caspian revenue would be nice to have, but it's far from being the top of the agenda. Western estimates suggest that Iran's sector of the Caspian holds only a tiny fraction of the country's total energy wealth – less than 0.1 percent. Even the most optimistic estimates put the share of the Caspian in Iran's total oil reserves at just 10 percent. The figure for Azerbaijan is 100 percent, and for Turkmenistan 83 percent.³

Geography and geology have cast Iran a poor lot in terms of its Caspian energy prospects. It owns only a tiny sector of the southern Caspian, and even that is a deep-water area, where no workable reserves of oil or gas have been found so far. Its neighbors are in a very different situation. In addition to the large oil and gas fields already found in their sectors of the sea, they also have the financial might of the big multinationals lining up to invest serious sums of money, and the backing of the West, as well as Russia's flexible position. Iran, on the other hand, can count only on its own fairly limited financial resources.

All that doesn't mean, however, that Iran has no real interest in the energy wealth of the Caspian. Ever since the issue of dividing the sea/lake's mineral wealth and drawing up its new legal status was put on the agenda, Iran, together with Russia, has been advocating joint use of the sea and its resources (condominium). It has been proposing to set up international bodies and companies to develop Caspian oil and gas fields. The other three nations were against this approach. Turkmenistan (whose position has been the least consistent) and Kazakhstan want the Caspian to be divided according to the international Law of the Sea, which would give each nation its own territorial waters and exclusive economic zones. And Azerbaijan has simply designated the Caspian Sea as a lake in its constitution. It has claimed its own national sector of the Caspian and declared it part of its sovereign territory.⁴

Russia has had to make concessions to its closest neighbors – it is now advocating the idea of dividing the seabed between the Caspian nations.⁵ In 1998–2003, Russia, Kazakhstan and Azerbaijan divided the northern part of the Caspian according to the principle of “separate seabed sectors, shared water.”⁶ The seabed was divided along the median line (a line equidistant from the territorial borders of the three states). A Russian-Kazakh agreement of 1998 introduced the term “modified median line,” which “includes areas that are not equidistant from the basis lines and are defined taking into account islands and geological structures, as well as special circumstances and expenditure on geological exploration”⁷ – that is, a line that deviates from the median line and is subject to a separate agreement between the parties involved.⁸ The three nations had thereby set the principle of dividing the seabed and the sea's mineral wealth. The idea of a modified median line leaves a lot of room for negotiation and compromise.⁹

Tehran has not formally recognized the *Northern Agreements*, stressing that “any change of the legal regime that governs the use of the mineral resources of the Caspian requires an agreement of all five Caspian nations.”¹⁰ It did however change its initial stance, and now advocates an equal five-way split of the Caspian seabed – 20 percent to each side. That sets Iran on a collision course with Azerbaijan and Turkmenistan, the two nations Tehran would do well to turn into allies if it wants to defend its interests in the Caspian.

Azerbaijan and Turkmenistan argue that the Iranian sector should be limited to the territory south of the Astara (Iran)-Gasani-Kuli (Turkmenistan) line,¹¹ which these two countries consider to have been the *de-facto* border between the former Soviet Union and Iran.¹² That would leave Iran an 11-percent share of the seabed. If the principle of the median line is applied, the lines dividing the Azeri, Iranian and Turkmen sectors converge farther north, leaving Iran a 13.8-percent share.¹³ But Tehran wants the whole 20 percent. So what is the practical difference between 11, 13.8 and 20 percent? Compared to the first figure, the second is not much better for Iran – it gives it only a little more territory for oil and gas exploration. But the step-up from 13.8 to 20 percent means that three oil fields – Alov, Araz and Sharg – fall into the Iranian sector.

In July 2001, Iran demonstrated that it is prepared to take decisive action to defend its claim to the three oil fields, and prevent any unilateral action by Azerbaijan. In 1998, Baku signed a pro-

duction sharing agreement with several oil multinationals to begin the exploration of Araz, Alov and Sharg. Azerbaijan's state-owned GNKAR oil company retained a 40-percent share in the venture. The operator, BP, received a 15 percent stake, as did Norway's Statoil and America's Exxon Mobil. Turkey's TPAO got 10 percent, and Canada's Alberta Energy 5 percent.¹⁴ The three oil fields are estimated to hold 6.6 billion barrels (900 million tons) of oil¹⁵ between them. GNKAR and BP soon began joint exploration of the area, which continued until 2001.¹⁶ Preliminary results suggested that the oil deposits there are not lying too deep, and there is a very good chance of finding commercially viable reserves.¹⁷ But in July 2001, Iranian coast-guard ships staged a show of force and drove the Azeri exploration vessels out of the area.¹⁸ BP immediately put all work in the area on hold as hasn't resumed it ever since, saying it will not continue until all the coastal states reach an agreement on demarcation – though exploration continues outside the disputed zone.¹⁹

All this means that the exploration of one of the most promising oil fields of the Caspian has been kept on hold for the past eight years. The seabed of the southern part of the Caspian has not yet been divided. Negotiations are proceeding, albeit slowly, and Iran is still standing its ground. It cites the Soviet-Iranian agreements of 1921 and 1940,²⁰ which did not define the sea border between the two countries. Tehran is therefore refusing to consider the Astara-Gasan-Kuli line as an official or informal border. Differences also remain between Azerbaijan and Turkmenistan, and negotiators have so far failed to find a formula for the division of the southern Caspian. But there has been a degree of rapprochement between Baku and Ashgabat following Saparmurat Niyazov's death. The new Turkmen president, Gurbanguly Berdimuhamedow, visited Baku in May 2008, and in November 2008 Azeri leader Ilham Aliiev travelled to Ashgabat for a trilateral meeting with his Turkmen and Turkish counterparts. Azerbaijan and Turkmenistan are trying to hammer out an agreement on the median line in the Caspian, and once that is sorted they can proceed to the issue of the disputed oil fields. They are also discussing the possibility of pooling their oil exploration efforts and using joint transport infrastructure for their sea-shelf oil fields.²¹ Azerbaijan is aspiring to become the regional transit node and the main route for energy streams from the eastern part of the Caspian, including Turkmenistan's gas fields, into Europe. These and other common interests could lead to a definitive agreement between Azerbaijan and Turkmenistan on dividing the Caspian oil and gas fields.

If that happens, Iran could be left on the sidelines of the talks and face a consolidated position of Azerbaijan and Turkmenistan – and quite possibly a united front of all four post-Soviet nations in the region. But Iran is also hoping to become a regional transit route. For this and other reasons it would like to remain on good terms with Azerbaijan and Turkmenistan, which for their part also want to avoid confrontation.

Iran has lately been softening its position at the negotiations, although it was as far back as 2003 that the Russian side said any talk of an equal five-way split is pointless.²² Tehran has indicated that for the sake of reaching an agreement it is ready to abandon the *red lines* it was previously defending. Speaking in December 2007, Iranian Foreign Minister Manouchehr Mottaki dismissed the radical idea that Iran should get 50 percent of the Caspian. The idea was based on the notion that since the former Soviet Union and Iran had joint custody of the Caspian Sea, half of this *common property* must now go to Iran, while the other parties can divide the remaining half between them as they see fit. Mottaki said the claim was unrealistic, and the Iranian share of the sea had never exceeded 11.3 percent. He added that the legal regime of the Caspian Sea was on the agenda of Iran, Turkmenistan and Azerbaijan talks, and that it would be determined in a fair manner and based on exploitation of the sea's resources.²³ The minister's apparent message to the Iranian public was that any agreement should be viewed as a positive outcome for Iran, if not an outright victory, because the country had never controlled much of the Caspian anyway.

One possible strategy to overcome the differences over the division of the south of the Caspian and guarantee Iranian presence there would be for Iran to secure a share in oil and gas exploration projects outside its claimed sector. Access to the resources of the Caspian does not just translate into having a national sector of the seabed, which may yet turn out to have little or no workable deposits. No less important is attracting foreign investment and participating in production sharing agreements. Iran itself does not have a lot of money to invest, and what little it does have is



channeled mostly into the oil and gas fields in the south of the country – but Tehran has also demonstrated interest in some Caspian projects, such as the second stage of the Shakh Deniz gas field. A subsidiary of the *National Iranian Oil Company (NIOC)* now owns a 10-percent stake in the project's first stage. The Iranian deputy oil minister, Hossain Shirazi, said in January 2009 that Iran intends to invest a further \$1.7 billion into the second stage of the project.²⁴ But so far, that is the only precedent of Iran participating in the development of the Caspian's mineral resources.

However, in addition to the Caspian Sea shelf, Iran has shown interest in dry-land projects as well, such as the gas fields of Turkmenistan. On January 4, 2009, Iranian Oil Minister Gholam Hussein-Nozari announced the signing of a contract with Ashgabat to develop a gas field there with a projected annual output of 10 billion cubic meters. The announcement did not specify which particular field it was.²⁵ Iran's involvement in projects in Turkmenistan proper, as well as possible transit of Turkmen gas via the Iranian territory could speed up the progress of the Caspian Sea shelf talks between the two countries.

Nevertheless, Iran has a fairly limited set of instruments in the Caspian. Another attempt to use force, like in 2001, could create more problems for Tehran than it solves. The Caspian nations have also committed themselves to not using force against each other in a declaration signed during the second Caspian summit hosted by Iranian President Mahmoud Ahmadinejad in Tehran on October 16, 2007.²⁶

As part of its strategy to strengthen its position at the talks and demonstrate its presence in the Caspian, Iran is hoping to launch its own energy exploration program in the south of the sea, especially in areas that are disputed with Azerbaijan. Until the borders of the national sectors are agreed, a country that makes an oil or gas discovery somewhere in the Caspian will have a serious argument at the talks in favor of pushing the border line in the desired direction, even if the discovery is outside its national sector of the sea. For example, under the terms of the Russian-Kazakh agreement, 50 percent of the cost of exploration will be reimbursed in such an event, and the disputed oil and gas blocks will be divided 50–50.²⁷ Iran wants to copy its neighbors' strategy – stake its claim to the oil and gas fields it finds, and then talk. But unlike the rest of the Caspian nations, Iran has not actually launched this program yet.

Until the late 1990s, Iran did not have any serious exploration program in the Caspian. The *Khazar Exploration and Production Company (KEPCO)*, a regional subsidiary of *NIOC*, was set up in 1998 to explore for oil and gas in Iran's northern provinces and the southern Caspian. The company reports that in December 1998–November 2001 it carried out a large oil and gas exploration program in cooperation with foreign companies in the southern part of the Caspian Sea, all the way north to Apsheron peninsula, and found 46 potential sites for *NIOC* to explore further.²⁸ In 2003, Iran published a report claiming that “the findings of seismic exploration by *Royal Dutch Shell* in the *de-facto* Iranian part of the Caspian Sea suggest the presence of at least 10 billion barrels of oil there.”²⁹ It is not completely clear what is meant by “the *de facto* Iranian part”, but that claimed sector is probably larger than 11, 14 or even 20 percent of the Caspian. Since then, Iran's estimates of its oil reserves in the Caspian Sea have become even more upbeat. A 2007 report based on the findings of the Iranian parliament's research institute cited the figure of 15 billion barrels,³⁰ and in 2008, the first deputy head of *NIOC*, Mohammad Javad Asemipour spoke about 32 billion barrels “in the southern part of the Caspian.”³¹

Estimates by Russian and Western experts are far less optimistic. S. Zhiznin cites a 1997 U.S. Department of State report saying that if the Caspian is divided into sectors using non-modified median line, Iran will have no proven oil reserves in its sector at all, while the undiscovered reserves there could reach 1,632 million tons (about 12 billion barrels).³² America's Energy Information Agency (EIA) estimates proven oil reserves in the Iranian sector of the Caspian at 100 million barrels, and potential reserves at 15 billion. These estimates do not vary too much, putting the figure of potential oil reserves in the Iranian sector of the Caspian at about 10 percent of the country's total oil wealth (thought to be 138.4 billion barrels³³).

Clarifying the actual size of the oil reserves in the southern Caspian requires deep-sea exploration, but Iran lacks the expertise and technology needed for such a program. *NIOC* is therefore trying to sign exploration agreements with foreign companies. It has set up a subsidiary called *North Drilling Company*, which owns two oil platforms in the Caspian built by Iran's

SADRA company at a shipyard not far from the Iranian Caspian port of Neka. The first platform, a jack-up drilling rig called *Iran Khazar*, was built in 1996 by SADRA with the help of Finland's *Rauma-Repola*.³⁴ The rig can work at water depths of up to 91 meters, with the maximum drilling depth of 7,620 meters.³⁵ But these specifications are not enough for the southern Caspian, so in 2001 Iran ordered the construction of the second rig, *Iran Alborz*, built by SADRA in cooperation with Sweden's *GVA Consultants*. The rig, designed for drilling in the southwestern part of the Caspian, can work at water depths of up to 1,000 meters.³⁶ It was expected to be complete within 32 months, i.e. by 2004,³⁷ but the date was pushed back first until 2006 and then until 2008. In June 2008, the Iranian oil minister said that launching *Iran Alborz* had become a national priority.³⁸ But in September it turned out that SADRA had not finished the construction of two auxiliary ships need to service the platform, and Iran was thinking about buying two tug boats to tow the rig. Later reports said the rig would be launched on February 10, 2009, the 30th anniversary of the Islamic revolution.

China's Oilfield Services Ltd (COSL) will be the operator of the rig – a three-year contract to that effect was signed in 2006. The Chinese company offered the best financial terms, and politically both countries are interested in developing cooperation in the region.

Negotiations have been under way since 2008 with *Petrobras*³⁹ about the Brazilian oil giant's participation in oil and gas exploration in the Caspian. As of late spring 2009, Iranian companies have yet to begin full-scale exploration in the southern Caspian, although they say exploration plans have already been finalized. The collapse of the oil prices in late 2008-early 2009 will obviously force the world oil producers, including *NIOC*, to trim their investment programs, which will further delay the beginning of full-scale exploration in the Caspian.

The bottom line is, Iran has not yet made a start on exploring the oil and gas wealth of the Caspian Sea. As time goes by, Tehran will find it even more difficult to extract concessions from its neighbors, three of which have already divided the northern part of the sea between them. The Iranian leadership is well aware of this, and it is showing interest in cooperation with the other players. Its main objective is to secure Iran's participation in oil and gas production.

WESTERN CORRIDOR

Iran has three main objectives in Central Asia and South Caucasus energy transit. The most important one in terms of the ambition, as well as political and economic significance, is turning Iran into a regional energy transit hub. The shortest and the most economical route for bringing oil and gas from the former Soviet republics in the Caspian region to the world markets is via Iran. The Iranian authorities and experts have been banging on about it for two decades. The second objective is to develop new routes for Iran's own energy exports and conquer new energy markets. The third is to secure reliable oil, gas and electricity supplies to keep in business the refineries in northern Iran, bring gas to remote Iranian provinces and keep the country well supplied with electricity all year round. All three objectives are interdependent, and must be viewed as a whole.

Iran's geography makes new energy transit routes a more realistic and promising pursuit than oil and gas exploration in the Caspian. Over the past 15 years Iran has managed to secure oil and gas supplies from Kazakhstan and Turkmenistan for the needs of its northern provinces, and to start selling its own gas to the Caucasus. But it has failed to become an important energy corridor, or a transit route for the Caspian and Central Asian energy flows to the world markets – and its chances of securing that role for itself are looking increasingly slim.

Iran's interests in oil transit are actually quite different from its gas transit goals. Being one of the world's largest oil producers (ranking fourth or fifth in 2005–2007), Iran already has an established market, supply routes and transport infrastructure for its oil exports. The situation in the Iranian gas industry is quite different. Although Iran has the world's second-largest gas reserves (28 trillion cubic meters, or 16 percent of the world total), it had been a net importer of gas until 2007. It now has big plans for ramping up its gas production and exports. In addition to increasing production, processing and transit capacity, Tehran will need to find a market and transit routes for its gas. So whereas the goal in oil transit is increasing the flows from



the Caspian oil fields via Iran, the key task for the Iranian gas industry is finding the best technical solution and the most economical route for bringing Iran's own gas to the world markets.

Iran has two key objectives regarding oil transit in the Caspian. The first is to take part in bringing oil from the Caspian region to the world markets and increase transit via the Iranian territory. The second is to secure oil supplies for Iran's new refineries in the north of the country, as well as the existing ones that are now being upgraded. Iran has also been thinking about pumping its oil to China via Central Asia, but nothing specific has been decided so far.

Table 1. Iran's share in oil exports and transit from the Caspian nations, 2007, million tons.

	Oil exports (total)	Oil exports from Caspian fields	Oil exports to/ via Iran	Iran's share in oil exports from Caspian countries, %
Azerbaijan	34.3	34.3	0	0
Kazakhstan	56.5	51.8	3.4	7
Turkmenistan	3.5	3.5	3.2	90

Source: *Oil flows and export capacity in the Caspian Sea and Black Sea regions*, p.12; Energy Information Administration. Kazakhstan, <http://www.eia.doe.gov/emeu/cabs/Kazakhstan/Oil.html>

The first oil transit option is building new transit pipelines, as well as using the existing Iranian network. Back in 1993 it was expected that the Baku-Ceyhan oil pipeline would go via Iran instead of Georgia. The length of that route is about 1,000 km, compared to the 1,730 km of the route via Georgia. The pipeline would have passed through Azerbaijan's Nakhichevan exclave, resolving the problem of oil supplies to the autonomy. But due to instability in Azerbaijan, Western pressure and technical complications, the project was abandoned and Georgia was chosen as the new transit route.⁴⁰

The prospects of another project, to bring oil from Kazakhstan and other Caspian producers to the world markets via a pipeline (or a network of pipelines) in Iran, are also looking bleak. Two alternative routes are being proposed. The first is to build a pipeline from the oil fields in Kazakhstan to the Iranian coast of the Gulf of Oman via Turkmenistan. The second is to ship oil by tankers to Iran's Caspian port of Neka, from where it would be pumped to the Gulf of Oman port of Jask via a new pipeline.

The Neka-Jask pipeline proposal gained traction in the autumn of 2008 following the Georgian crisis. The president of the Kazakh gas company *KazMunayGas*, Kairgeldy Kabyldin, spoke in an interview about the virtues of the Iranian route as an alternative to Baku-Tbilisi-Ceyhan (BTC), made more risky by the events in Georgia.⁴¹ There were reports in the Iranian media in November 2008 about the progress of the Neka-Jask project's planning stage. The length of the proposed route is 1,515 km, daily transit capacity 1 million barrels. The pipeline should be launched within 4 years,⁴² by 2013, when one of Kazakhstan's largest oil fields, Kashagan, is expected to come on stream. But in October 2008, Kazakh Prime Minister Karim Masimov said that the proposal to build a pipeline together with Iran was not on the table, and Astana was instead looking into the possibility of ramping up the capacity of the *Caspian Pipeline Consortium (CPC)* and the BTC route, as well as building a new oil pipeline to China. The only area where Kazakhstan is prepared to work with the Iranians is ceding some of its Caspian oil and gas exploration rights to Tehran in exchange for access to Iranian oil fields in the Persian Gulf.⁴³ It appears that the leadership of Kazakhstan and its national oil company view the idea of building a pipeline via Iran as a possibility for a distant future, and for a very different political and economic situation. Meanwhile, Kazakhstan can use the hypothetical possibility of channeling its oil via Iran as a bargaining chip in its negotiations with Azerbaijan on building a Caspian transit system, or at talks with Russia on the *CPC*.

One Caspian oil transit project Iran has managed to pull off is the swap operations. Rather than actually being transported via the whole length of the Iranian territory, Caspian oil is delivered to Iranian ports on the Caspian Sea, and Iran then ships an equivalent amount of its own oil to customers from its Persian Gulf ports. The primary Caspian port for these operations is Neka;

the ports of Noshahr and Enzeli are also involved. The scheme's principal Persian Gulf port is Kharg Island. Oil from Neka is supplied to refineries in Rei (a suburb of Tehran) and Tabriz. Iran charges a swap fee of \$1.5 to \$2 a barrel (\$12–16 a ton). The operator for the swap contracts is *Naftiran Intertrade Company (NICO)*, a subsidiary of *NIOC*. The swap scheme was first launched in 1997, but at first Iran could not receive more than 50,000 barrels a day due to the lack of infrastructure. It was expected that the daily swap shipments would increase in several stages, first to 100,000 barrels, then to 370,000 and then to 500,000 at the third stage of the project, reaching eventually 1 million barrels.⁴⁴ The daily shipments rose from 50,000 to 150,000 barrels over the period of 2004–2008 following the expansion of the oil pipeline network in northern Iran, the launch of new pumping stations, modernization of ports and oil terminals, and upgrade of several Iranian refineries. *NIOC* and government officials say Iran is committed to increasing the volume of the swap operations,⁴⁵ but that is limited by the capacity of refineries in the north of the country. Iran now has a refinery in Rei (the Tehran refinery, capacity 250,000 barrels a day) and Tabriz (110,000 barrels).⁴⁶ There are plans to open a refinery in Neka by 2010 (projected capacity of 200,000–300,000 barrels a day), as well as several other refineries in Mazandaran and Khorasan provinces.⁴⁷

By building the infrastructure in the north of the country Iran is trying to win more customers among the Caspian producers for its swap operations. Kazakhstan is the key supplier for the swap scheme – about 50 percent of all the oil shipped to Iran's Caspian ports (some 4 million tons annually) comes from there. But these swap shipments account for only 7 percent of Kazakhstan's total oil exports.

Turkmenistan, for its part, channels almost 90 percent of its oil exports via swaps with Iran. That is 3.2 million tons a year in real terms, making up 43 percent of the Iranian swap operations.

Winning Azeri or Russian custom will be more complicated. These two countries have other export routes already up and running, and until recently they have not been seriously considering the route via Iran.

Tehran had been counting on Azeri oil custom from the very beginning, but first shipments arrived only in August 2008, when two out of Azerbaijan's three export routes were interrupted. A stretch of the BTC pipe was blown up by the Kurdish rebels, while the Baku-Supsa pipeline was shut down as a precaution by its operator, *BP*, during the Georgian-Russian war. Baku was forced to channel some of its oil exports via Iran, but only until the BTC went back on line. On August 24, the Iranian energy industry news agency Shana reported that *GNKAR* had closed a deal with Middle East Petrol trading and export company to ship Azeri oil via Iran using the swap scheme (Azeri oil delivered to Neka in exchange for shipments of Iranian oil to Azeri customers via the Persian Gulf ports).⁴⁸ But the total volume of shipments was a mere 300,000 tons (2.2 million barrels), which is only about double the daily capacity of the BTC pipeline.

Russia's *Lukoil* began swap shipments to Iran in 2003–2004, following the opening of a new oil terminal in the town of Ilyinka, Astrakhan Oblast, in October 2003. The terminal's annual capacity is 2 million tons, but only 0.4 million tons was shipped in 2007.⁴⁹ *Lukoil* has more than 2,000 filling stations in the United States and is wary of sanctions, so it is careful about developing cooperation with Iran. There have also been some technical difficulties on the Iranian side, keeping the shipments volume down.

Nevertheless, Iran continues to build the infrastructure that could give it a major role in Caspian oil and gas transit. While the Iranian spending on oil production and exploration in the region has been meager, Tehran has been investing heavily in transit infrastructure and developing cooperation with its neighbors. In 2006, the capacity of its oil storage facilities in Neka was increased to 1.5 million barrels,⁵⁰ and the daily capacity of the Neka-Rei oil pipeline to 250,000 barrels.⁵¹ But any further increase in the volume of the swap operations with the aim of reaching the 370,000 barrels a day target will require some other problems to be solved first, and a substantial new investment by the Iranians.

One of the bottlenecks is that none of the Caspian nations has a big enough fleet of modern tankers. Tehran is trying to fill that niche. Once it has the tankers it will be able to play a substantial role in oil production in the region. An Iranian tanker fleet would also be a powerful argument in favor of shipping the oil via Iranian ports.



Tehran does not have much time left to fulfill that ambition however – other countries have big plans to expand their tanker fleets too. Kazakhstan, the main Caspian oil producer, now has only three 12,000-ton tankers.⁵² But it plans to have another 20 by 2012.⁵³ The Azeri fleet, which inherited almost all the Soviet tankers in the Caspian, has 41 tankers, including six big President *Geydar Aliiev* type ships (13,500 tons deadweight).⁵⁴ The main Russian fleet serving the Caspian, *Volgotanker*, has almost 350 tankers, mainly the *Volgoneft* type ships (no bigger than 5,000 tons each).⁵⁵ But the company was declared bankrupt in 2008.⁵⁶ Turkmenistan is also assembling a tanker fleet. However, none of the Caspian nations has tankers bigger than 13,500 tons, whereas much bigger vessels of up to 60,000 tons are required to increase oil shipments.⁵⁷

Recent media reports suggest that Tehran is determined to corner this market. In 2006 it approved plans to build six 63,000-ton tankers. Three of them will be built in northern Iran; Russia will get the order for the other three.⁵⁸ The Iranians figured that the alternative of building as many as sixty 5,000-ton tankers and the 10 new oil terminals in Neka they would require was unrealistic. A new offshore deep-water terminal connected by an underwater pipe to on-shore storage facilities will be built in Neka for the big new tankers.⁵⁹ Smaller ships will be built as well.⁶⁰

Building a large tanker fleet and infrastructure in the north of the country could give Iran its first real instrument of securing a role for itself in Caspian energy transit. But it is not clear how these programs, conceived during a period of extremely high oil prices, will be affected by the ongoing economic crisis and the falling price of crude, Iran's main export. All of Iran's investment programs are funded by the numerous subsidiaries of *NIOC*, which is itself subordinated to the Oil Ministry. It could well turn out that *NIOC*, which has big plans for ramping up its gas production and exports, will be forced to redistribute its limited financial resources, leaving the Caspian investment projects high and dry.

These projects are unlikely to attract investment from other Caspian energy players. The U.S. sanctions is one reason; another is that there are other routes for bringing the Caspian oil to the world markets, and investors will want to put their limited funds into projects that are more reliable, politically and otherwise.

The principal existing route is the BTC pipeline. Azerbaijan and Kazakhstan ratified their earlier agreements and signed new ones in 2008 to increase the volume of tanker shipments from three large Kazakh fields – Tengiz, Kashagan and Karachaganak – to Baku. The two sides have agreed to set up the Kazakhstan Caspian Transport System (KCTS) and a joint project development company. They have also finalized funding, price policy and terms of access to the new transit infrastructure.⁶¹ At the first stage of the project (from 2012) annual Kazakh oil shipments will reach 23 million tons, and 35–36 million tons at the later stages, compared to just 3.4 million tons Kazakhstan exported to Iran in 2007.⁶² The project offers substantial benefits to both parties. Kazakhstan secures access to an additional export channel that is already up and running, as opposed to still languishing on the drawing board, while Azerbaijan keeps its pipeline profitable and strengthens its position as a transit route. The project is funded by the stakeholders in the Kazakh oil fields and the BTC (some of them have stakes in both the oilfields and the pipeline).

Another option available to Kazakhstan is the *Caspian Pipeline Consortium (CPC)*. It was the problems with expanding this pipeline's transit capacity, which arose in 2008, that had actually led Kazakhstan to launching the KCTS project as an alternative.⁶³ Nevertheless, the *CPC* stakeholders signed a memorandum of understanding on December 17, 2008, to increase the pipeline's capacity to 67 million tons a year.⁶⁴

The third option Kazakhstan is working on is the pipeline to China – more specifically, the second leg between Kenkiyak and Kumkol. The annual transit capacity of the pipeline, which is expected to be launched by the end of 2009, is 20m tons.⁶⁵

Unless these three projects fall behind schedule, they will create enough transit capacity to cover Kazakhstan's growing oil exports requirements, which are expected to reach 100 million tons a year by 2013. That means that Iran's role in bringing Kazakh oil to the world markets will become even less significant. Right now, the Iranian route is the least attractive of the four options available to Kazakhstan. Astana will want to keep this option as a backup so as not to be locked in to the other three export routes. But neither Kazakhstan itself nor its partners will actually invest in the Iranian route, and they will warm to it only if the other projects fall through.

Meanwhile, Azerbaijan itself aspires to become the region's key transit route. Russia's exports via Iran are so small that they are not even mentioned in most sources. Iran makes sense as a transit route to reach Asian consumers, provided that they can pay enough to discourage the suppliers from shipping their oil to Europe instead. But the completion of the Eastern Siberian-Pacific pipeline will open a direct route for Russian oil to China and other countries of Asia-Pacific. That will make the Iranian transit option even less attractive for the Russian oil producers. The Iranian swap operations are vitally important only to Turkmenistan.

That means that Iran's Caspian neighbors are quite happy with the existing volume of the Iranian swap shipments, and they are not showing much interest in expanding the scheme, let alone building a pipeline from Kazakhstan to the Persian Gulf. Nevertheless, they are not going to abandon the Iranian route completely: they want to keep their options open, and in different political circumstances that route could yet prove to be fairly attractive.

The swap project in its current shape and size is quite convenient for Iran and its neighbors alike. It also enables Iran to develop infrastructure in its Caspian provinces, lay the foundation for future expansion of its transit system, secure oil supplies to its northern refineries, and even to play a role, albeit small, in Caspian energy transit. If Iran's plans to build large tankers in the Caspian come to fruition, *NIOC* will be the only contractor capable of shipping large amounts of oil across the Caspian Sea (though not necessarily to Iranian ports) because no other Caspian nation has plans to build such big ships.

That makes it very important for Tehran to make sure that the entire Caspian Sea is open to international shipping. Moscow is firmly of the same opinion, which makes it more likely that the two will have their way at the talks on the legal regime of the Caspian.

In some sense the swap operations could be quite risky for Iran. If shipments to Neka are interrupted or significantly reduced, the Iranian refineries in the north of the country will have to cut their output. Given the perennial fuel shortages in Iran, which could spill over into public discontent in strategically important northern cities, including Tehran and Tabriz, the Iranian regime is very sensitive about the reliability of the swap shipments.

But the bottom line is, everyone is happy with the existing volume of swap operations. Iran would naturally prefer to see these shipments go up, but the suppliers are not interested in this, let alone in the Iranian pipeline projects. Export routes have already been decided for the next several years, and Iran's share in them is minimal. It must be said however that in several years' time, Caspian production could rise sharply. Oil reserves in the undeveloped Alov-Araz-Sharg fields alone are estimated at 900 million tons. If that happens, the Iranian route could suddenly become much more attractive, and if the political situation improves by then, the Caspian producers might well opt in its favor.

IRAN'S INTERESTS IN GAS TRANSIT

Iran's key interests in Caspian and Central Asian gas transit boil down to participating in the transit of gas from the neighboring countries to Europe, South Asia and East Asia, as well as securing its own presence on the gas market of the Transcaucasia, and importing small amounts of gas for northern Iranian provinces.

As for the gas industry as a whole, Iran's strategy here is two-pronged. The first ambition is to increase its own exports; the second to become the transit route for as much of the neighboring region's gas production as possible. Over the past few years Iran has put an emphasis on ramping up its gas exports. The infrastructure required for that would also serve the task of attracting transit custom from other countries (talks are now under way with Turkmenistan). Here too Iran prefers a swap scheme to straightforward transit: it wants to buy gas for its own needs from one party (Turkmenistan), and then sell its own gas to another party (Turkey). That solves the usual dilemma of the countries that export their own gas and act as a transit route for other producers at the same time.

The situation for Iran's gas industry is not as clear-cut or predictable as in the oil sector. The country has the world's second largest gas reserves after Russia – 28 trillion cubic meters. But



for a long time Iran remained a net importer of gas. Only in 2007 did the country produce as much gas as it consumed (110.5 billion cubic meters). Two thirds of the gas fields remain undeveloped. Iran is now trying to change that and turn into one of the key players on the international gas market. Its largest gas field, South Pars in the Persian Gulf, holds about half of the country's gas reserves (10–15 trillion cubic meters). Most of its other large gas fields are in the south of the country, and the Khangiran field is in the northeast, near Meshkhd. The daily output of South Pars is projected to reach 400 million cubic meters by 2015. Half of it will be exported.

One of *NIOC's* key tasks is building domestic gas infrastructure and shifting the bulk of domestic energy consumption from oil to gas, whose share reached 53 percent in 2006.⁶⁶ Iran plans to spend \$18 billion on gas infrastructure projects in 2009, bringing the share of Iranians who enjoy access to gas for domestic needs to 80 percent (54 million people).⁶⁷ Up to 30 percent of the gas produced will be pumped into oil beds to maintain oil production.

Although Iran's domestic gas consumption is high by any standards, the country also has ambitions exports plans. It has set itself the goal of becoming a world leader in this area. In 2007, Iran exported just 6.2 billion cubic meters of gas. *NIOC* plans to increase gas exports via pipelines to 44 billion in 2009,⁶⁸ and to 110 billion by 2020.⁶⁹

In 2002 the government set up the *National Iranian Gas Export Company (NIGEC)*, tasked with increasing gas production and exports. The company plans to export gas in the liquefied form (LNG) in addition to building new pipelines and spurs to existing and future international gas transit networks.⁷⁰

When the company was being set up, it was expected that in addition to Europe and Turkey, the main export destinations would include the United Arab Emirates, Oman, Kuwait, Pakistan, India, Armenia and Georgia. Those exports would rely on a system of existing and new pipelines.⁷¹ Some of those plans have already come to fruition: Iran has begun exports to Armenia and Turkey, and for a short time supplied its gas to Georgia as well. Talks are still under way on other projects, though some have never left the drawing board.

Tehran's attention is now fixed on two international pipeline projects: the Iran-Pakistan-India pipeline (IPI), and a spur from Europe's future *Nabucco* pipeline to Iran. Neither of these two projects directly involves Iran's interests in Central Asia or the Caucasus, but they do have an impact on Tehran's strategy in that region. At least two key implications come to mind. First, the Caucasus loses its significance for Iran as a promising market and a transit route providing access to Europe. Second, the idea of Turkmen gas transit via Iran becomes more attractive. Both of these considerations create more room for cooperation with Russia.

Tehran sees Europe as one of the most attractive markets for its future gas exports. In addition to pure economics, the Iranian leaders also hope for political dividends from cornering at least a small part of the European gas market. Until recently, Tehran has been considering only two options for bringing its gas to Europe. One is via Turkey, once more capacity has been built into the existing infrastructure; the other is via the South Caucasus, and then on to Ukraine, Poland and other East European markets. But in 2008 Iran also launched a campaign to join the *Nabucco* project.

The chances of that third option coming to fruition never looked high. The necessary infrastructure was nonexistent, Georgia and Azerbaijan did not seem very interested, and *Gazprom* soon blocked the route via Armenia.

Ukraine, however, did demonstrate some interest in Iranian gas supplies. It was back in the 1990s that Kyiv first discussed this with Armenia and Azerbaijan.⁷² In 2003 Ukraine signed a memorandum on buying large quantities of Iranian gas over the next 25 years.⁷³ But there has been little progress since then. Ukrainian President Viktor Yushchenko congratulated his Iranian counterpart on the Iranian holiday of Nowruz in 2008, but that exchange of pleasantries did not lead anywhere. Taking into account Iran's gas prospects in the Caucasus, Kyiv has only a hypothetical chance of securing access to Iranian gas. That will require a spur to be built from *Nabucco* to Moldova and Ukraine, as well of course as Iran's own participation in *Nabucco*. Ukraine is at the very end or, at best, in the middle of the proposed route – and for this route to materialize, Iran first needs to gain access to the gas markets of Armenia and Georgia, and to build the necessary infrastructure.

In Armenia, Iran has fallen foul of *Gazprom*. In 2004, Tehran and Yerevan agreed to build a gas pipeline that would be an alternative source of gas supplies for Armenia. The first leg of the pipeline between Megri and Kajaran was launched in 2007. The second 186 km stretch linking Kajaran and Ararat was launched on December 1, 2008.⁷⁴ Iranian gas exports via the pipeline are expected to reach 2.3 billion cubic meters annually. But all of that gas will be consumed in Armenia itself, mostly for generating electricity that will then be exported back to Iran (at the agreed rate of 3 kWh for 1 cubic meter of gas). The construction of the first leg of the pipeline was funded by Iran itself, using a \$30 million loan from the Export Development Bank of Iran.⁷⁵ But the pipeline was then bought by *Gazprom* in early 2006 under a deal that also fixed the price of gas for Armenia. That is when Yerevan made *ArmRosgazprom* the client party for the construction of the second stretch of the pipeline. In addition, Russia became the owner of the Razdan power plant, which will produce electricity for Iran.⁷⁶ On its own territory, Iran has built a 110 km stretch between Tabriz and Megri.

JSC ArmRosgazprom is now the only gas supplier in Armenia. The company also owns the gas distribution network, including the Armenian stretch of the new pipeline to Iran. Initially, *Gazprom* and the Armenian government owned 45 percent each in *RosArm gazprom*. The remaining 10 percent stake belonged to *Itera*, a gas trader. After a rights issue to finance the construction of the second stretch of the pipeline, and an acquisition of *Itera*'s stake in March 2009, *Gazprom* consolidated its stake in *ArmRosgazprom* to 80 percent, and the Armenian government's share was diluted to 20 percent. So Iran is now essentially dealing with *Gazprom* in Armenia, which puts an end to the idea of exporting Iranian gas via that country to European markets. The outcome could have been quite different for Iran. Tehran did offer alternative proposals to Armenia,⁷⁷ but Moscow's leverage, which included the price of Russian gas supplies and the restructuring of Armenia's debt to Russia, turned out to be more persuasive. Iran had to abandon the idea of using Armenia as a transit route. But it did secure guaranteed electricity supplies in return for its gas. And being the only available alternative to Russia as a potential source of gas supplies, it could yet play a crucial role in the event of an interruption of transit from Russia on the Georgian stretch of the pipeline,⁷⁸ which happened for example in December 2008-January 2009.

There has also been a precedent of Iran supplying gas to Georgia in January 2006, in similar *force-majeure* circumstances. If Moscow is to be believed, the supplies to Georgia were interrupted by explosions on two transit pipelines in North Ossetia.⁷⁹ A couple of days later the Iranian foreign minister, Manouchehr Mottaki, got in touch with his Georgian counterpart and said Iran was ready to start pumping its gas to Georgia. The pipelines that existed at the time could carry up to 2 million cubic meters a day, and there was a possibility of that figure rising even further later on.⁸⁰ But Georgia soon stopped Iranian gas imports and has not resumed them ever since.

In 2005 Iran signed an agreement on gas supplies with Azerbaijan, and the two countries have been cooperating quite successfully in this area. Using the existing gas transit infrastructure, Azerbaijan exports gas to northwestern Iranian provinces. In return, Iran supplies gas to the Azeri exclave of Nakhichevan.⁸¹ Tehran has also offered to take part in the transit of the additional gas that will be produced by the Shakh-Deniz field in the Caspian.⁸² Right now the field's entire gas output is pumped via the South Caucasus Pipeline (Baku-Tbilisi-Erzurum), which went operational in 2007. Given Baku's ambition to become the main transit route for Caspian energy flows, there is little reason to expect it to expand its cooperation with Iran beyond what is necessary to supply Nakhichevan with gas. Iran and Azerbaijan have conflicting interests in this area. If Iran were to be included in the *Nabucco* project, and especially if the Trans-Caspian gas pipeline plans fell through, Azerbaijan would become just one of many gas suppliers. But if the Trans-Caspian pipeline were to succeed, Baku would become the regional transit center, and secure a reliable source of transit revenue for many years to come.

In other words, over the past few years Iran has managed to win a share of the South Caucasus market. The key factor behind its success was that Tehran was a welcome alternative source of gas supplies, which Armenia, Georgia and Azerbaijan's Nakhichevan autonomy were happy to have for national energy security considerations. But in Armenia, Iranian gas supplies have since fallen under *Gazprom*'s control. Georgia is now receiving gas not just from Russia but also via the South Caucasus Pipeline, and Tbilisi is not eager to build long-term relations with



Tehran. Meanwhile, Azerbaijan is busily developing its own gas fields, so the only area where it is prepared to work with Iran is the gas supplies to Nakhichevan. All that means that Iran's small share of the Caucasus market can only rise in the event of a sharp increase in gas consumption here, or if the region's nations decide to reduce their reliance on Russian gas imports.

As for Iran's attempts to enter the European market via the South Caucasus, they have essentially been checked by the two other producer and transit countries, Russia and Azerbaijan.

Iran now has just one route to Europe still left to it: via Turkey. Ankara has been quite positive about Tehran's aspirations here. Iranian gas has already won a substantial share of the Turkish market; both countries would like to increase these supplies and channel some of them on to Europe. Two options are available: one is based on bilateral agreements with Turkey; the other is for Iran to join the *Nabucco* project. These two options are not mutually exclusive.

Iran began gas exports to Turkey via the Tabriz-Ankara pipeline back in 2002. The maximum annual capacity of the pipeline is 14 billion cubic meters. Right now Turkey buys only about 5–6 billion. The pipeline was built to serve the domestic Turkish market. There have been reports in the Iranian media that Istanbul and Ankara have been in talks since 2008 about Turkish companies' participation in the South Pars project. Turkey might even be willing to build a new pipeline via its territory to supply Iranian gas to Europe.⁸³ The two sides signed a memorandum of understanding in November 2008, outlining plans to export up to 35 billion cubic meters of Iranian gas to Europe via Turkey and to build a new pipeline for that purpose.⁸⁴ Turkey has also been supportive of Iran's aspiration to join the *Nabucco* project, and Turkish Prime Minister Erdogan has made several statements to that effect in recent months.

Iranian experts, government officials and industry representatives have been expressing great interest in the *Nabucco* project since 2008. The Georgian crisis and the Russian-Ukrainian gas conflict at the beginning of 2009 put even more wind in their sails, and the Iranian media have taken to expounding their simplistic arguments in favor of Iran's inclusion in the European project almost on a daily basis.

Their case is based on the assertion that Russia can no longer be viewed as a reliable energy supplier, and that Iran is the only realistic alternative.⁸⁵ The Iranians also claim that *Nabucco* will not be economical unless it secures Iranian gas supplies by 2017 at the latest. Whether America and its allies like it or not, the Iranian argument goes, Iran would be the most reliable gas supplier for *Nabucco*, especially given that Moscow has already signed contracts with the Central Asian producers, diverting their gas into Russia's own pipelines. As a killer argument about the need to strengthen security along the pipeline's route, an expert from the Iranian Shana agency even ventured to remind everyone that *Nabucco* is another name for Nebuchadnezzar, a great king who drove the Jews out of Babylon and into exile.⁸⁶ It is not exactly clear which point the expert was trying to make, but potential European partners probably weren't very interested anyway.

However, the European participants in *Nabucco* are increasingly showing interest in Tehran's offer. Turkey is firmly of the opinion that Iran should be involved in the project. Bulgaria's *Bulgargas* sent a delegation to Tehran at the end of February to discuss the possibility of Iranian gas supplies. The secretariat of the project itself is not ruling out Iran's participation either – but not now, and not until the political situation improves. Nevertheless, the EU leadership is blocking Iran's bid to join the project. Iranian representatives were not invited to the January 2009 meeting of the project's participants in Budapest. The political game over Iran and *Nabucco* is only just beginning, and it is linked to many other issues. But for the purposes of this discussion suffice it to say that Iran is aspiring to become a supplier for the proposed new pipeline.

Apart from its own exports, Iran is also trying to become the transit route for energy flows from neighboring countries. It is hoping to win oil transit custom from almost all the other Caspian nations; as for gas transit, the key partner it is trying to woo is Turkmenistan. Iran's strategy here is to keep Turkmenistan from committing itself to exports via the Trans-Caspian and Trans-Afghan pipelines, which are still on the drawing board. The first of the two proposed pipelines would reduce Iran's chances of winning a share of the European market, partly because it would make its participation in *Nabucco* less likely. As for the Turkmenistan-Afghanistan-Pakistan-India pipeline project, its implementation would jeopardize the alterna-

tive Iran-Pakistan-India (IPI) route. The success of these two *hostile* projects would be a serious blow for Iran's grand plans for a manifold increase in gas production and exports.

The capacity of Iran's own pipelines is not enough to offer them as an alternative route for the entire volume of Turkmen gas exports. On the other hand, Iran does not want this gas to flow via the Trans-Afghan and Trans-Caspian pipelines either. There are, however, two other projects that represent the lesser evil for Tehran. One is the Near-Caspian pipeline which would channel Turkmen gas via Kazakhstan and Russia. The other is building a pipeline from Turkmenistan to China via Kazakhstan – an agreement to that effect was signed in 2006. Of course, apart from seeing the rival projects bite the dust, Iran would also like to make itself one of the key routes for gas exports from Turkmenistan.

The nature of Iran's relations with that country gives it every reason to be optimistic about the outcome – which cannot be said about Tehran's ties with its other Caspian neighbors. Of all the former Soviet republics, Iran is on the best terms with Turkmenistan. That includes energy cooperation as well as other areas. The Meshkhed-Serahs railway line, opened in 1996, became the first link between Iran and the hitherto closed Central Asian countries. And as this article has already mentioned, Turkmenistan channels over 90 percent of its oil exports via Iran.

Turkmenistan has been exporting 6 billion cubic meters of gas to Iran every year since 1997, via the Korpedje-Kurtkui pipeline which supplies Iran's northeastern provinces and accounts for five percent of the country's total gas consumption. An *NIGC* representative said in September 2008 that the annual imports from Turkmenistan had actually increased to 9.2 billion cubic meters, and were expected to rise further to 14 billion cubic meters.⁸⁷ Some of this gas is sent on to Turkey under a swap scheme.

But for all the benefits of this cooperation, there are risks as well. Iran's northeastern provinces depend on Turkmenistan for their gas supplies. That became painfully obvious when a price war led to an interruption of supplies at the beginning of 2008, during the coldest period of the year (Ashgabat said it needed to perform urgent repairs on the pipeline). That also led to an interruption of Iranian gas supplies to Turkey. To overcome this problem, Ashgabat and Tehran agreed to change the pricing system. On December 31, 2008 they signed a deal on the transition from fixed to floating gas price which tracks the price of crude.⁸⁸

Meanwhile, Iran is also making steps to end the dependence of its northern provinces on gas supplies from Turkmenistan. The *NIGC* is pushing ahead with the project to connect northern towns and villages to the national gas network, which includes the building of a trunk pipeline from Tehran Province to Khorasan-Razavi via Semnan.⁸⁹ But that does not mean that Iran wants to end imports from Turkmenistan – on the contrary, it wants those imports to increase, partly to enable Iran to increase exports to Turkey and on to Europe. In mid-February 2009 Iran signed a new agreement with Turkmenistan to import 10 billion cubic meters of gas a year from the lolotan gas field.⁹⁰

Apart from the improving relations with Turkmenistan, another positive sign for Iran is the difficulties facing the Trans-Afghan and Trans-Caspian projects. The key problem for the first project is the military and political instability along almost the entire route of the proposed pipeline. The first consortium to work on this pipeline was created back in 1996. Turkmenistan, Afghanistan and Pakistan then signed another agreement in December 2002. India joined the agreement to buy Turkmen gas in 2008.⁹¹ Meanwhile, the continuing troubles in Afghanistan have been compounded by growing political instability in Pakistan, where the government has essentially lost control of the border with Afghanistan. As for the IPI project, despite the de-facto suspension of India's participation, Islamabad and Tehran have managed to agree on the gas price formula at the end of 2008, and are making optimistic noises about pushing ahead with the project.

Meanwhile, the prospects of the Trans-Caspian project have become less certain after Russia, Kazakhstan, Turkmenistan and Uzbekistan signed an agreement to build the Near-Caspian Pipeline and upgrade the Central Asia-Center network. In this area, the Russian and Iranian interests coincide.

A successful implementation of the IPI project would make the Turkmenistan-Afghanistan-Pakistan pipeline less economical. And Iran's inclusion in the *Nabucco* project would be a pow-



erful argument against the Trans-Caspian pipe. Conversely, the demise of the Trans-Caspian project would improve the chances of Iran's inclusion in *Nabucco*. Iran would then become both a supplier and a transit country for Turkmenistan's exports to Europe. It is hard to say now whether Iran will actually see this ideal scenario come to pass – experts are doubtful about Iran's ability to supply enough gas for both pipelines at the same time. It is therefore important for Iran to make sure that its southern gas fields come on stream as planned. But the prospects of Iran's participation in both of these large projects have led to a certain shift in the country's interests in the Caspian region. First, Iran must maintain good relations with Russia's *Gazprom* and with the Caspian nations. Second, Tehran is moving away from the strategy of supplying its gas to Europe via the South Caucasus route or increasing its presence on the Caucasian market. And third, although Iran will still try to attract more Turkmen gas transit custom, it would also be willing to support the Russian and Kazakh route for the Turkmen gas exports as an alternative to the Trans-Caspian project.

So Russia and Iran have both conflicting and shared interests in gas transit. In the oil sector, Iran already has an established market and export channels. In the electricity sector, the interests of all the participants more or less coincide. But in the gas market, Iran is aspiring to become a new powerful entrant. It will of course have to win its share of the market from the existing players. In Europe that would be primarily Russia. Much depends on the dynamics of European gas consumption. If the ongoing economic crisis or some other factors depress gas consumption in Europe and the market stagnates, frictions will inevitably arise between the *old* and the *new* players. Which is why Russia would like Iranian gas to flow in some other direction instead, such as South Asia. That means that Russian and Iranian interests coincide on the IPI and the Trans-Afghan project. But there the simple answers end. Moscow's and Tehran's interests in Turkmenistan coincide on the Trans-Caspian project – both would like to see it fall through. But they also diverge since both of them want to become the main transit route for the Turkmen gas. Meticulous work by both countries' experts and well thought out political and economic steps are required to harmonize these interests. Effective and systemic work in this direction requires the involvement of international institutions. The Gas Exporting Countries Forum, set in December 2008, could become one such institution; the Shanghai Cooperation Organization (where Iran is an observer) is another. The Economic Cooperation Organization (where Russia is not even an observer so far) is one other option.

IRAN'S INTERESTS IN THE ELECTRICITY MARKET

The electric energy market is one of the least controversial areas where interests of all the regional players mostly coincide rather than diverge. In 2006, power generation in Iran reached 190 billion kWh. The total electricity consumption was 149 billion kWh. Consumption is growing by 7–9 percent every year, while generation is increasing at an annual rate of 10 percent.⁹² That means Iran has a surplus of electricity, which it exports to Armenia, Afghanistan, Iraq, Pakistan and Turkey. But on some occasions, such as during the drought of 2007–2008, which forced Iran to shut down its hydroelectric plants, or during the summer peak of electricity consumption, some of the Iranian territories and cities experience power shortages. Iran's neighbors face similar problems from time to time. In this area Iran is prepared to play a constructive role so as to resolve its internal disproportions and to make a tangible contribution to the development of Central Asia and the Caucasus.

Speaking in 2004, the Iranian deputy energy minister, Dr Reza Amrolahi, outlined four key priorities for Iran in the regional electricity sector: direct electricity exports to neighboring countries (primarily Turkey and Iraq); imports (mainly from Central Asian countries and the South Caucasus); seasonal and intra-day energy flows between Iran and its neighbors; and electricity transit via Iran, for example between Azerbaijan proper and its Nakhichevan exclave.

Iran intends to secure reliable electricity imports from Central Asia, Azerbaijan and Armenia, for which purpose it has been doing what it can to invest in the construction of new power plants and cross-border power transmission lines.

The key project for Iran in this area is the construction of the 220 MW Sangtuda 2 hydroelectric power plant on the river Vakhsh in Tajikistan. The last generator of the Sangtuda 1 plant,

built jointly by Russia and Tajikistan, was launched on May 16, 2009.⁹³ Sangtuda 2, which is being built by Iran, will work in parallel with Sangtuda 1. The Iranian partner was expected to contribute \$180 million to the project, and the Tajik government – another \$40 million. The completion date is scheduled for 2011. Under the terms of the deal between the two governments, Iran will own the plant for 12 years and six months after the launch; the plant then becomes the property of Tajikistan.⁹⁴

Another Tajik project in which Iran could take part is the completion of the Rogun hydroelectric power plant, which would almost double Tajikistan's power generation capacity (the total capacity of the existing Tajik hydroelectric plants is 4,070 MW, while the Rogun plant is rated at 3,600 MW).⁹⁵

Russia's *RUSAL* at one point became the main investor in the completion of the Rogun project, which began back in the 1970s. An agreement to that effect was signed with the Tajik government in 2004. But actual work never began due to technical differences, and in September 2007 Dushanbe pulled out of the deal. The nature of the differences was that the Tajik government demanded the height of the dam to be increased to 325 meters, which would allow Tajikistan to control the flow of the Vakhsh, a tributary of the Amu Darya. The problem also had political connotations – Dushanbe believed that *RUSAL* was “failing to fulfill its obligations” under pressure from neighboring Uzbekistan.⁹⁶

Tajikistan then decided to complete the project on its own, hoping for a loan from the World Bank or other international institutions. Iran said it was willing to take part.⁹⁷

Apart from the hydroelectric projects in Tajikistan, Iran also plans to take part in building small hydro power plants on rivers along its border with Armenia and Azerbaijan. In March 2007 it signed a deal with Armenia to build two 140 MW hydro power plants on the river Araks,⁹⁸ and in August 2007 a similar deal was signed with Azerbaijan.

Electricity exports/imports and the linking of the national energy grids requires a powerful system of cross-border transmission lines (ETLs). The biggest project being discussed in this area is the construction of an ETL from Tajikistan to Iran via Afghanistan along the route of Sangtuda-Rogun-Kunduz-Mazar-Herat-Meshkhed. A memorandum on the project was signed by the three countries' ministers in September 2008. Iran's *Mushanir* company was contracted to carry out a feasibility study.⁹⁹ Apart from the memorandum, no progress has been made by the spring of 2009. The cost of the project and the sources of funding will be determined once the feasibility study is completed.

Another project being considered is the construction of a third ETL between Armenia and Iran, rated at 400 MW.¹⁰⁰ The two existing lines are each rated at 200 MW. There are also plans to build new ETLs between Iran and Azerbaijan and increase electricity flows between the two countries from 250 MW to 700 MW.¹⁰¹

Some of Iran's most successful energy projects in Central Asia and the Caucasus are in power generation and transmission, although here too the country's share of the market is much smaller than Russia's. Tehran has been nurturing ambitious plans in this region, which is perhaps unsurprising, given the momentous changes here following the collapse of the former Soviet Union. But the opportunities offered by these changes are open not only to Iran. In fact, Iran has found itself in one of the least favorable positions to make use of them. After two or three years of search, the new independent states stopped trying to make a choice between the Islamic, Turkish, Iranian, Western or other models. The Central Asian and Caucasian leaders have been busy consolidating the nationhood and the economies of their republics, as well as their own grip on power, using their countries' energy resources as a powerful tool. Politically, Iran has played a constructive role; more so in Tajikistan, and to a lesser extent in other conflict zones. But Tehran did not have the resources to secure a more tangible political or economic role for itself in the new independent republics. More powerful players have cornered the energy market of the southern CIS states. All Iran could do was try to solve the Caspian problem (it had almost nothing to lose here, but it needed to keep its options open), and to build energy relations with its northern neighbors in a way that would help its own social and economic development rather than hampering it. In power generation and transmission, as well as in the oil sector, that goal has largely been met.



Central Asia and the Caucasus are now on the periphery of Iran's foreign policy, but the balance of forces in this region will largely determine the outcome of the Iranian plans in gas exports and transit. Harmonizing its interests in this area with Russia's is of the utmost importance for Iran.

Following the arrival of the new U.S. administration at the beginning of 2009, many analysts are expecting a radical shift in U.S.-Iranian relations, which they believe will completely change the geopolitical and energy situation in the region. That would probably open new prospects for Iran – but any change will take time. It will take more than a few months for the investment climate to improve, and the political risks will not disappear overnight. Meanwhile, countries in Central Asia and the Caucasus already have a large choice of export routes, and plenty of investors eager to take part in developing their energy wealth. As for Russia and Iran, no matter what the nature of their respective governments might be, both of them will always be viewed in the West as two powerful *geopolitical tectonic plates*,¹⁰² as Russian journalist Azer Mursaliyev put it – and the Western goal will be to steer the new energy routes well clear of them both. 🗨️

Notes

¹ This article's definition of the Caspian region includes the former Soviet republics in the South Caucasus and Central Asia, including: Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

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³ The share of the Caspian in total proven oil and gas reserves of the region's countries (based on a U.S. Energy Information Agency report and BP statistics overview).

Oil – billion barrels

Gas – billion cubic meters

Country	Caspian oil	Total oil reserves	Share of Caspian oil, %	Caspian gas	Total gas reserves	Share of Caspian gas, %
Azerbaijan	7	7	100	850	850	100
Kazakhstan	22	30	73		2,408	75
Turkmenistan	0.5	0.6	83	?	2,663	–
Russia	0.3	60	0.005	–	47,609	–
Iran	0.1	138.4	0.0007	–	28,101	–

Source: Oil & Gas Journal Energy Information Administration Table, posted on March 3, 2009, <http://www.eia.doe.gov/emeu/international/reserves.html>

⁴ *Constitution of the Republic of Azerbaijan*, http://www.president.az/browse.php?sec_id=52

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⁷ Russian-Kazakh Agreement on the division of the sea bottom of the northern part of the Caspian Sea for the purposes of exercising sovereign rights on mineral resources of the sea.

⁸ Azerbaijan and Kazakhstan divided the sea bottom along the unmodified median line. On November 29, 2001, during an anniversary summit of the CIS, the presidents of Azerbaijan and Kazakhstan signed an Agreement "On dividing the bottom of the Caspian".

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Vadim Kozyulin

SUDAN BETWEEN WAR AND PEACE

Large war starts with large defense acquisitions. The flows of arms can help to trace the potential hotbeds of conflicts – weapons go to the areas of pain, aggravate the old conflicts and bring closer the breakouts of new violence.

Recent news coming from Sudan indicate that the country is preparing for war, which may eventually spill over into neighboring states and change the borders in the region.

European and Arab colonizers took the African tribes out of their primordial life, taught them to live in cities, believe in new gods and even participate in the elections. But independent African ethnic groups stopped in their progress between the savagery and civilization. Western billions make a significant contribution to the budgets of some local governments – they create an illusion of survival for the poorest and corrupt the *nouveaux riches*.

The lands separated by artificial borders drawn by the colonial powers in the 19th and 20th century without bearing in mind natural ethnic and cultural boundaries are full of unresolved conflicts. Old territorial claims, interethnic and religious problems are exacerbated with the rapid population growth, exhaustion of natural resources, and climate change.

REBELLION IN BORDERS AND WITHOUT BORDERS

Darfur is a rebellious province of Sudan. Its sun-burnt land is the reason for conflict between the two local communities – Arab Muslims (and its armed wing of Janjaweds, who ride through the sands with their Kalashnikovs across the chest) and Africans (comprising Muslims, Christians and pagans). Government forces try to stop the violence from time to time and separate the parties. The African community normally gets more casualties, so people seek refuge in neighboring states. According to the official data, the number of refugees and internally displaced (IDPs) is over 200,000 people, most of whom live in Chad.

Armed struggle between the Arabs and Africans does not stop in Chad itself (the Muslims make 65 percent of the local population). Two conflicts are interconnected – the Darfur militants use the territory of Chad as their rear base, while the rebels from Chad hide in Darfur. Both states secretly support the militants from both sides. Darfur is the battlefield of undeclared war between Sudan and Chad, while the legitimate government of Chad has to share the power with the tribe leaders and warlords.

Kenya is the country which until recently seemed to be relatively trouble-free, despite the splashes of interethnic violence and the mutiny of ethnic Somalis. During the 2007 disturbances nearly 2,500 people died. Fragile peace settled after the establishment of the coalition government of national unity enables the country to have the reputation of safe-haven in the West and attract foreign tourists to local safaris. Kenya is a popular place for conducting inter-



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national conferences on various topics – from salvation of African elephants to reconciliation of enemy clans from neighboring states.

The Democratic Republic of Congo suffers from differences between the Hutu and Tutsi, which continue to instigate civil war, despite the efforts of the UN peacekeepers. Neighboring Rwanda and Uganda make attempts to derail the process of national consolidation, in order to be able to exploit the natural resources in the areas controlled by the militants loyal to them.

In Uganda there is a hope for settlement, which will put an end to the twenty-year civil war involving the Northern Nile ethnic groups and Bantu southerners. But the next step of the peace plan – voluntary disarmament of the rebels – seems unrealistic, bearing in mind the fact that the International Criminal Court convicted the leaders of the Lord Resistance Army (LRA) for crimes against civilians, so the criminal prosecution and the penalty are pending.

The history of modern Central African Republic is a series of coups. After the 2001–2003 war the country lives under the tough authoritarian regime. It is challenged by various bandit groupings in the north of the country, which try to acquire some political status.

The world also looks indifferently at the collapse of Somalia, which breaks up into a dozen of feuds. Warlords have their own rules and laws there and neglect the internationally recognized transitional federal government. The war with Ethiopia followed by the inter-clan war turned Somalia into a country of refugees and IDPs, while its economy is ruined. Ethiopia supported by the United States tried to fight against the Somali Islamists. However, military victories of the Ethiopians in Mogadishu were short, while the UN-backed transitional government suddenly declared the sharia law in Somalia. Nowadays Somalia is mainly associated with Islamism and piracy.

Eritrea established in 1993 after successful guerrilla war has its own problems. The Eritreans occupied most of the sea coast in war-torn Ethiopia and deprived the country of access to the ports. Since then after a number of local conflicts, in which Ethiopia was luckier, the parties have been preparing for a decisive battle. Meanwhile, peace is monitored by the UN peacekeepers as well. Nonetheless, their presence does not prevent the Eritrean volunteers to fight with Ethiopia on the territory of Somalia and to support any enemies of their adversary with arms and money.

This set of regional conflicts and wars demonstrates some samples of peacemaking, which can surprise the observers. For instance, Sudan's leadership has many times showed its ability to achieve peace at the negotiation table with the toughest opponents.

RECONCILIATION OF UNRECONCILED

20 years of bloodshed in Sudan and the truce that put an end to it are both connected with the name of John Garang. A Dinka by birth he graduated the University of California (Berkeley) and in 1983 was sent to the south of the country to suppress the mutiny against the Islamic government of Sudan. He broke the oath of allegiance and led the rebellion, set up the Sudan's People Liberation Army (SPLA). The war against the Islamization of the South was one of the most dramatic conflicts of the late 20th century. During the years of war nearly two million people died and four million lost their homes.

At first sight, the war in the South resembled a traditional religious conflict, since the majority of population in this area is made of Christians. However, an important root of the conflict was under the ground – the parties wanted to divide the potential (and since 1997 – actual) oil revenues, since most of the oil in Sudan is in the south of the country.

In 2002 the leaders of the conflicting parties – President Omar al-Bashir and John Garang – managed to overcome the differences and signed the framework peace agreement that stopped the civil war. After three more years of negotiations, most of the issues were settled. On January 9, 2005 the comprehensive peace plan was signed – it was guaranteed by the United Nations, the League of Arab States, the EU, the African Union, the United States, the U.K., Norway, the Netherlands, Italy, Egypt, Kenya, and Uganda. It implied that John Garang

would be the vice president, Islam would no longer be the only official religion, and South Sudan got the self-government, posts in the government of national unity, and half of the revenues from resources extracted on its territory (chiefly – the oil). The armies agreed to establish a joint military unit in the South, which would become an exemplary case for the rest of the Armed Forces. And moreover, the parties approved the idea of the referendum in 2011 in South Sudan, which should decide its future – autonomy or full independence.

South Sudan got a broad autonomy. It seemed that the conflict was resolved, but far from that. John Garang did not manage to see the results of his victory – six month later, in July 2005 he died in a plane crash flying back home from negotiations in Uganda. The helicopter belonging to the Ugandan president hit the rock. This tragic death raised new suspicions among the parties and caused a new wave of violence and riots in Sudan.

Garang's followers were less open for talks than their leader – in October 2007 the government of South Sudan suspended the activities of its ministers and presidential advisors in the government of national unity and urged the central authorities to comply fully with the provisions of the comprehensive peace agreement. President al-Bashir agreed with some arguments of the opposition and in December 2007 new ministers from South Sudan took their posts again.

In early 2003 when it turned out that that the Sudanese government was ready to share the oil revenues in order to achieve peace, a number of militant groups in Darfur began their own intrigue. They launched a dispute on the land possession in this region. The clashes with the local tribes, which were a regular thing due to permanent famine since the early 1980s, became a real armed struggle in 2003, when the leaders of the belligerent parties felt the smell of oil. In December the representatives of the Sudan Liberation Army (SLA) in Darfur asked for self-government, control of the territory of Darfur and 13 percent of oil revenues of the country (the population of Darfur makes 13 percent of the population of Sudan).

Let us point out that there is no oil in Darfur. The nature was cruel to this province, which territory is equal to France – Sahara attacks the arable lands, two thirds of the region are sand and rocks and high population growth makes famine inevitable. The rebels realized that firepower and oil in the neighboring province would make a perfect formula of success, which would give them a new sense of existence.

BLOOD AND OIL

The variety of ethnic groups living in this area is reflected in numerous rebel movements. The most influential party in Darfur is the *Justice and Equality Movement* (JEM). Three other significant groups are the factions of the Sudan Liberation Army – SLA). They represent different tribes with different political weight and combat potential, fight with each other more often than with the central government. But *JEM* and *SLA* started the rebellion against the social isolation of the peoples of Darfur in 2003. Beside them, there are many bandits who prefer the mask of rebels and many rebels who do not have the armies, but have Web sites and satellite phones to connect the foreign press.

The parties in Darfur can fight with each other, they have different political claims to the central government, but they all agree that Khartoum should compensate for the damage inflicted by the Janjaweed. This movement popped up in 2003 to support the regular army of Sudan in suppressing the *JEM* and *SLA* militants. Being Muslims, Janjaweed do not hesitate to destroy the mosques, kill the imams and desecrate the religious books of black Sudanese from Fur and Zagawa tribes.

The military strength of the rebels is normally counted in jeeps in this area. An experienced driver and a dozen of armed militants with a heavy machine gun on the roof, with a stock of gas and food make an ideal combat unit in the desert and can easily cover long distances.

In 1990 a leader of such detachment comprising 300 jeeps – Idriss Déby – marched from Darfur to Ndjamena and overthrew the government of President Hissène Habré in Chad. He now keeps fighting against the local rebels and support the militants in Sudan.



For instance, in May 2008 his friends from *JEM* tried to repeat the mobile operation and attack Khartoum. But the Sudanese authorities were tracking their movement and defeated the group. They also captured the phone call by Khalil Ibrahim (*JEM*'s leader) to Idriss Déby asking for a rescue helicopter. President al-Bashir was furious and broke diplomatic relations with Chad.

External interests in Darfur are reflected in various ways. Chad is closely connected with both rebel groups – they get support, hide on the territory of the country, recruit new militants among the Darfur refugees in the camps located in Eastern Chad. The camps are secured by the EUFOR – a French-EU enterprise – deployed in Chad and the CAR upon insistence of France in late 2007. According to the bilateral agreement, the French materiel and nearly 1,500 servicemen are based on the territory of Chad.

President Déby once got his military education in France. France granted an asylum to Khalil Ibrahim. A leader of SLA – Abdel Wahid al-Nour – also lives in Paris and refuses to take part in the peaceful settlement in Darfur. The French control the developments in the rebellious region.

However, Paris is an important, but secondary player. *Le Monde* argues that the participation of France in Darfur is regarded as useful by Washington, since France has levers in the region (Chad, CAR) and contacts (Eritrea) which the U.S. administration lacks.¹ Hence, Paris becomes a key U.S. partner in the region and the logic of the conflict is aimed at keeping the U.S. interested.

In April 2008 the Western media reported a curious statement by a *JEM* spokesman – he argued that the rebels in Darfur wanted to replace the Chinese oil companies with the Western ones. In his interview with Dow Jones Newswires he maintained that the movement was ready to provide better assurances of oil revenue distribution and environmental protection. He also hoped for the dialogue with the United States – *JEM*'s support for Chad which hosts the oil pipeline from Chad to Cameroon operated by *Exxon Mobil Corp.* is allegedly the assistance to the U.S. oil interests in the region.

Successful oil production in the region attracts global powers – China and the United States. Due to the problems in the Middle East, the Americans seek the alternative sources of cheap oil. In the late 1990s the President of Chad became a true friend of Washington. The discovered oil reserves in this country amount to 1.5 billion barrels. Since 2003 the oil from the Doba fields in the southeast of the country has been supplied to the world market via the oil pipeline operated by *Exxon Mobil* and *Chevron* together with *Petronas* from Malaysia. The pipeline is 1,070 km long and connects Chad with the sea terminal in Cameroon – the daily production rate is nearly 160,000 barrels.

However, in 2007 Déby let China enter the market. *PetroChina* explored a new oil field in Chad with over 100 million tons of reserves and in September 2007 it signed the contract with the government establishing a joint venture with *CNPC*. The rivalry for oil between China and the United States affected Chad.

In February 2008 a coup attempt occurred. 2,000 armed rebels crossed over 1,000 km from Darfur to Ndjamena within a few days and seized the presidential palace. Déby hid at the French military base and hesitated for a couple of days. The French military, who were tactical partners of the United States, were inactive and let the rebels reach the capital and did not prevent the pillage. Soon after Déby must have promised to behave and was restored at his throne with the help of the French troops.

WEAPONS FOR THE REVOLUTION

The region is weaponized – even Israel supplies some Darfur rebels, despite their Muslim origin. SLA has even opened its representative office in Israel.

The Sudanese authorities accuse Ethiopia and Kenya of supplying weapons to South Sudan.

Minister of Finance of South Sudan Kuol Athian indirectly confirmed the active weaponization of the autonomy – in 2008 the parliament had to approve \$980 million of expenditure in addition to the \$1.6 billion budget. In his interview with Reuters he confessed that the major reason for such extra spending was the army – it spent \$500 million more than planned.²

A cargo with illegal weapons was detected by the UN inspectors – they helped to seize *DC 130* from Ethiopia with 40 tons of ammunition and light weapons in the airport in Juba. The Foreign Ministry of Sudan issued a note to the Ethiopian ambassador.

Such reports are numerous – the region is saturated with small arms and light weapons. It is easier for arms smugglers to cross the borders than for the refugees. The rebels in Darfur would like to fix the right to carry a machine gun for farmers and try to make it one of the points of the truce. Not surprisingly such illegal arms deals are thriving. However, there are some changes and they are astonishing.

The region becomes a destination for heavy weapons. Machine guns, grenade launchers, mortars – this armament of the jeep detachments is available to everyone, it can good for tactical success, but real power is brought by armored vehicles.

The 2011 referendum is approaching. According to various observers, its outcome is clear – the Southerners will vote for complete independence. Such result would mean the resumption of civil war, so tanks arrive in South Sudan.

On February 13, 2009 *Faina* vessel liberated from the pirates started to unload its cargo in Mombasa in Kenya. 33 *T-72M1* and *T-72M1K* tanks, six 14.5 mm ZPU-4 air defense machine gun systems, 150 *RPG-7V* grenade launchers, 8,788 125 mm *VOF-36* ammunition, 5,000 125 mm *VBK-10* ammunition, 18,490 dynamic protection systems for tanks, over 1,000 tons of small arms, six *GRAD* rocket launchers, *Strela-2M* portable rocket launchers.

Everyone in Kenya knew that the cargo was meant for South Sudan, even though the officials denied the delivery. Standard arms acquisition procedures were not complied with in this case. Normally a seller supplies Kenya with a sample for tests and then long before any decision is taken a group of Kenyan military go to the exporting country to learn how to handle the weapons. There was nothing of that kind between the government of Ukraine and the Kenyan MOD.

Kenya does not suffer from serious external threats, but it has problems with domestic security. Nonetheless, one can hardly imagine that riots can be suppressed with tanks and air defense systems. Moreover, training and supplies to the Kenyan officers are sponsored by the donations from the United States, so the army follows the NATO standards. Why on Earth would it buy the Soviet materiel, which the Kenyans can neither operate nor maintain?

New facts add to the intrigue. Ukraine's report on arms export of June 18, 2008 submitted to the UN Conventional Arms Register indicates that in 2007 Ukrainian companies delivered to Kenya 77 *T-72* tanks and five rocket launchers (*BM-21 Grad*), 122 mm howitzers and 203 mm guns. It is noteworthy that 203 mm self-propelled gun – *2S7 Pion* – was created in the Soviet Union to destroy and suppress the nuclear offensive means, enemy artillery and firepower, field and long-term defense facilities and logistics. Such weapons cannot be employed against the disturbances – they are designated for a serious warfare. By the way in 2007 the Kenyan MFA submitted to the UN Register a very short report – no export, no import.³

Thus, the African desert consumed hundreds of artillery pieces and thousands of small arms, as well as 110 *T-72M1* and *T-72M1K* tanks – an extremely modern weapon for the continent. Such supplies are the sign of a new war, which will not be confined to South Sudan, but will spill over into Darfur, may involve Chad, Ethiopia, Uganda and even transform the conflict into another Great African war.

A few dozens of NGOs are trying to detect illegal or destabilizing arms transfers in the world – thanks to them, such information becomes public and is investigated by UN special commissions. But after all, such transfers are never accidental or may pass unnoticed. They cannot be noticed only if there is no desire to identify them at all.



Nowadays Western mediators, humanitarian and human rights agencies, UNIDIR officers in various provinces of Sudan keep silence about the buildup of weapons in South Sudan and this reminds of a plot.

The aforementioned weapons – tanks, rocket launchers, self-propelled artillery systems – are complicated machines, which require good training of the crews and technicians. To maintain such tanks, one needs an appropriate technological basis and resources. None of the African states can cope with this task without attracting foreign military advisors. And there is no doubt that such experts are in the region and there are many of them. It is not yet clear, which state they belong to, but one may presume that the Soviet equipment is maintained by our former compatriots from the ex-U.S.S.R, who are also engaged in training. Behind this, one may feel the presence of some evil force – it is frightening to name it.

THE OIL: SPLITTING PEOPLE, UNITING PEOPLE

It is believed that the Islamic fundamentalism is the deafest religion as far as external arguments are concerned. However, the broadly condemned regime in Sudan has showed good examples of effective compromise with belligerent opponents. After the conclusion of the peace agreement with the South, Khartoum seriously believed that reconstruction and investments in infrastructure of South Sudan would help to build friendly relations with the local population. These hopes are still strong today.

In accordance with the achieved agreements, Sudan began to change. The downtown of Khartoum with its trade district is boiling busily with loud prays of Muslims and rhythmical Christian gospels. The Evangelistic church is based there. It is surrounded by neatly dressed youth, Sudanese girls with uncovered heads and faces. In the street nearby every evening a polite young man disseminates free pocketbooks – copies of the New Testament.

The Khartoum University trains the staff for the government and the opposition. It was established by the Brits and 17,000 students study mainly in English. Professors come from Syria, Lebanon, Egypt, Germany, and the U.K. Knowledge penetrates the minds of the youth along with the seeds of liberalism.

The country is thriving with massive construction. A new road network is the first thing a foreigner notices when he arrives in Khartoum. The number of flights in the airport has grown several times and it is much easier and cheaper to come to Sudan nowadays. The country is covered with new bridges, electricity grids, pipelines. Due to the lack of coal, Sudan's energy sector makes stakes on the Nile – hydropower plants are being built. Khartoum hopes that the periphery, including the Southerners, will soon feel the change.

Most of the oil in Sudan is concentrated in the south. As of 2002, the proven oil reserves amounted to 631.5 million barrels, natural gas reserves were 99.11 billion cubic meters. Sudan currently produces 500,000 barrels of oil per day and this is far less than other African oil exporters – Nigeria, Angola, and Equatorial Guinea. The Sudanese government hopes to extract 600,000 barrels by late 2009 and 1.1 million per day by 2010.

The conflict in South Sudan would impede the functioning of this industry – fragile oil facilities would die in the fire of civil war. Hence, oil was a powerful impetus for reconciliation.

The resumption of the conflict would be a blow to Khartoum, which would be deprived of oil revenues. However, for Juba the open war with the central government would mean the suspension of petrodollar flows – the pipeline goes north to Port Sudan via Khartoum. The oil infrastructure is a uniting factor for the elites of both parts of large Sudan – it facilitates the attraction of foreign investments, it helps to increase the budgets and ensure the prosperity of the nation, as the wages grow along with the oil revenues.

However, one can hardly expect the Southerners to be guided with geopolitical interests in their choice. Most probably they will follow the voice of their hearts and support complete independence, for which nearly one million people sacrificed their lives. If the province succeeds in evading the war, it will have to learn to live independently.

The oil rich area does not take this problem seriously. The government of South Sudan can always construct a new pipeline via Kenya. Khartoum is not against building a pipeline along the shortest route – from South Sudan to Mombasa, if the population of the region agrees to stay within the united country. If this is not the case, Khartoum will try its best to disrupt the construction of the pipeline to Kenya. Such project would require about \$2 billion, which could be invested by the United States or India (which wants to have a pipeline connected with the Indian Ocean). But Kenya is not a stable country, it suffers from Somalia Islamists and the pipeline would be an irritating factor for all militants, especially those who refer to the war in South Sudan as the war between the Muslims and the Christians.

UNITED STATES, CHINA, RUSSIA: WHEN ALL THE PATHS MEET

In 1997–1999 the international consortium led by *CNPC* made the first contribution to the oil infrastructure of Sudan – \$2 billion. Since then the Chinese investments have increased to \$15 billion and Beijing became the major foreign policy and economic partner of Khartoum. The total number of the Chinese specialists in Sudan amounts to 15,000 people. In the last 10 years the trade turnover between Beijing and its African partners increased by 1,000 percent! Two thirds of the Sudanese oil are delivered to China and this makes about eight percent of all oil supplies to China.

China's global problem is the lack of energy resources. China (daily demand for oil is seven million barrels) is the second largest consumer of oil in the world after the United States (20 million barrels per day). Even though Washington relies on oil imports more than China (60 percent against 47 percent), China's per capita oil consumption is 20 times lower than in the United States. To maintain high growth rate China requires permanent increase in oil consumption – the forecast for 2011 is nine million barrels per day. Under these circumstances, the Chinese has only one way out – to invest and select the partners without any political correctness or scrupulousness. Africa with its conflicts is the perfect place for such risky investors as China. Other investors, mainly American, have left the continent, since free capital does not like the risks.

While China develops projects with Khartoum, the United States tries to improve its relations with South Sudan and Darfur. The Americans do not make business in these troubled waters, they fund the humanitarian projects. Through the USAID mission in Sudan the Americans help to organize the work of local administrations and wake up the civil society. The United States is the largest donor of Sudan and it pays for 90 percent of humanitarian aid delivered to the country. Every year U.S. expenditure on humanitarian, construction and peacemaking projects in Darfur and South Sudan exceeds one billion dollars.

The United States imposed economic sanctions against Khartoum, but is ready to cooperate with South Sudan. However, business interests of the U.S. corporations in South Sudan are quite modest. The projects launched indicate that their participants would like to take over other U.S. companies in the race for the right to produce oil in South Sudan.

In the recent years Sudan has turned into an irritation factor in the Sino-American relations. China is not only the major importer of the Sudanese oil, but is also the major arms supplier to Sudan. Khartoum pays with Chinese petrodollars for the Chinese weapons and uses them against the militants and civilians in Darfur. Despite the pressure on the part of the United States, China until recently has tried to avoid imposing its influence on the Sudanese leadership. According to some experts, Beijing has lately changed its approach and agreed to support the UN and AU peace initiatives, and also limited the supplies of the most sensitive weapons to Khartoum.

Except mutual Cold War suspicion, the United States and China have no reasons for conflict in Africa. Two largest oil consumers in the world are interested in reliability and security of supplies at reasonable prices. The example of Angola proves that the two Great Powers can cooperate without conflicts with a supplier, which every year gets *bad mark* from the U.S. Department of State for the human rights abuses.



New U.S. policy with respect to China will most probably mean that Washington will get rid of the human rights fetish in order to convince Beijing to take some part of the peacekeeping burden. As the Chinese Foreign Minister Yang Jiechi put it, "Even when the train of the world economy eventually reaches some flat land, it will still be necessary for China and the United States, two giant motors, to push this train forward together and all the time."⁴

Russia also shows growing interest in the region and returns to Africa. In December 2008 there was established a post of the special presidential envoy on Sudan. It is occupied by Mikhail Margelov, Chair of the Committee for International Affairs of the Federation Council.

Before Margelov the continent was reopened for Russia by Vladimir Putin personally – he made historic visits to Egypt, Algeria, Libya, Morocco, and South Africa, which are advanced and more or less prosperous nations in African terms. During his tours he was not engaged in big politics, but rather defended the interests of the Russian companies and signed new contracts. Russia wanted to invest billions, to get concessions and to sell weapons – to make billions as well.

What does Russia look for in the war-torn region? In early 2009 Mikhail Margelov went to Sudan and visited Khartoum, Al-Fashir and Juba, where he met the leading politicians, the president and vice president in Khartoum and the president of South Sudan. The Russian senator was seemingly speaking about the same things – resumption of political and economic cooperation. However, he did not touch upon any economic project and he was accompanied mainly by journalists – the businessmen were not in the delegation.

The flagships of Russian business have issues to discuss in Khartoum. Russia had its moments of glory in Sudan as well. In 1997, for instance, *Zarubezhneftegazstroy* signed a contract on oil pipeline construction (411 km). Due to the lack of funding in Sudan and in Russia the company found an investor in France (\$300 million) and invented an effective scheme of returning the loans. However, the Ministry of Energy in Sudan broke the contract under the pretext of delay with the start of works (in fact, Sudan received a better offer from Beijing).

In 1998 *Lukoil* signed a contract on the construction of a mobile pipeline with the capacity of 12,500 barrels per day. Despite long negotiations, the project failed to be implemented (the Sudanese argue that *Lukoil* was claiming for concessions without even starting the works).

Slavneft and *Tatneft* were also among the Russian companies announcing their strategic plans in Sudan. However, only *Rosoboronexport* was successful – the Russian weapons are appreciated in Sudan more than the Chinese ones.

As far as other areas are concerned, China is winning over both rivals. The Sudanese agree that the quality of the Chinese products is 20 percent lower than the Russian, but it is improved, while the quality of the Russian products is going down. Besides, China's prices are much lower and there is no room for competition here.

China's major trump card is funding – Beijing easily provides large loans which can be paid back in parts during 15 years. For the Russian banks 15 years is something beyond understanding.

Three years ago Russia made an effort to overcome its economic impotence in Africa and made a presentation of the leading Russian companies and banks to ambassadors and military attaches from Central and Eastern Africa. *Rosoboronexport*, *Technopromexport*, *Vneshtorgbank*, *Vnesheconombank*, etc. took part in the event and talked about their corporate potential and plans. The Russian government nearly agreed to fund (on reasonable terms) the projects of the Russian corporations in Africa. When the Africans asked for the specific numbers, the Russian cautiously made different statements in discord – remembering "state interests" as *carte blanche* or "LIBOR and no less than nine percent a year".

The ambassadors who were stunned with sudden attention repeated the only phrase – the Russian state was turning to the African continent. They promised to convey this message to their leaders, promised copper, nickel, diamonds, invited Russian companies to cooperation, but with the Russian money and not higher than three percent a year. This was a good talk.

Nowadays Russia is on the red carpet going to Africa once again. The public interest is high, the media interest is high. But as soon as the oil pipe was launched, the red carpet became narrower. The number of flights to Khartoum has increased several times, hotels are expensive but are full. The country is getting used to international attention and to... the Chinese technologies. Russia is about 15 years late. China got its *Cannes Palme d'Or* at this festival.

However, Mikhail Margelov came to Khartoum with a proposal – to host an international expert conference on Darfur in September 2009 in Moscow. The idea was immediately supported by President al-Bashir.

Margelov had a philosophical explanation for such a strange venue for the conference, “We have no countries, where our interests do not extend. Sudan is not an exception. Stability of Sudan, real implementation of the agreement between the North and the South, success of the negotiation between the North and Darfur – all this also affect Russia.”⁵

China held a similar event in 2008. Beijing was forced to step into Sudan’s political life – under the pressure of Western criticism for assisting the authoritarian regime. The Chinese are ready to take part in shaping a more comfortable political climate in Sudan for the sake of their economic projects.

Russia and China, being the permanent members of the UN Security Council, rendered Sudan a number of services – prevented tough sanctions, for example. Nowadays Sudan is under embargo imposed by the United States and the EU. The UN has sanctions only against Darfur, while the central government got away and did not fall under the international regime of sanctions, thanks to China and Russia. Beijing’s motivation is clear – it consumes two thirds of Sudan’s oil, while investments in Sudan are the largest project of *CNPC*. Chinese companies one after another win tenders on construction of infrastructure – dams, hydropower plants, electricity grids, plants. For China the support of Sudan is converted into billions of dollars. So no wonder that Beijing supplies the country with tanks, aircraft, artillery, develops its defense industry, in order to protect the investments.

Russia is often condemned for its political support to Sudan. The international community is even more concerned about arms supplies. Russia began to deliver the vehicles in 2001 – 40 *Mi-24* helicopters, 12 *MiG-29* aircraft, 30 *BTR-80* armored personnel carriers. *KAMAZ* also rests its hopes on Sudan – over 100 trucks have been delivered and there are plans to start assembling the vehicles on the spot. From time to time Sudan acquires *Mi-17* helicopters. The overall economic effect is about \$30 million.

Military-technical cooperation with Sudan may help Russia to gain more respect from Africa and the Middle East, but it inflicts serious damage to the Russian reputation in the West. Russian arms dealers are treated with suspicion in the world because of their supplies to Sudan. And the MFA statements about the compliance with the international arms transfers’ laws are not taken seriously.

Russia’s attempt to enter Africa via Sudan may be regarded as an offer of the new rules of the game – today Russia in exchange for supporting Sudan in the UN Security Council gets a privilege of selling weapons to Khartoum. This is a trifle in comparison with the benefits obtained by China. So Moscow now would like to convert this strong political support into specific economic projects – access to the deposits, construction contracts, equipment supplies. In other words, Russia is ready to make business with the use of its political capital.

Vladimir Putin voiced these plans three years ago, “The immense positive political material developed and paid for by the Soviet Union should be transformed today into pragmatic relations in economic sphere. Nearly all countries of the African continent present an interest for the economy of any nation, including Russia – to increase the extraction of natural resources, to get necessary products from those countries, which are not or cannot be manufactured in Russia. Above all, I mean the agricultural products, tropical fruit – they are not cultivated in Russia and will never be. All this plus political interaction.”⁶

Russia has neither means, nor impetus to compete with China within the framework of open economy with its tenders, etc. China has to make many concessions to obtain energy resources, while Russia has no such problems.



Russian interests in Sudan are not specific, they are too global. Russia would like to remain a Great Power and, hence, it claims for some role in Sudan as well, just as in many other parts of the world. In 2005 when the peace agreement was signed, eight countries, including the Netherlands and Norway guaranteed the implementation of the document. Russia's signature was not there. Perhaps, another historic treaty in Sudan will contain the signature of Mr. Margelov along with other parties. This would help Moscow to become an international mediator, to strengthen its global status and to compensate for economic weaknesses.

WARRANT FOR UNREST

As the referendum in South Sudan is approaching, the tensions grow and the new war is much more probable. Western experts assume that President al-Bashir should be the only victim of the internal conflict – such scenario is quite attractive to them. Until he rules the country, the future always lies between war and peace, and the military outcome is much more probable. If Bashir disappears from the political scene, there are other alternatives and the military scenario is not inevitable any longer.

A good example is Mozambique. In 1976–1992 the country was torn with the civil war. In 1985 its president – Samora Machel – died in the plane crash organized by the South African secret services. He was replaced by Joaquim Alberto Chissano, who launched the course on economic and political liberalization. The 1990 Constitution, which provides for the multiparty democracy is effective until now. The death of Machel helped to stop the war and to move the river of the armed conflict into political canals.

Until recently the U.S. military strategists believed that the regime in Sudan can easily be replaced – it was considered a technical issue. 2,500 U.S. soldiers should have been enough to change the power in Khartoum. The temptation was big. In 2007 Joe Biden stood for the military intervention and supported this scenario in the Senate. But such attack against Sudan required international support, which America lacked.

The accusation of the authorities in Khartoum of genocide could provide for such international backing. The 1948 Convention on the Prevention and Punishment of the Crime of Genocide empowers the United Nations to prosecute and punish the culprits of genocide regardless of their position – “whether they are constitutionally responsible rulers, public officials or private individuals.” Washington attempted to portray Janjaweed as a tool of genocide, which would enable the United Nations to apply effective measures of punishment and to bring the criminals to the International Criminal Court. However, the attempt failed.

The decision of the International Court to issue a warrant for arrest of President al-Bashir was another attempt to solve the problems in Sudan by removing a specific person from power. Democratic countries are so keen on throwing al-Bashir out of his palace in Khartoum, as if they know his successor and can foresee the implications of removing from power such a tough leader.

Sudan's closest neighbors, the League of the Arab States, the African Union, Russia, China, and India – those nations that understand true situation in this country – disapproved the decision of the ICC, condemned it as destabilizing and urged for its suspension. Further developments confirmed their apprehensions. The *JEM* rebels, who signed a declaration of good intentions with the government in February 2009, immediately after the March decision argued that there would be no negotiations with Khartoum and it was the time to get rid of al-Bashir. Khalil Ibrahim was ready to provide evidence to the ICC and claimed for the resumption of investigation of genocide. The Darfur militants immediately attacked the UN peacekeepers supplied by the African Union.

The warrant for arrest means that the West has put an end to all the attempts to achieve peaceful resolution of the conflicts in Sudan. Many negotiators will now withdraw their commitments, since they do not want to deal with the international criminal. The decision of the ICC was regarded by the rebels as a start of the hunting season against al-Bashir – who on Earth would defend the president accused of five crimes against humanity and two war crimes? Perhaps,

taking into account the fate of Samora Machel, Khartoum established a special government committee to ensure the security of flights of President al-Bashir abroad.

The Bashir regime will hardly become more compliant. It is condemning the United States and the EU⁷ – rallies bring together tens of thousands of people, who support the president. Sudan closed the offices of 13 international organizations, shut down three local NGOs and accused them of cooperation with the ICC. These are mostly the organizations, which in the last six years have been conducting the largest humanitarian operation in the world – their assistance helped to survive over two million refugees and IDPs in Darfur. Thus, the ICC decision allegedly aimed at bringing justice to the population in Darfur and stopping the conflict, *ipso facto* led to new sufferings.

DIPLOMATIC PAINFUL HOLD

Let us make a forecast about possible developments in Sudan. The West pursues the course on toughening the relations with Khartoum.

As many experts assume, there were three active supporters of Darfur in the U.S. Congress – Barack Obama, Joe Biden, and Hilary Clinton. Nowadays these people formulate the U.S. foreign policy. The new president appointed Scott Gration as his special envoy for Sudan. Lt.-Gen. Air Force (ret.) Gration is famous for his 274 sorties in Iraq. Obama blessed him with the following words, “Sudan is a priority for this administration, particularly at a time when it cries out for peace and for justice. The worsening humanitarian crisis there makes our task all the more urgent.”⁸ The military experience must be an advantage for the new envoy.


The policy towards the current Sudanese regime will follow the hard line – expansion of the UN measures to protect the population in Darfur, active involvement of the rebels in the negotiation process, aggressive diplomatic pressure on the leadership in Khartoum. The United States does not need a slap in the face in Africa, so the administration will not take chances. For that purpose, Washington needs a broader support from the Western nations, China as an ally, and non-interference of Russia, Arab states and Sudan’s neighbors. The media campaign about the hardships of the IDPs in Darfur and expulsion of the international humanitarian organizations will facilitate this task. Feeling the compassion in the West, the militants in Darfur will provoke al-Bashir to undertake military operations that will be condemned by the West. Al-Bashir will be in a tight corner and will make one mistake after another – send out humanitarian missions, bomb the bases of the rebels, make harsh statements concerning the United States and Israel, introduce curfew, expel Western ambassadors, threaten to start Jihad.

Depending on the gravity of the situation, the Western response may be the following:

- limit diplomatic contacts with al-Bashir to peace negotiations only;
- set up a broad coalition to ensure international isolation of the Sudanese authorities;
- involve China in the peace process in Sudan;
- exert pressure on Russia and China to force them to curb military cooperation with Khartoum;
- create a black list of state companies in Sudan;
- freeze the assets of Sudan and ban the payments for oil;
- ban the flights of war aircraft over Darfur, just as it was in Iraq during Saddam Hussein’s regime when the Iraqi Air Force could not go beyond a certain zone;
- block the ports in Sudan to stop the oil exports and arms imports;
- shift from candid approval of arms supplies to South Sudan to open military support of the authorities in the south and some political forces in Darfur;
- conduct international peace enforcement operation against Khartoum.



Unlike the tactics used in Somalia in 1995 during the UN operation (UNOSOM), this time the United States will rely on local armed groups in South Sudan and Darfur.

Then Omar al-Bashir will have the only way out – to resort to sharia and Allah. This would mean chaos and *Somalization* of the country, return to the civil war but at a new technological level – with T-72 tanks and aircraft. The country will turn into another bloody hotspot, which will be abandoned by humanitarian missions and peacekeepers. And no wonder that one of the ideologists of terrorism – Abu Azzam al-Ansari – called Africa an “unexplored gold mine” for Al Qaeda. 

Notes

¹ Alex Lantier, “Le nouveau gouvernement Sarkozy hôte d’une conférence sur le Darfour,” World Socialist Web Site, July 5, 2007, http://www.wsws.org/francais/News/2007/juil07/050707_darfour.shtml (last visited on April 29, 2009).

² Reuters, October 15, 2008, www.reuters.com/article/latestCrisis/idUSLF374703 (last visited on April 29, 2009).

³ UN Conventional Arms Register, http://disarmament.un.org/UN_REGISTER.NSF

⁴ RIA Novosti, March 13, 2009, <http://news-ru.trend.az/world/wnews/1441666.html> (last visited on April 29, 2009).

⁵ Vesti, February 7, 2009, <http://www.vesti.ru/doc.html?id=251139> (last visited on April 29, 2009).

⁶ http://www.kremlin.ru/appears/2006/09/07/1300_type63380type82634_110888.shtml

⁷ Peter Martell, “Bashir lashes out at West”, March 5, 2009, http://www.news24.com/News24/Africa/News/0,%20,%202-11-1447_2480484,%2000.html (last visited on April 29, 2009).

⁸ Reuters, March 18, 2009, <http://www.reuters.com/article/idUSN18343231> (last visited on April 29, 2009).



James Goodby

ACHIEVING NUCLEAR ZERO: WAY AHEAD¹

At the remarkable summit meeting at Reykjavik in October 1986 between President Ronald Reagan and General Secretary Mikhail Gorbachev the two leaders discussed the vision of a world free of nuclear weapons. 1986 was a watershed in terms of global inventories of nuclear weapons. Although the two leaders failed to achieve their ultimate goal, they steered the world in a new direction, toward many fewer nuclear weapons.

A conference at the Hoover Institution in 2006, convened by George Shultz and Sidney Drell on the 20th anniversary of Reykjavik, considered what it would take to rekindle the vision shared by Reagan and Gorbachev. The participants agreed that a world without nuclear weapons was not only a goal worth pursuing, in itself, but would also invigorate efforts to prevent the proliferation of nuclear weapons. They therefore decided that another conference should be held to discuss a series of practical steps leading to major reductions in the nuclear danger. At the second conference at the Hoover Institution one year later, this time in cooperation with the *Nuclear Threat Initiative* (NTI), the goal of a world free of nuclear weapons was reaffirmed, and specific steps toward that end were elaborated in considerable detail. The final report of that conference was published by the Hoover Press in December 2008, under the title *Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons*.

Following the 2006 Conference, former U.S. secretaries of state George Shultz and Henry Kissinger, former secretary of defense William Perry, and former chairman of the Senate Armed Services Committee Sam Nunn (D-Ga.), wrote that:

“Reassertion of the vision of a world free of nuclear weapons and practical measures toward achieving that goal would be, and would be perceived as, a bold initiative consistent with America’s moral heritage. The effort could have a profoundly positive impact on the security of future generations. Without the bold vision, the actions will not be perceived as fair or urgent. Without the actions, the vision will not be perceived as realistic or possible.”²

This conclusion is central to the case for revisiting the idea of a world free of nuclear weapons as an operationally meaningful goal. It was the consensus opinion of the two conferences at the Hoover Institution, and it was strongly supported by participants from many countries at an international conference organized by the Norwegian Foreign Ministry in Oslo in February 2008. In contrast to the world reaction in 1986, which was highly skeptical, the reaction in 2006 and thereafter has been remarkably positive.

The essence of the argument is that linking immediate actions and a long-term vision will produce synergies that will encourage progress toward a world without nuclear weapons. I think there are several immediate advantages that can be identified. Generating support for individual steps that may not, in themselves, enjoy universal endorsement should be one result. Obliging governments to think through all the steps that have to be taken to safely reach the goal of a world without nuclear weapons is another. A third is that the goal can also be a compass: it can add coherence to day-to-day national decisions. A fourth result, more ephemeral-



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al, is the intensity of purpose that may be created by the pursuit of this goal: mustering the necessary political will is another way of putting this. And a fifth benefit should be that the United States and other possessors of nuclear weapons would be able to move from the defense in nonproliferation matters, where we presently are, to the offense, thus enabling us to be more effective in advancing our nonproliferation interests.

Permeating the first *Wall Street Journal* article – and reflected also in a second article published in January 2008 – was a sense of urgency. The authors believed that the world is approaching a time when nuclear weapons will be more widely available, as nuclear deterrence becomes less effective and increasingly hazardous as a policy choice. Another judgment was that the steps the international community has taken to address current nuclear threats has not adequately responded to the danger.

And yet, despite the somber nature of their views, what these four men said was basically optimistic: yes, there are problems, but also solutions. The world need not give in to pessimism, or fatalism, and certainly not to the paralysis of fear. At the same time, they saw no grounds for complacency. “The world teeters on the edge of a new and more perilous nuclear era,” to quote from the preface to the aforementioned final report.

The developing situation is not favorable to nuclear nonproliferation, they thought. The international consensus behind the NPT has eroded. And new dangers that did not exist in the Cold War heighten the inherent risk posed by more nuclear weapons in more hands. These new dangers include international terrorism, well-organized nuclear black markets, and the rise of cyber warfare, which will make the management of any future nuclear crisis more problematic than in the past. Just think of Khrushchev and Kennedy trying to control the Cuban Missile Crisis while a third party distorts or prevents their urgent communications with each other.

In their second article, published on January 15, 2008 in the *Wall Street Journal*, Shultz, Kissinger, Perry, and Nunn declared that the United States and Russia should:

- ❑ extend key verification provisions of the Strategic Arms Reduction Treaty of 1991;
- ❑ take steps to increase the warning and decision times for the launch of all nuclear-armed ballistic missiles, thereby reducing risks of accidental or unauthorized attacks;
- ❑ discard any existing operational plans for massive attacks that still remain from Cold War days;
- ❑ and undertake negotiations toward developing cooperative, multilateral ballistic missile defense and early-warning systems.

In addition, the four authors pointed to the need to:

- ❑ accelerate work dramatically to provide the highest possible standards of security for nuclear weapons, and for nuclear materials everywhere in the world, to prevent terrorists from acquiring a nuclear bomb;
- ❑ start a dialogue, including within NATO and with Russia, on consolidating the nuclear weapons designed for forward deployment to enhance their security and as a first step toward careful accounting for them and their eventual elimination;
- ❑ strengthen the means of monitoring compliance with the Nuclear Non-Proliferation Treaty (NPT) to counter the global spread of advanced technologies; and
- ❑ adopt a process for bringing the Comprehensive Test Ban Treaty (CTBT) into effect, which would strengthen the NPT and aid international monitoring of nuclear activities.

Each of these steps was seen as a candidate for action in 2008. The article also emphasized four other key issue-areas that would take somewhat longer to realize:

First, the United States and Russia must undertake further substantial reductions in U.S. and Russian nuclear forces beyond those recorded in the 2002 U.S.-Russian Strategic Offensive Reductions Treaty. As the reductions proceed, other nations should quickly become involved.

Second, an international system of controls should be developed to manage the risks of the nuclear fuel cycle. Multilateral facilities will have to be devised and operated with the support of a strengthened International Atomic Energy Agency (IAEA), guaranteeing that the low-enriched uranium required for power reactors will be available, that the fuel will remain under appropriate multilateral controls, and that the spent fuel will be removed to internationally operated facilities.

Third, a verifiable treaty should be completed to prevent all nations, both nuclear and non-nuclear, from producing nuclear materials for weapons, and a more rigorous system of accounting and security for nuclear materials should be developed.

Fourth, states must turn the goal of a world without nuclear weapons into a practical enterprise among nations by applying the necessary political will to build an international consensus on priorities.

Each of the steps identified in the article of January 15, 2008 would make the world a safer place. Among those people who think that a world without nuclear weapons is beyond imagining at this point in time, there is support for the individual steps. No one, in fact, is suggesting that all progress in building a nuclear restraint regime be put on hold while the feasibility of achieving a world without nuclear weapons is examined. To the contrary, as I will suggest later in my remarks, implementation of each of the steps advocated by Shultz, Kissinger, Perry, and Nunn should pave the way for the “end state”, where nuclear weapons arsenals would be reduced from 50–100 bombs and warheads to zero.

Let me provide some background to put these recommendations in perspective. Many of us believe that the U.S.-Soviet experience of the Cold War does not provide any grounds for complacency regarding the theory that nuclear deterrence can keep the peace through the threat of mutual assured destruction. The history of the Cold War establishes quite clearly, in my view, that the U.S.-Soviet competition was unique. Nations that for the first time are building nuclear weapons, or planning to, may succeed in using their newfound power to avoid war, but this cannot be counted on. Very special circumstances made nuclear deterrence between the Soviet Union and the United States a successful instrument of peace, although one that always contained the vast risk of annihilation on a global scale. Each of the two nations believed it would ultimately prevail, largely through peaceful means, and thought preventive war was unnecessary. Moreover, the United States and the Soviet Union had no territorial claims against the other and they were insulated by thousands of miles from the daily frictions that arise when adversaries live side by side.

Given these circumstances, the Soviet Union and the United States had the luxury of time to develop rules, tacit and otherwise, to tilt the scales against the use of nuclear weapons. These circumstances do not exist in the Middle East, Northeast Asia, or South Asia, and they may not exist in other parts of the world where nuclear weapons competitions could suddenly erupt. To assume that nuclear deterrence will always work successfully, even in very different conditions, is an exercise in wishful thinking. As former U.S. Secretary of Defense Harold Brown has written, “the stability of even the one-on-one case depends on the internal stability, rationality, and command-and control arrangements of the respective regimes.” Furthermore, and this is a key point, Brown observed that “what works on one does not necessarily work on many.”

Even during the 1980s, President Reagan, the inspiration for current ideas about eliminating nuclear weapons, questioned the utility of nuclear weapons as the bases for deterrence. Reagan was ahead of his time, and was roundly criticized by the nuclear *mandarins* of the day for daring to think seriously about eliminating nuclear weapons. But his legacy in the United States persists in four lines of thought, not universally shared, to be sure, but very widespread:

- ❑ A recognition of the ultimate futility of dependence on nuclear weapons for national security;



- ❑ A paradigm shift from arms control, as practiced since the early 1960s, to nuclear disarmament;
- ❑ Ballistic missile defense as a key to eliminating nuclear weapons;
- ❑ The *de facto* termination of the doctrine of “protracted nuclear war” as it was understood in the 1970s.

Also during the 1980s, there were people who thought quite seriously about abolishing nuclear weapons. One of them was Jonathan Schell, who wrote a book entitled *The Abolition* published in 1984. He observed, among many other things, that “the more closely we look at the zero point the less of a watershed it seems to be. Examined in detail, it reveals a wide range of alternatives, in which the key issue is no longer the number of weapons in existence but the extent of the capacity and the level of readiness for building more.”

The United States and Russia have reduced their nuclear arsenals significantly since the end of the Cold War, but each has thousands of nuclear weapons in its inventory even though the strategy of mutual assured destruction (MAD) has become obsolete. The real danger lies elsewhere: terrorists are anxious to get their hands on an atom bomb or other nuclear device and will pay a high price to do so. They are determined to find vulnerabilities and to exploit them. So far, the civilized world has patched the potential leaks in time. A thriving nuclear black market was broken up just a few years ago, but it operated without detection for a long time. Even the most meticulous control systems sometimes lose track of the thousands of nuclear weapons or their components. That happened twice in the past year just in the United States.

The equation that should inform policy is this: more atomic bombs or warheads in more hands equals more chances for them to be lost, stolen or used in anger. Each nation has an interest in preventing this deadly progression, even if it means rolling back its own holdings of nuclear weapons.

It would make a difference if the nuclear weapons states, led by the United States and Russia, joined in removing nuclear weapons from their war plans and in taking prudent steps to reduce the numbers of deployed weapons to zero. And, very importantly, it would create a solid front against the acquisition of nuclear weapons by Iran, North Korea, and others that might seek to emulate those nations.

THE JOURNEY TO ZERO

As the current possessors of nuclear weapons reduce their arsenals to some very low numbers of nuclear bombs and warheads, several issues will come to the fore, all of which will have to be thoroughly examined long before the nations embark on the journey to zero. In fact, it is advisable to begin now a serious consideration of these issues because, first, a genuine policy commitment to zero nuclear weapons should be based on a good, even if incomplete, understanding of international security challenges at the “end state”; second, a persuasive case for an international commitment to zero must be based on plausible answers to questions about feasibility and risks; and third, there must be a clear understanding of what “zero” means, in practice. I propose to raise several of these issues in the balance of my remarks more to point to areas where much more work is needed than to suggest that I have answers.

To begin with, it should be assumed that progress toward the end state of zero nuclear weapons will have been preceded by implementation of at least the following actions:

1. Numerical limits will have been imposed by verifiable treaties on national nuclear forces of all nations possessing nuclear arms, including on warheads and on delivery systems, both “tactical” and “strategic,” both in a deployed and reserve or non-deployed status.
2. The Non-Proliferation Treaty will be strengthened by formal requirements of adherence to the Additional Protocols.

3. A Fissile Material Cut-off Treaty will be in force to prevent production of more special nuclear material, and existing supplies will be safeguarded.
4. The Comprehensive Test Ban Treaty will have entered into force.
5. An international control regime will be in force for the complete nuclear fuel cycle for civilian power.

Of course, regional disputes should also be addressed and, if possible, resolved. Doing so will be critical to creating a stable strategic environment in which deep reductions on a global basis can be pursued. I should also underscore that the first item in my list focuses on limiting and reducing nuclear weapons stockpiles on a global basis, not just between Russia and the United States.

All the rest are aimed at preventing the further spread of nuclear weapons capabilities while the current holders of nuclear weapons are shrinking their stockpiles. All are necessary to improve global security. All provide useful test-beds to discern whether cooperation in this sensitive area is possible.

I think of the “end state” as beginning at a point when all deployed nuclear weapons have been reduced to a few hundred globally and all nuclear armed states have begun the process of capping and reducing the numbers of non-deployed or reserve, nuclear weapons. The culmination of the end state would be a world without nuclear weapons. Can we reliably verify the absence of nuclear weapons? We have years of successful experience in verifying numbers of nuclear warheads associated with deployed missiles and bombers. We can monitor the numbers and locations of the principal means of delivering warheads – bombers and missiles – and that also gives us some handle over nondeployed warheads. But there can be no doubt about it, assurances that all non-deployed warheads everywhere in the world have been eliminated will be the last accomplishment in a long and difficult journey. A great deal of thought should be devoted to all aspects of this issue, and this has not been the case for decades.

The experience of the IAEA in monitoring Iraq’s nuclear-capable facilities provides some useful information. In his report to the UN Security Council on January 27, 2003 the Director General of the IAEA described what measures had been taken and said that “no evidence that Iraq has revived its nuclear weapons program” had been found. He concluded that provided “sustained proactive cooperation by Iraq” was available, “we should be able within the next few months to provide credible assurances that Iraq has no nuclear weapons program.” What he was saying was that proving a negative is possible, given the cooperation of the country being inspected. But, lacking such cooperation, proving a negative will be essentially impossible, given today’s monitoring capabilities, and proof will clearly be more dependent on human intelligence resources than on technical instrumentation.

Much more study is needed in this, and other areas. For example, recessed deterrence (an arsenal stored in such a way as to require lengthy preparation to assemble and launch warheads), latency (a technical capability that has not been constructed), and virtual arsenals (arsenals that have been deconstructed but can be rebuilt) are the kinds of options that need to be addressed by serious analysts.

Furthermore, to say that nondeployed warheads are hard to find is not the same as saying that warning of an impending activation of concealed weapons cannot be detected. Pre-emption or some other type of intervention would be available as an option if such activities were reliably detected. We have had experience in looking for warning signs of imminent missile launches but knowing whether a missile was mated with a nuclear warhead would be impossible, based on remote sensing and, here again, human intelligence would come into play. Monitoring aircraft would also be an enormously challenging task for verification

We should not expect that nuclear deterrence by means other than deployed or non-deployed weapons would disappear even if all nuclear weapons were eliminated. This was Jonathan Schell’s point and is key to understanding the nature of the issue we are wrestling with. I find an echo of it in the language of Secretary of Defense Robert Gates and former U.S. Secretary of Energy Samuel Bodman, who wrote in their September 2008 *White Paper* on nuclear weapons that they believed the United States should “rely, over time, more heavily on a



responsive nuclear weapons design and manufacturing infrastructure to manage risks, and less on an inventory of non-deployed warheads.” The logical end-state of such a policy could be a world without nuclear weapons – both deployed and non-deployed – where the sanction for defiance of the world’s will to escape from the nuclear deterrence trap would be a responsive nuclear infrastructure and cooperative defenses against any outlaw that attempted to initiate a nuclear attack. This may be what nuclear deterrence will look like in the future. It has its own set of problems, which need close examination. For the purists, it is not ideal. But I suggest that it is a big improvement over what we have today.

All former nuclear weapons states would be able to retain the basic infrastructure for producing nuclear weapons; controlling lead-times required for some finite level of reconstitution would be an important element in controlling reconstitution capabilities. More study is needed on whether it is possible to impose limitations or measures of transparency so precisely targeted that they would have the effect of creating verifiable lead-times of predictable durations. Specifically, a study is needed on the following questions:

- (1) What are the necessary elements of a responsive nuclear infrastructure?
- (2) What should be prohibited?
- (3) What can be done to assure early and reliable warning of a break-out attempt?

A nuclear-free world has been described by some critics as an invitation to a reconstitution race, which would present an unstable and potentially dangerous strategic environment. Granted, it could become this, but two factors would prevent it:

- (1) early and reliable warning of break-out and
- (2) agreed measures of response that would serve as a deterrent. Both factors need additional study to determine their feasibility.

The first factor would pose the need for an international monitoring systems, and probably also regional systems, empowered to watch for and report promptly any signs of attempts to fabricate nuclear warheads and mate them with delivery vehicles.

The second factor, agreed responses to threats, would require a degree of international consensus that would be hard to obtain under today’s circumstances but might not be so difficult in a situation where all nations would feel threatened by one rogue state or non-state entity.

As one begins to think about a world without nuclear weapons in a more than causal way, one cannot help being impressed by how many ramifications there are. But this is one of the strengths of the idea: it forces attention on issues that might otherwise be neglected. I will discuss some of these in the remainder of my time.

It is argued by some skeptics that a decision by nuclear-weapon states to reduce and eventually eliminate their nuclear arsenals will not affect the decisions of other countries that may be weighing the importance of nuclear weapons for their security. The contemporary international environment is characterized by the general expectation that nuclear proliferation will continue and that the current nuclear-armed states will not surrender their nuclear weapons. In such an environment it is almost impossible to secure universal agreement to take action against countries like Iran and North Korea.

That situation would be altered if expectations were reversed: that proliferation would not proceed and that the nuclear-armed states already had given up their ready-to-use nuclear weapons. The incentive structure would change completely. Instead of tolerance for infringement of global norms, there would be intolerance, simply because each of the former nuclear-armed states would have a major stake in preventing break-out and hence in cooperating with other states in quelling a threat to their mutual security.

Several measures, both active and passive, should be put into place to defend against break-out. One of these would be active defenses against aircraft, cruise missiles, and ballistic missiles. This will not be easy to do, and the threat of pre-emptive attack may be the only military solution. As regards passive defense measures, greater intelligence sharing will be required,

bolstered by agreed measures of transparency. In addition, the defensive structure put into place during recent years should be integrated and brought under UN supervision. I refer here to UN Security Council Resolution 1540, the *Proliferation Security Initiative*, and initiatives related to prevention of nuclear terrorism.

Professor David Holloway of Stanford University has suggested an *interim option*, which would be the final stage before all nuclear-armed states move to zero *deployed* warheads. Each nuclear-armed state would be permitted to have 50–100 deployed warheads.³ This option could also be considered *interim* in the sense of maintaining minimal deployed nuclear deterrent forces while developing confidence in the following areas:

- ❑ verifying permissible activities that are part of a responsive nuclear infrastructure;
- ❑ monitoring dismantlement of warheads scheduled for elimination;
- ❑ putting in place procedures for challenge inspections to search for concealed warheads;
- ❑ creating cooperative defense systems against nuclear attack;
- ❑ developing compliance mechanisms to enforce nuclear agreements.

Under this concept, 50–100 operationally deployed warheads would be retained while all *non-deployed* warheads are in the process of being eliminated. When the nations were satisfied that sufficient progress had been made in the five areas listed above, all deployed nuclear warheads also would be eliminated. The idea of time-bound nuclear disarmament has been advocated from time to time, frequently by the Government of India. It might be reasonable to suggest a deadline for reducing from 50–100 to zero to reduce the opportunities for foot-dragging. If the deadline could not be met, the commitment could be terminated, and 50–100 operationally deployed warheads would remain the agreed ceiling.

In addition to incrementalism through phased reductions by nuclear weapon states, there is also the possibility of geographic incrementalism. Nuclear-free zones already exist in many parts of the world. These can be maintained and others can be added. The elimination of nuclear weapons in one region, say Northeast Asia or South Asia, should not be delayed until all other regions have reached agreement to eliminate nuclear weapons. Of course, this asymmetric approach to a nuclear-weapon-free world raises questions about equity. And it also raises the issue of the role security assurances play in advancing the prospects for a nuclear-weapon-free world.

One of the most common complaints about the idea of eliminating nuclear weapons is that this might “make the world safe for conventional war.” The implication of this is that aggressor nations would be free to make war on others because there would be no fear of nuclear retaliation. As suggested above, regional disputes should be resolved before nations enter the end-state phase of eliminating nuclear weapons. This would remove the threat of powerful conventional forces being used by large nations to settle scores with smaller neighbors.

It is already clear that at least in Europe, limitations on conventional forces will be necessary if nuclear weapons are to be reduced significantly, let alone eliminated. The Conventional Forces in Europe (CFE) Treaty has been suspended by Russia and new terms will almost certainly have to be negotiated. Limitations on missiles also are likely to be necessary. In short, deep reductions leading to elimination of nuclear weapons will require limitations on other military forces, as well. And Europe will not be alone in requiring this. Nations in the Middle East, South Asia, and East Asia also will raise the issue of limiting missiles and conventional forces.

It will be more important than ever to ensure that the bans on development and use of other unconventional weapons, especially biological weapons, remain in force and that verification machinery is instituted and strengthened. Biological weapons have been called the “poor nation’s atom bomb” because they are cheaper and easier to produce than nuclear weapons. Some advanced nations that agree to give up or forgo nuclear weapons also might be tempted to replace them with biological weapons as their ultimate deterrence. An outcome that



encourages the development and proliferation of biological weapons clearly must be avoided. For this reason, high priority should be given to negotiating a verification protocol to the Biological Weapons Convention at the earliest possible date.

LIVING WITHOUT THE BOMB

Two very basic criticisms of the process of eliminating nuclear weapons are:

- (1) Nations that have privileged positions in the international system by virtue of being nuclear weapon states will be reluctant to accept giving up that status or even to accept parity in nuclear weapons as stockpiles are reduced to low levels.
- (2) Nations that fear the conventionally-armed military might of neighboring countries or that of one of the world's larger nations have sought nuclear weapons as a deterrent against conventionally-armed attack. Such nations would be reluctant to give up the nuclear *equalizer*.

These are real and serious obstacles to achieving a world without nuclear weapons. In these two factors, rather than in technical problems, can be found the principal reasons why reaching zero will be so difficult. Yet, there are the beginnings of answers to these problems too. First, the process of moving toward elimination of nuclear weapons should induce political change that will encourage further reductions. Second, for the former nuclear weapons states nuclear deterrence would live on, in the form of a reconstitution capability, while for non-nuclear weapons states a latent capability would exist in at least some cases, which also would represent a form of deterrence. Third, alliances and security guarantees will have to be part of the equation, as will a strengthened role for the United Nations and regional security organizations. And fourth, over time the prestige and sense of a special place in the international order conveyed by nuclear weapons will disappear as the international norm of non-possession takes hold.

One of many important points Ambassador Chester Crocker makes is that "there may be no more important issue than identifying the mechanism and the institutional formula for addressing what one expert [Jayantha Dhanapala] has described as 'the institutional deficit on the NPT.'"⁴ Crocker calls for "the establishment of a new overarching framework" which would have oversight responsibilities for denuclearization. This idea also deserves study if the notion of a world without nuclear weapons is to be taken seriously.

A key conclusion of the 2008 *Wall Street Journal* article was this: "The U.S. and Russia, which possess close to 95 percent of the world's nuclear warheads, have a special responsibility, obligation, and experience to demonstrate leadership, but other nations must join."⁵

There are probably many ways to begin the process. A commitment by the United States and Russian presidents, possibly at their meeting in April, to work for a world without nuclear weapons would be a good beginning. It would be even better if they instructed their negotiators to work for a legally binding agreement with a ceiling of 1,000 warheads to be defined in a way that would be equitable for both sides.

In addition, a critical first step is to secure U.S.-Russian agreement either to the extension of START for five years or to extract from it the verification provisions essential for continuing reductions in nuclear weapons. Beyond that, various paths are open to negotiators, ranging from a completely new nuclear constraints treaty, to parallel or reciprocal unilateral actions, to a regime in which, as at the present time, both START and the Treaty of Moscow provide the legal basis for U.S.-Russian nuclear weapons constraints. It is not my intention here to present a blueprint for further action. That would be presumptuous on my part. But I would like to offer a few reflections on the options that, it seems to me, are hypothetically available to Moscow and Washington and the three generic models I have just mentioned comprise a reasonable frame of reference.

First, I think that it is important that Russia and the United States record solid progress in nuclear arms reductions well prior to the 2010 NPT Review Conference. My impression of the last two such conferences is that they did little or nothing to advance the cause of nonprolifer-

ation and may have set it back. Another result like that would be disastrous. I am not able to gauge the possible reactions of other nations to agreements that Russia and the United States might be able to reach within the next year. I think that progress beyond where we are now certainly will be essential, but several options might fit that requirement. Of the three models I just mentioned, it is clear to me that the negotiation of a new strategic nuclear arms treaty would take much longer than a year to accomplish. Would the fact that such a treaty was under negotiation be regarded as real progress in further implementation of Article VI? Perhaps, but expectations may be higher now than in the past, thanks in part to disappointments in the last two Review Conferences and the renewed public interest in a world without nuclear weapons.

Would parallel or reciprocal U.S. and Russian constraint measures be seen as solid progress? An example of this might be reciprocal deactivation of nuclear delivery systems, along the general lines of that announced in the Clinton-Yelstin Joint Statement on Parameters of Future Nuclear Reductions of March 21, 1997. This would be a fairly quick way of reducing the numbers of START-accountable warheads or actually-deployed warheads, on a provisional basis, pending the negotiation of a full-fledged treaty. Another example, closely related to this, would be the removal of missiles from a prompt launch mode, as many experts have proposed. Additional negotiated actions that might complement such reciprocal unilateral measures would add to their real and perceived impact. One of the most significant of these, I think, would be real progress on a U.S.-Russian agreement on the transparent and irreversible dismantlement of nuclear warheads. The two countries made aborted starts in this direction in the mid 1990s, one of which I led. Is this still premature, or has it become more mutually acceptable?

The third illustrative model I mentioned, the *cohabitation* of START and the Treaty of Moscow, sounds contrived and slightly odd until one reflects on the fact that this is precisely the regime that the two countries have been living with, fairly comfortably, since 2002. We may have to continue living with it through 2012, when the Treaty of Moscow expires. There are conceptual problems with this but, though messy, this hybrid regime does impose constraints both on delivery systems and warheads. The participants in the NPT Review Conference might not be impressed by this holding action but if Russia and the United States were in agreement that they regarded the elimination of nuclear weapons as their joint objective, if the two countries agreed, in principle, on lower START-accountable ceilings and on lower Treaty of Moscow warhead ceilings defined in terms of actually, rather than hypothetically, deployed warheads, the real and perceived impact would be very significant. It perhaps goes without saying that accounting for actually deployed warheads would take us into new realms of verification techniques. But if the two countries meant what they said about eliminating nuclear weapons they inevitably would have to begin looking into new verification methods, and the sooner the better, I think. It will not be easy, but we have always known that.

If all of this seems too ambitious, I leave you with this thought, another observation made by Messrs. Shultz, Kissinger, Perry, and Nunn:

“...In some respects, the goal of a world free of nuclear weapons is like the top of a very tall mountain. From the vantage point of our troubled world today, we can’t even see the top of the mountains, and it is tempting and easy to say we can’t get there from here. But the risks from continuing to go down the mountain or standing pat are too real to ignore. We must chart a course to higher ground where the mountaintop becomes more visible.”



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NOTES

¹ The article is based on the remarks made by Amb. Goodby at the roundtable “*What Should Be the Next Steps in the U.S.-Russian Nuclear Disarmament Process?*” held by the PIR Center together with the Nuclear Threat Initiative (NTI) in Moscow on March 5, 2009.

² *Wall Street Journal*, January 4, 2007.

³ *Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons* (Hoover Press, 2008), ch. 1.

⁴ Chester Crocker, *Toward a Diplomatic Action Plan on Nuclear Issues* (Hoover Press, 2009).

⁵ *Wall Street Journal*, January 15, 2008.



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George Perkovich

NUCLEAR ZERO: KEY ISSUES TO BE ADDRESSED

In the West today, and perhaps in Russia, leading circles believe that nuclear deterrence is what prevented the U.S. and the Soviet Union from fighting directly during the Cold War. Many assume that these weapons will continue to deter without fail. Both ideas deserve to be questioned.

Is it really true that Soviet leaders were determined to go to war with the United States but were deterred by the existence of nuclear weapons? At what time and place were Soviet leaders willing to go to war against NATO states but chose not to do so because of nuclear counter-threats? What specific evidence shows this? There were cases, such as Vietnam and Afghanistan, where the U.S. and the U.S.S.R intervened militarily in other states. Would these interventions have happened if Washington or Moscow did not believe that nuclear deterrence would keep the other side from escalating? By making escalation to homeland attacks unthinkable, did intra-war nuclear deterrence prolong these wars and the damage they did? Is it possible that nuclear deterrence allowed more killing than it prevented during the Cold War? Even if objective scholars conclude that nuclear deterrence did directly prevent war and did not enable low-intensity conflicts in the Third World, the future effectiveness of nuclear deterrence remains unknowable.

Nuclear deterrence is effective because it can fail – nuclear weapons actually could be used. The horrifying consequences give pause. Wise human beings should continually examine whether and how the risks of nuclear deterrence are necessary or advisable, and whether the threats nuclear deterrence is supposed to protect against could not be deterred by other means. What made sense decades ago, may not make sense today. What makes sense today, may not be necessary tomorrow.

Allow me to be provocative and suggest that the end of the Cold War should cause us to re-examine our assumptions about nuclear deterrence. For civilized states, nuclear deterrence is credible only if the threatened use of nuclear weapons would be proportional in scale and existential danger to the aggression that stimulated it. Civilized human beings feel that disproportionate and indiscriminate violence are grossly unfair. This demand for proportionality is reflected in legal doctrines of *Just War*. A civilized state would not threaten to use nuclear weapons in response to economic sanctions, a territorial dispute, or even a conventional military invasion involving forces not large enough to inflict major territorial losses.

Even uncivilized states – there are a few – should know that if they unjustly used nuclear weapons the international response would be severe. The world's major powers would conclude that such a government should not be allowed to continue. If terrorists are not deterrable, nuclear weapons are not useable to deter them. Some might argue that nuclear weapons could be necessary to preemptively destroy terrorist nuclear weapons, but for this to be a politically feasible option, exceptionally reliable intelligence regarding the precise loca-



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tions would be required. This sort of intelligence has been absent in Iraq (2003) and in Iran. Moreover, if such reliable precise intelligence were available, it is highly likely that non-nuclear means could be used to destroy such targets, and would be preferred by political leaders.

The taboo against using nuclear weapons has grown steadily stronger since 1945. Taboo is an interesting, important word. According to the *Oxford English Dictionary*, it means “to give a sacred or privileged character to a thing which ... debars it from ordinary use or treatment.... To put a thing under a social ban.” War is undertaken to serve policy objectives, to gain power or prevent someone else from taking power from you. States that act unjustly on a grand scale tend to lose power and fail over time. They collapse from within because they cannot mobilize their citizens to work hard and support their government. Or, they fall from external pressure mounted by others determined to balance their power. The nuclear taboo increases the probability other powers would rally against a nuclear aggressor or that a government’s own people would turn against it if that government used nuclear weapons unjustly.

At the very least, the nuclear taboo means that nuclear deterrence is only credible against the most massive threats – aggression that has the scale and destructiveness that is proportional to that which would follow from nuclear war. How many such threats do Russia and the U.S. *realistically* face today? China? India? Pakistan? Israel? France and the U.K.? It is nearly impossible to see major powers committing aggression against each other on a scale to justify the use of nuclear weapons. Maybe they have learned from Germany’s catastrophic failures of World War, or Japan’s. The threat of nuclear weapons use is an even greater cause of restraint, but it is possible that civilized states have learned in the past one hundred years that major aggression carries enormous costs and provides no lasting benefits. Similarly, the U.S.A and Russia may have learned from their experiences in Vietnam, Afghanistan, and Iraq that invading smaller countries doesn’t really pay (even those that do not have nuclear weapons). Globalization should intensify the costs of territorial aggression as economic interdependence, especially in finance, leaves all states susceptible to isolation by others.

Of course, things could change and threats might emerge that could justify nuclear counter-threats. But historically, nuclear weapons have not enabled their possessors to conquer and occupy other territories, even those undefended by nuclear weapons. Does any nuclear-armed state hold territory or dominion over other people that it did not hold before it acquired nuclear weapons? It is far from clear that a state breaking out from a nuclear-disarmed world would be able to sustain aggression against others. In any case, states would not agree to get rid of their last nuclear weapons if they felt that others had the capabilities and motives to commit aggression on a scale that would justify nuclear retaliation. Moreover, such massive-scale threats would probably take enough time to develop that we – the United States, Russia, China, etc. – would have warning. If nuclear weapons had been abolished, this warning time would enable disarmed states to regenerate nuclear weapons if they thought it necessary.

Speaking realistically, political and technical realities will not permit the verifiable elimination of all nuclear weapons in the next 10–15 years (or longer). Therefore, it makes sense to examine the challenges that would need to be managed for all nuclear-armed states to move cautiously towards zero by reducing their arsenals to much lower numbers. Amb. Timerbaev points to this challenge when he asks “How, by what principles and in what stages should planned, deliberate and step-by-step reductions conducted [by all nuclear-armed states], so that they may satisfy all the concerned parties and do not violate international and regional stability during the implementation process and beyond.”¹¹

The following are some of the difficult issues that arise:

- Some observers suggest that deterrence would be weakened at low numbers. What scenarios underlay this concern, and are they realistic? How could such concerns be addressed through arms control or other measures?

American and perhaps Russian officials and experts tend to be the ones who assert that low numbers weaken deterrence and invite instability. By contrast, the majority of nuclear-armed states already live with “only” low numbers of nuclear weapons. The U.K. and French govern-

ments do not seem terribly worried that their relatively small arsenals will not deter or might invite instability. China has always managed nuclear deterrence with much smaller arsenals than its main potential adversaries possess. India and Pakistan remain in a conflict-prone relationship and possess “low numbers” of nuclear weapons which they do not maintain in a ready-to-use fashion. Both governments acknowledge that nuclear deterrence has rendered major warfare between them untenable and they have made progress through back-channel negotiations to seek a *modus vivendi* in Kashmir. While American and perhaps Russian nuclear experts might judge India’s and Pakistan’s nuclear situations to be inadequate, few urge that India and Pakistan should build larger arsenals, mate warheads to delivery systems, and deploy them in launch-ready configurations. In short, there is plenty of experience around the world since 1945 to suggest that deterrence and stability can be maintained with low numbers of nuclear weapons.

Much more analysis needs to be done on this issue. The simple assertion behind the concern is that low numbers might leave a state vulnerable to a first-strike, especially from a state with a larger arsenal. The vulnerable state would feel greater pressure to use its small arsenal early in a conflict. While this problem deserves expert theoretical analysis, we should pay even more attention to the actual historical experiences of states managing international relations and deterrence with “low numbers” of nuclear weapons, often in asymmetrical equations with adversaries. Moreover, arms control measures and other forms of transparency can be readily imagined to augment the stability of deterrence at low numbers.

Relatedly, some could worry that if a problem developed regarding the reliability of a warhead design in a small arsenal, the overall deterrent would be weakened, whereas with a larger arsenal with multiple designs, redundancy would preserve the deterrent. This “reliability” issue is one reason why some in the U.S. nuclear weapon complex urge development of a new warhead designed for reliability, safety, durability and easy maintenance without nuclear testing. Advocates say that such a warhead would allow the U.S. to undertake much greater reductions of nuclear weapons. It should be expected that discussions of multilateral nuclear arms reductions would need to address questions of modernization.

❑ How important is parity or disparity in the deterrence doctrines of the various states?

At various stages of the Cold War, the U.S. and the Soviet Union managed deterrence without parity. In the middle period – the 1970s and early 1980s – there was approximate parity. In the late 1980s, Soviet officials recognized that “sufficiency” was the more vital criterion than parity. Today, there is growing recognition that in the global context the distinction between strategic and tactical nuclear weapons is meaningless – a nuke is a nuke. In this context, Russia, with its much larger holdings of short-range nuclear weapons, has numerical superiority over the U.S. and NATO, yet this disparity is not perceived to undermine deterrence. Similarly, China is recognized to have a viable nuclear deterrent even though its arsenal is much smaller and more rudimentary than those of the U.S. and Russia. Indeed, today on a worldwide basis nuclear deterrence is largely based on asymmetric balances. Practice shows there is little reason to accept that parity is necessary for viable nuclear deterrence.

❑ The United States and Russia possess thousands more nuclear weapons than China, the U.K., France, India, Pakistan, Israel and North Korea – including “strategic” and “sub-strategic” and deployed and reserve weapons. How much of a numerical advantage do Washington and Moscow think they need over the others? On what basis would they claim they should be allowed to retain greater numbers?

Public sources do not indicate that either government has thought carefully about these questions. Perhaps this is because Moscow and Washington have not yet seriously considered reducing their arsenals to a point where multilateral nuclear arms control would be feasible.

In conversation, U.S. nuclear strategists tend to assert that the U.S.A should retain at least as many nuclear weapons as all other nuclear-armed states combined. For this assertion (and perhaps similar Russian views) to be worthy of serious consideration, other questions such as the ones raised in this essay must be closely analyzed. As a negotiating principle, it is difficult



to see how leaders of states with smaller arsenals would agree in a negotiation to accept vast disparities. But perhaps the different security environments and responsibilities of states could be recognized in ways that would enable the nuclear-armed states to negotiate unequal limitations.

- Who does each nuclear-armed state think it needs to deter with nuclear weapons? Does Russia need nuclear weapons to deter the United States and China? Anyone else? Does China calibrate its nuclear requirements in comparison to the United States, Russia, India and Japan? Does India determine its nuclear sufficiency relative to China and Pakistan?

A key variable in answering these questions is whether a given state envisions the need to deter more than one nuclear-armed adversary at the same time. Would Russia and the U.S. insist on maintaining an arsenal sized to fight two (or more) nuclear adversaries in the same crisis or war, or in two or more simultaneous crises with the potential to escalate to nuclear war?

Presumably Washington would not reasonably claim that it needs nuclear weapons to deter the U.K., France, India or Israel. This immediately puts into doubt the assertion that the U.S.A should retain at least as many nuclear weapons as all others combined (excluding Russia). But if the U.S.A and Russia could conceivably maintain mutual deterrence with, say, 500 total weapons, would the United States then seek an additional allowance to deter China? The answer could be “yes” if realistic threats existed of simultaneous major warfare in Eurasia – between NATO and Russia – in Northeast Asia – perhaps over Taiwan or in a future conflict with D.P.R.K.

Assuming that Russia would “require” at least near-parity with the U.S.A, there is probably a point in a reduction process where Moscow would then say that it needs additional weapons to deter China, too. Would it make a similar claim for additional weapons to deter the U.K. and France, or could this requirement be met with an arsenal matching the United States? If Russia and the U.S. were allowed to have significantly larger arsenals than, say, the U.K. and France, then Russia’s concern could be mitigated. But the nearer to parity that the U.S.A and Russia are asked to come with the smaller arsenals, the more likely Washington and Moscow are to resist by emphasizing risks of war against multiple nuclear-armed adversaries.

The Chinese arsenal today is smaller and operationally slower than one might expect in a state that envisions fighting nuclear wars with two adversaries, either simultaneously or one right after the other. Assuming that the United States and Russia further reduced the ratios of their arsenals compared to others *before* asking others to undertake reductions in a multilateral process, it is not obvious why any of the others should conclude that this would make them less able to deter multiple adversaries than they were before.

India has unresolved territorial issues with both Pakistan and China, both of whom target nuclear forces at India. To date, India has chosen not to seek an arsenal approximating parity with both China and Pakistan. Such a decision would appear unlikely given India’s strategic culture and planning. But would India in negotiations be willing to formally limit itself to an arsenal significantly smaller than those of Pakistan and China combined? As a political matter, it is one thing to choose to build less than rivals have. It is quite another thing to forego the right to do so and accept disparity in a treaty.

We can ask similar questions of each nuclear-armed state and realize that moving from bilateral U.S.-Russian nuclear arms control to multilateral arms control will be a multi-phased, extremely complicated process. It is reasonable to suppose that Washington and Moscow would be willing to approach parity with the next-largest arsenals only if they had significantly greater confidence in the security dynamics in Europe and Northeast Asia. For general strategic political reasons, China would probably not be willing to negotiate reductions without simultaneous improvements in its security relations with the U.S.A, Russia and India. Beijing also would want a clearer sense of positive security trends relating to North Korea, Japan and Taiwan. India would likely require both greater global equity and progress in resolving its security dilemmas with Pakistan and China.

If the necessary combinations of states were satisfied that they could maintain deterrence with uneven numbers, then the political problem of making disparities acceptable could likely be solved. For example, states could negotiate in terms of *ratios* rather than absolute numbers of nuclear weapons. If the U.S.A and Russia reduced to, say, 500 total nuclear weapons, the ratio of China's holdings would increase. China would gain parity. Similarly, if China reduced its arsenal somewhat, and India held steady, it would gain parity compared with the position it would have without arms control. Ultimately, the political issue of parity/equality could be addressed by framing multilateral nuclear reductions as a vital step toward the abolition of all nuclear weapons which is the only viable point of nuclear equality.

Rather than avoid this complicated challenge, it might help to think about multilateral nuclear arms control as a process that should begin with preliminary discussions of issues like the ones raised here. An early step would be to identify the various considerations that the U.S.A, Russia, China, France, the U.K., India, and Pakistan would want to have addressed before any negotiations could begin. The six-party talks already provide a forum for addressing North Korea's interests. Israel, because it has not tested or otherwise declared a nuclear-weapons capability, could be addressed in the context of creating a regional zone free of weapons of mass destruction. Such discussions could begin on an informal basis, perhaps through Track 1.5 discussions involving well-connected think tanks from each state with government observers.

- Some American strategists worry that reductions to, say, 500 total weapons would invite China to rapidly build up its arsenal to reach parity. Does Russia have similar concerns? Does China worry that if it reduced its nuclear arsenal in some formula relative to U.S. and Russian reductions, India could try to build up to parity with China?

This concern is frequently expressed in the United States now that elder statesmen such as George Shultz, Henry Kissinger, William Perry and Sam Nunn have urged movement toward a world free of nuclear weapons, and President Obama has signaled his interest in this objective. However, an answer seems obvious: the U.S.A and Russia would not agree to reduce their total arsenals to a level where China could "race to parity" if there were not formal, reliable agreement that China would not do so. And China would not make such an agreement if it did not have confidence that the U.S.A (and others) were not gaining conventional or other military capabilities to negate its smaller arsenal.

- How do ballistic missile defenses fit into such equations?

If effective ballistic missile defenses could be developed that would be able to reliably destroy a high percentage of attacking nuclear weapons in realistic scenarios, an adversary could feel that its deterrent was jeopardized. This could be destabilizing, or at least could block further reductions of offensive systems. In practical terms today, Russia would not be willing to reduce to low numbers (say 500) if the U.S.A did not put limits on its potential ballistic missile defense capabilities. Nor would China be willing to undertake reductions if Washington was not prevented from developing and deploying systems that could negate a significant percentage of its nuclear arsenal. In short, multilateral reductions to lower numbers will not occur without agreed limitations on ballistic missile defenses, or a transformation of strategic relations so that states no longer feel the need to be able to deliver nuclear arms against other states that possess ballistic missile defenses.

The ballistic missile defense issue changes form, however, to the extent that the international community seeks the total elimination of nuclear weapons. In a world without nuclear weapons, missile defenses could be an insurance policy against anyone who might cheat.

One way to proceed could be to accept severe limits on ballistic missile defenses in the near-term in order to facilitate multilateral reductions of nuclear arms, and meanwhile to promote cooperation in research, development and potential operations of defenses as states agree to work jointly toward nuclear disarmament.



The questions I have explored here are only a few that arise if we seriously try to reduce toward zero the number of nuclear weapons in the world. The U.S.A, Russia and other nuclear-weapon states have an obligation to make this attempt, as agreed in the NPT and the 2000 Review Conference. Analysts, such as Roland Timerbaev and myself, can offer initial questions and answers, but governments are who matter. Today no nuclear-armed state has tasked its defense ministries or think tanks to work through these questions and propose ways of addressing them. Because such serious analysis has not been done *within* any nuclear-armed state, there has been no discussion of these problems between nuclear-armed states.

This absence of analysis and discussion should be corrected. At a minimum, each nuclear-armed state should commission its relevant government bodies and/or think tanks to begin such studies. Such commissions should be undertaken with the understanding that the results should then be discussed and debated among nuclear-armed states. Where and when it is appropriate, nongovernmental organizations should be invited to join such discussions.

Notes

¹ Roland Timerbaev, "Nuclear-Weapon-Free-World: Ways of Moving Ahead", *Security Index*, No. 2, Spring 2009, p.104.



Edward Ifft¹

NEXT STEPS IN U.S.-RUSSIAN ARMS CONTROL²

The arrival of the Obama administration in the United States, along with several aspects of the world situation, indicates that we are about to see a revitalization of the arms control process in general, and the U.S.-Russian arms control process in particular. The relevant circumstances of the world situation are familiar to us all—the expiration of the START Treaty next December, the approaching NPT Review Conference next year, the urgent need to resolve the problems created by the nuclear activities of Iran and North Korea, the failure of the Conference on Disarmament in Geneva to make any progress whatsoever for almost 13 years and the growing realization (especially in the U.S.A, U.K. and elsewhere, and, I hope that includes Russia) that a continuation of the current situation, in which thousands of nuclear weapons are deployed, with thousands more in reserve, is both unnecessary and dangerous.

NEW GOALS

President Obama has set a very positive goal for us all by saying the following: “I will seek real verifiable reductions in all U.S. and Russian nuclear weapons—whether deployed or non-deployed, whether strategic or nonstrategic—and work with other nuclear powers to reduce global nuclear stockpiles dramatically by the end of my presidency. As a first step, I will seek Russia’s agreement to extend essential monitoring and verification provisions of the START I before it expires in December, 2009.”

Momentum is building in the U.S. for substantial reductions and the eventual elimination of nuclear weapons. Inspiration for this has been provided by the works leading experts, such as George Shultz, Henry Kissinger, Sam Nunn and William Perry, George Perkovich and James Acton, Jan Lodal and Ivo Daalder. A further contribution, examining in greater detail the complex verification issues in this effort, will appear soon in a major study to be published by the *Nuclear Threat Initiative*.

The U.K. has also been playing a very helpful role, beginning with the speech by Margaret Beckett at the Carnegie Nonproliferation Conference in 2007, and continuing with the very helpful exhortations of Des Browne and David Miliband. The U.K. and Norway, assisted by the Verification Research, Training and Information Centre (VERTIC), are already working on solving some of the difficult monitoring tasks we will face. The U.K. has also offered to host discussions of the technical aspects of these issues among the weapons laboratories of the nuclear weapon states—an offer that should be pursued. The Trilateral Initiative among the U.S., Russia and the IAEA was making good progress until it stalled and that work should be resumed.



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WHAT IS TO BE DONE ABOUT START?

It is useful to divide this subject into two parts—a long-term goal and the immediate problems we face this year. The long term-goal is addressed in the publications and speeches mentioned above. Therefore, I would like to focus primarily on the immediate problem of what to do about the START Treaty, as well as the Moscow Treaty of 2002 or SORT.

Our immediate goal should be to replace the START Treaty before it expires on December 5, 2009. There seem to be four main options:

- START Minus*: Lower the levels and simplify the START verification regime;
- SORT Plus*: Lower the levels and add the necessary verification provisions;
- New Treaty*: Replace both START and SORT with a new treaty;
- Extend START*: This would be a fallback in case the other options prove to be too ambitious for this year. We can extend START for five years, as provided for in the Treaty itself, without the need for a formal amendment, which would require approval from the U.S. Senate and the Russian Parliament. There might possibly also be legal maneuvers by which we could agree to continue to implement only those parts of the verification regime which the sides agree to be essential. Extending START would mean that our partners in Ukraine, Belarus and Kazakhstan would continue to be States Parties. The other three options would be bilateral.

My personal recommendation would be to replace both START and SORT with a new treaty. Whatever option is chosen, there are two main questions—what should be the level of strategic nuclear weapons systems and what verification regime is needed?

As far as the levels are concerned, it would be advisable to reduce to about 1,000 deployed strategic nuclear warheads. This is ambitious and a level somewhat higher would not be surprising, but any level above 1,500 would be very disappointing and would not be well-received at the 2010 NPT Review Conference. Whatever the level, I hope we can agree to stop the curious practice, found in both the START II Treaty and SORT, of showing a range. Since the level is a ceiling, showing a range is confusing and illogical.

It seems clear that, in addition to a ceiling on warhead levels, there must also be some constraints on delivery vehicles—ICBM and SLBM launchers and heavy bombers—to assist verification and minimize the possibility of breakout. In addition, we cannot continue to ignore non-deployed systems and tactical nuclear weapons, especially as levels of deployed strategic systems get much lower. One idea we should consider now, in order to start to get a handle on the problem, would be to declare current nuclear stockpiles. Why should these numbers continue to be classified under current conditions? The U.S. and Russia could take the lead in this and encourage the other NWS to follow. Initially, we would not attempt to verify stockpiles, but would begin to build trust and establish a baseline from which future reductions could be measured.

Because I have been advocating reductions to about 1,000 as the next step for some time, I have been asked what is magic about this number. Of course, there is nothing *magic* here. Obviously 1,000 is a round number that would be a very significant reduction and would have considerable public appeal. A key point is that reducing to about 1,000 makes sense as the next step whether or not one believes that the eventual elimination of all nuclear weapons is feasible or even desirable. In addition, down to about this level, four key factors that apply today would still be true:

- Nuclear deterrence would continue to operate as it does today.
- A triad of nuclear forces would still be viable.

- ❑ The proven verification regime we have today in the START Treaty (or even a simplified version of it) would be adequate to provide effective verification.
- ❑ The levels of U.S. and Russian nuclear forces would still be far above those of any other country.

Somewhere below 1,000 these four statements might no longer be true and quantitative change would become qualitative change. We may need to rethink deterrence, including extended deterrence. It seems to me that deterrence is a rather fundamental aspect of international security and will still be needed even if all nuclear weapons are eliminated. The mistake made by both our countries was the idea that deterrence required tens of thousands of nuclear weapons—an idea that was always absurd and is even more so today.

As the role of nuclear weapons is diminished, deterrence will rely increasingly upon conventional weapons. Regional conflicts must be ameliorated and security increasingly based upon collective efforts. Greater respect for international law in initiating the use of force will be essential. These are serious issues—we must not allow our efforts to *reduce nuclear weapons* to make the world safe for conventional war and no one wishes to return to the pre-1945 world. The future role of conventional weapons in deterrence is a complex one and voices are already being heard saying that the elimination of nuclear weapons must not result in a world with large imbalances in conventional forces. This may be a point that must be considered, but it amounts to moving the goal posts, particularly when it comes from countries that have been advocating the elimination of nuclear weapons for decades.

Other complications that will arise at some point below about 1,000 warheads would be the need for the U.S. and Russia to move from a triad of forces to a dyad, a requirement for more stringent verification measures and the fact that other countries with nuclear weapons would have to come to the negotiating table and agree to begin to constrain their forces. If countries actually get to extremely low levels, further issues will arise. While the subject of eliminating the last few weapons is a fascinating one, governments should not allow this problem, for which definitive answers will not be needed for a long time, to dominate the debate.

The START verification regime is extremely complicated and we would not reinvent it if we were beginning all over again today. However, it exists and we know it works. Therefore, although it could be simplified, we should be cautious about what we throw away. This regime has nine major components, none of which is found in the SORT Treaty:

- ❑ Clear definitions, counting rules and over 100 Agreements and Joint Statements produced by the Joint Compliance and Inspection Commission (JCIC);
- ❑ Conversion or elimination procedures that make reductions irreversible;
- ❑ Non-interference with national technical means, operating in accordance with generally recognized principles of international law;
- ❑ A prohibition on most forms of telemetry denial;
- ❑ A massive data exchange—over 100 pages updated daily as required through the Nuclear Risk Reduction Centers and in full every six months;
- ❑ Notifications—153 different formats;
- ❑ 12 types of on-site inspection, plus Perimeter and Portal Continuous Monitoring (PPCM) at the Votkinsk facility;
- ❑ Seven cooperative measures per year;
- ❑ Unique identifiers, plus geographical and operational constraints on mobile ICBM systems.



Detailed study of how this regime might be modified to meet current conditions, which are far more favorable than they were in 1991, is clearly needed and is beyond the scope of this paper. It seems clear that both sides could probably live comfortably with fewer inspections and fewer notifications. For example, is it really necessary to send a notification when a heavy bomber flies from one internal base to another? One could also imagine elimination procedures that are less burdensome and costly, but still effective.

One feature that must be included in the next agreement is agreed counting rules. According to the START rules, as of July 2008, the primary deployed forces of the two sides are shown below:

Table 1. Nuclear forces of Russia and the United States

Ceiling	United States	Russia
1,600 delivery vehicles	1,214	839
6,000 deployed warheads	5,951	4,138
4,900 warheads on ballistic missiles	4,864	3,506
1,100 warheads on mobile ICBMs	0	198
1,540 warheads on heavy ICBMs	0	1,040

Secretary Gates has stated that the U.S.A will reach the SORT level of 2,200 deployed nuclear warheads by 2010 and there are reports that the United States is already there. However, no counting rules were ever agreed for SORT and the discrepancy between the agreed START counting rules illustrated above and the SORT rules used by the U.S. is about 3,000 warheads. At low levels, we will need rules that correspond more closely to reality than the START rules, but verification must also be considered. In any case, the details of these rules are less important than the fact that they must be clear and agreed. There are legitimate concerns about the “upload potential” of reduced forces. Reasonable constraints on strategic nuclear delivery vehicles, plus a return to the sort of limits on “downloading” found in the START Treaty, could ameliorate such concerns.

More difficult will be issues that we know are controversial and that need to be resolved for progress to be made toward deep reductions and eventual zero. Clearly the U.S.A needs to ratify the Comprehensive Test Ban Treaty and President Obama has already expressed his intention to do so. The United States, which is no longer obsessed with Russian missile throw-weight or force structure, could probably liberalize the rules on deploying MIRVs on ICBMs, in particular the new RS-24. Washington needs to take more seriously Russian concerns regarding future ABM systems, especially those close to Russian territory, and be willing to provide some assurances regarding its future ABM activities. Clearly, there is a connection between potential threats and the need for defenses to protect against such threats. Finally, now that the European Union has issued a draft Code of Conduct for space-faring nations, the U.S.A needs to be more open-minded and willing at least to discuss the problem of weapons in space. There are indications that the Obama administration will move in this direction.

For its part, the Russian Federation also needs to address several problems. For example, Russia needs to recognize more fully U.S. concerns regarding terrorism and rogue states. This includes understanding U.S. views about missile defenses. Both sides have long advocated cooperation in this area and the time has come to put words into action and solve this problem that has plagued us for years. Russia should be more reasonable about the possibility of replacing a small number of nuclear warheads with conventional warheads. The sides have proven equipment (neutron detectors) and procedures for distinguishing between nuclear and conventional warheads. Of course, at roughly 2,000 warheads for each side, simply counting these as nuclear solves the problem, but if interest persists in the conventional option, this

could become a problem at low levels. Finally, Russia must begin to come to grips with the issues posed by its large force of tactical or sub-strategic nuclear weapons. As strategic systems are reduced, the relative importance of these weapons will obviously increase. A good place to start would be with greater transparency.

ADDITIONAL ISSUES

As we contemplate very deep reductions, some difficult technical problems come into view. Monitoring techniques for the elimination of nuclear warheads and for the disposition of their fissile material will be needed. Some useful work along these lines was done in anticipation of the implementation of the 1997 *Helsinki Framework* (START III). The U.K.-Norway work mentioned above is also directed to this end. It is worth noting that vigorous work to address these problems need not, at this stage, involve any commitment to any particular level of reductions or to the eventual elimination of nuclear weapons. The point is that we do need to be adding things to our verification tool box so that we have options, and our leaders have time to consider and test these options. The U.S. scientists would welcome the opportunity to collaborate with their Russian colleagues in working toward solving these problems.

There will also be political issues. For example, we need to solve problems of access, liability, taxes, and so on, of the sort that complicated our attempts to cooperate on the *Mayak* facility.

More effective procedures for dealing with compliance issues will also be needed. Our countries have had a generally good record in dealing with compliance issues under the INF and START Treaties. However, some technical issues have been allowed to linger for years. As levels of weapons get lower, compliance issues will inevitably arise and countries will demand a system for dealing with such concerns, which is, and is seen to be, fair and effective.

This is clearly an exciting time. Over the next year, we need to make a productive start on solving these issues. We also have on our plate the broader multilateral issues of dealing with nuclear proliferation, strengthening the NPT, the crisis of the CFE Treaty, the problem of the rise of intermediate-range ballistic missiles in countries not covered by the INF Treaty and the ongoing problems of terrorism. We should welcome the opportunities provided by these challenges.

Notes

¹ The views and characterizations expressed are those of the author and do not necessarily reflect the policies of the U.S. Government or Georgetown University.

² The article is based on the remarks made by Edward Lfft at the roundtable “*What Should Be the Next Steps in the U.S.-Russian Nuclear Disarmament Process?*” held by the PIR Center together with the *Nuclear Threat Initiative* (NTI) in Moscow on March 5, 2009.





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Gennady Evstafiev

PASSING THE ROCKS OF THE U.S. INITIATIVE

The statements by Barack Obama concerning the nuclear arms reduction got a positive response in the Russian expert community. Just as any peace initiative would. However, there is always a question about the real motivation underpinning such steps. Is it true disarmament zeal or something else? How much does this correspond with the Russian interests? Is a new compromise possible? All these questions were raised in Gennady Evstafiev's article published in Izvestiya in March. We reprint the excerpts from this article as it reflects quite well major concerns of the Russian negotiators and the code of thinking typical of many Russian officials.

The new U.S. administration set forth the arms reduction initiative. By itself, the idea of extensive reduction in strategic nuclear arms connected reportedly with the cancelation of deployment of missile defense elements in Europe can only be welcomed. It is good that Washington has eventually admitted the things which were much spoken about in Moscow – the U.S. missile defense in Europe has nothing to do with the missile and nuclear programs of the third countries and is mainly targeted against the Russian strategic forces. However, one may also note a number of *underwater rocks* that the American side prefers to omit.

Firstly, such large-scale reduction in strategic offensive arms by Russia and the United States can hardly take place without engagement of other nuclear weapon states. Perhaps, there will be no problem with involving the U.K. and France in this process – after all they are U.S. satellites, as far as strategic framework is concerned. But there are still lots of questions pertaining to China's nuclear capabilities. Its growing nuclear might is not regulated by any international agreements nowadays and is not transparent at all. Obviously, Russia is Beijing's strategic partner, but the sphere of strategic arms does not allow for any uncertainty.

Secondly, intense reduction in strategic arms requires a new quality of political relationship between the two countries and, moreover, the new level of mutual trust. The United States has not yet abandoned any of its erroneous or destabilizing initiatives – be it NATO expansion eastwards, or deployment of military infrastructure in Eastern Europe, or weaponization of outer space and the Arctic region, or the NATO doctrine of offensive operations beyond Article V and geographic scope of the North Atlantic Treaty, or the militarization of Georgia, or the *renazification* of Ukraine. To move on in the area of nuclear arms reduction, the United States should prove to us and to the rest of the world its commitment to international stability and mutual partnership. And one can hardly see this now.

Thirdly, the cuts should mainly affect the ICBMs and SLBMs. And what about heavy bombers? Within START I framework, the United States got the right of conditional counting for a number of its aircraft. For instance, *B-1B* bomber, which may carry up to 22 nuclear warheads, was calculated as one nuclear warhead. *B-52* with its 20 cruise missiles was calculated as 10 cruise missiles. Then in 2002, when the parties signed SORT, these bombers were regarded as non-nuclear weapon carriers. Of course, in exchange the United States pledged to store nuclear weapons 100 km away from the air bases. And this is not a joke. New bombers – *B-2* – were considered non-nuclear even at the very beginning. One should hardly remind the audience that Washington outnumbers Russia in heavy bombers in several times. And the total of nuclear warheads that can be mounted by the



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United States, if desired, on heavy bombers may exceed 3,000, i.e. will be three times more than the proposed target for cuts. Meanwhile, due to the efforts of Washington the verification mechanisms for the air component of the nuclear triad have been brought to minimum.

Fourthly, Washington believes that the treaty should not cover sea-launched cruise missiles with the range exceeding 600 km. They cannot be regarded as strategic arms *per se*. Under the existing arms reduction treaties, the United States is obliged not to deploy over 880 SLCMs. However, taking into account the U.S. Navy total superiority at sea, such weapons have strategic importance. After all the effective range of new Tomahawk missiles exceeds 3,500 km. And 880 SLCMs nearly equal the Russian strategic nuclear arsenal in numbers (to be left after the cuts).

Fifthly, it is quite difficult to speak about the possibility of extensive strategic arms reduction without limitations on nuclear weapon technology as such. Washington takes painfully the Iranian nuclear program, but is less concerned about nuclear capabilities of Israel, Pakistan, and India (especially as the U.S.-Indian cooperation develops and the idea of legalization of its nuclear weapon status is becoming more and more evident). Hence, the universality of the NPT is undermined. Besides, the United States refused to ratify the CTBT and made its best to bury the quite reasonable initiative of Moscow on prevention of deployment of nuclear weapons beyond the national territory. What kind of desire for nuclear-weapon-free world can we then talk?

Sixthly, the United States has a huge superiority in conventional weapons, above all in high-precision weapons. Moreover, the United States is capable of concentrating large offensive groupings in any part of the world relying on extensive military infrastructure (which approaches the Russian borders, in fact). And now imagine how cheekier the United States would be during Georgia's aggression in South Ossetia, if Washington was not aware of Russia's adequate and assured nuclear retaliation.

Finally, we got used to strategic stability at relatively high level of strategic nuclear arsenals. However, with the lowest possible ceiling for strategic nuclear arms the life becomes much more complicated. There is a growing and real risk of erroneous operational or even political decision, while the possibility for nuclear weapons employment is significantly lower as well. And it is quite probable that the decision on the first disarming counterforce strike will no longer seem crazy. By the way, the only case when Russia and the United States were at the edge of nuclear warfare and the scenario of disarming strike was considered – the Cuban missile crisis – took place at the moment when both parties possessed the relatively low number of strategic nuclear forces.

Hence, any initiative set forth by the United States is designated to serve the interests of Washington and only Washington. What is the strategic purpose then?

The United States will be able to exchange the non-existent missile defense system (the construction of which in the current economic conditions is quite difficult for the United States) for the real Russian nuclear potential. This will not only help America to consolidate its global politico-military domination, but will also erase Russia from the list of countries that have a serious impact on the global politico-military balance of power. To preserve such status, Russia will have to be involved in the conventional arms race at the moment of financial and economic crisis.

Evidently, when Russia is no longer a factor to be taken into account, the United States will feel much more comfortable in its strategic dialogue with China, which is broadly discussed in the expert and political community. Washington knows well about the enormous dependence of China on the U.S. market. And it is quite dubious that the "Chinese economic wonder" may survive at all without strategic partnership with the United States. Being *tête-à-tête* with Beijing, it will be much easier for Washington to force China to follow its interests and benefit from all weaknesses of the modern Chinese statehood.

Thus, the desire of the new U.S. administration to make Russia *choke to death by embracing* it with the cobweb of nuclear disarmament is quite understandable. But why is Washington so sure that Moscow, like in the 1990s, will continue to make concessions? However, we should thank the Americans for their proposal and demonstrate that we realize the true essence of it. Only when Washington understands that any *peace initiatives* are welcomed but are taken without admiration, it will set forth actual peace initiatives.



Joseph Cirincione

THE OBAMA TRANSFORMATION: CAN IT SUCCEED?

President Barack Obama has one of the most comprehensive, progressive and ambitious arms control and disarmament agendas ever proposed by a U.S. president. With his joint statement with Russian President Dmitry Medvedev on April 1, 2009 and his speech in Prague on April 5, President Obama began the transformation of U.S. nuclear policy. Implementing this agenda, however, will require the president to secure the active cooperation of Russian leaders while overcoming serious domestic resistance to his plans.¹

President Obama developed his plan during his presidential campaign, based on years of cooperative work in the Senate with both Democratic and Republican leaders. Overall, it appears that prospects are improving for sustaining and building a bipartisan consensus around the basic elements of the Obama plan. This is due to several factors, including the increase in the nuclear threats, the failure of previous strategies, the development of new policies, and the commitment of the new president and other state leaders to this new approach. The next twelve to eighteen months will determine if these plans can succeed.

GROWING NUCLEAR THREATS

There are four main categories of threat: nuclear terrorism, the dangers from the existing arsenals, attempts by additional nations to acquire nuclear weapons, and the weakness of the non-proliferation regime. These threats are interrelated and developments in one area impact others. For example, failure to reduce existing arsenals increases the risk that other nations will acquire their own nuclear weapons, which, in turn, raises the risk of terrorist theft or diversion of materials. If unchecked, one or more of our nuclear nightmares is likely to be realized.

Nuclear terror. While considerable attention, particularly in the U.S. media, is focused on the nuclear and missile programs of North Korea and Iran, the combination of terrorist groups, nuclear weapons and an unstable government now makes Pakistan our greatest threat. Pakistan has enough material for perhaps 60 to 100 weapons, and is rapidly expanding its fissile material production facilities. It has a weak civilian government, its army and intelligence services contain strong fundamentalist influences, and Taliban militants have taken over swaths of Pakistan's frontier provinces.

If Pakistan destabilizes from this or future conflicts, *Al Qaeda* – now securely rooted in Pakistan – could gain control of nuclear materials for a bomb or the weapons themselves. This scenario could be unlikely, but the mere possibility makes it a grave concern. Robert Gallucci, dean of the Georgetown University School of Foreign Service says, “Pakistan is not only a problem that could go bad at any moment – it could have gone bad yesterday.”²



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Deadly arsenals. There are an estimated 23,000 nuclear weapons in global stockpiles – 96 percent held by the United States and Russia. If any one of these weapons was launched through accident, miscalculation, or unauthorized use, it would decimate a city. The U.S.A and Russia maintain approximately 3,000 nuclear warheads on high-alert status, ready to launch within 15 minutes.

These arsenals have become a hefty liability for the U.S.A and Russia, and the consequences to accident would be catastrophic. Former Senator Sam Nunn says, “We have hundreds of nuclear weapons on hair-trigger launch status. Every day that goes by, we are depending on the Russian warning system working. And they are dependent on ours. That is unacceptable. We have to lengthen the warning time.”³

New nuclear states. Iran and North Korea are the most pressing proliferation concerns, and their nuclear advancements pose serious threats to neighboring states and the stability of the global nonproliferation regime. The fundamental danger is not that either state would use a weapon that they developed – the certain retaliation would make any use suicidal – the true threat is regional, as rival states seek their own nuclear deterrent.

This deadly chain reaction is already underway in the Middle East where states are developing a nuclear hedge against Iran. Over the past three years, a dozen Middle Eastern states declared their interest in civilian nuclear power or research programs. Egypt, Turkey, Saudi Arabia, the U.A.E. and others are beginning to acquire independent nuclear technological bases. Given time and provocation, these energy programs could become the seeds of a nuclear-armed Middle East.

Repairing the regime. Finally, the nonproliferation regime – the interlocking network of agreements and treaties that has slowed if not altogether prevented horizontal proliferation over the past 40 years – has been deteriorating. Several observers have warned of its possible collapse (particularly if trends noted above continue).

The new U.S. position has had an immediate and positive impact, exciting delegates to the 2009 NPT Preparatory Committee and producing an agenda for the 2010 conference in record time, breaking the logjam at the Conference on Disarmament that has prevented negotiations of the Fissile Material Cut-off Treaty, and raising the possibility of a consensus agreements over the next year that could raise the barriers to proliferation.

There is widespread recognition that the previous administration’s strategy for countering proliferation, the so-called *Bush Doctrine*, failed to deter these threats and in several cases made them worse. The Bush policy posited that the greatest danger came from the nexus of terrorists, outlaw states, and weapons of mass destruction. Their solution was direct military action to overthrow regimes before their full threats materialized. Iraq was the first implementation of the policy.

When then-Undersecretary of State John Bolton was asked what lesson Iran and North Korea should draw from the Iraq War, he said, “Take a number.”⁴ We don’t deal with dictators, officials thought, we destroy them.

The war’s architects expected regime change in Iraq to lead to regime change in Syria, Iran, North Korea, and other states. The opposite occurred. The ill-conceived invasion soon became a protracted quagmire for U.S. political and military influence. Unbound by regional adversaries and unchecked by U.S. power, the indirect targets of the Bush doctrine grew bolder and advanced their nuclear programs. Both states have advanced their programs more in the past five years than they had in the previous ten.

THE NEW MOMENT

The collapse of the Bush policy left a void, into which grew a movement advocating the complete elimination of nuclear weapons. Roland Timerbaev documents the “generally positive

impact” of the various new nuclear disarmament campaigns, including the efforts of the so-called *four horsemen* (Republicans George Shultz and Henry Kissinger and Democrats William Perry and Sam Nunn),⁵ the joint Australia-Japan commission, and the new international campaign, *Global Zero*.⁶ These groups have expanded their influence in the public debate and capitalizing on popular support for verifiable nuclear disarmament.

We are already seeing the shift in arms control policy in Europe. Current and former senior statesmen and stateswomen from the United Kingdom, Norway, Italy, France, and Germany have given their support for the goal of progressive nuclear disarmament. From the United Kingdom, Prime Minister Gordon Brown,⁷ Secretary of Defense Des Browne,⁸ and Secretary of State for Foreign and Commonwealth Affairs David Miliband⁹ offered their support and partnership for working towards global nuclear disarmament. Norwegian Foreign Minister Jonas Gahr Støre¹⁰ pledged his country’s support, backed up by substantial government funding for conferences and other initiatives. From Italy, five senior statesmen gave their endorsement,¹¹ and Secretary of State Enzo Scotti affirmed his country’s commitment.¹² Chancellor Angela Merkel¹³ gave her support, as did four German statesmen,¹⁴ and Foreign Minister Frank-Walter Steinmeier.¹⁵ French President Nicolas Sarkozy has stated his country’s work on disarmament.¹⁶ In a letter on behalf of the Council of the European Union to UN Secretary General Ban Ki-moon, President Sarkozy declared the EU’s ambition and plan of action¹⁷ for working towards general nuclear disarmament.¹⁸ This consensus of European views provides strong international support for President Obama’s disarmament agenda.

On April 5, 2009, before a crowd of 15,000 in Prague, President Obama declared, “Today, I state clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons.” This was a landmark statement, promising a fundamental shift in U.S. nuclear policy and posture. The President stressed that his long-term goal will take patience and persistence. The U.S. media’s response was generally skeptical, and several columnists called President Obama naïve or worse.

As Roland Timerbaev noted in this journal,¹⁹ there have been several previous high-level initiatives urging the elimination of the world’s nuclear weapons. Indeed, Obama’s speech is not the even first time a sitting U.S. President has sought to rid the world of nuclear weapons. In November 1945 – two months after dropping the first atomic bombs on Hiroshima and Nagasaki – President Harry Truman signed a declaration calling for the “elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction.”²⁰ President Kennedy said, “World order will be secured only when the whole world has laid down these weapons which seem to offer us present security but threaten the future survival of the human race.”²¹ President Reagan was a strong yet unlikely believer in the elimination of nuclear weapons. In 1983, after realizing the peril they invite, Reagan said, “I know I speak for people everywhere when I say our dream is to see the day when nuclear weapons will be banished from the face of the Earth.”²² President Reagan and Mikhail Gorbachev at the 1986 Reykjavik Summit nearly agreed to full disarmament within ten years.²³ This glimmer of a nuclear weapons-free world was then put out, as further negotiation foundered on Reagan’s attachment to his Strategic Defense Initiative.

Thus, previous presidents have declared similar ambitions, but their initiatives have consistently fallen short. What sets the Obama plan apart is that it marries this long-term vision with a comprehensive set of near-term steps. And it comes at a time when, as a result of the factors listed above, the American president seems to have a willing partner in the Russian president, and the center of America’s security elite have significantly shifted in favor of arms control.

The Obama plan begins with reestablishing cooperation with Russia. As former Republican Senator Chuck Hagel notes, “Without the U.S. and Russia working together – the nations that control 95 percent of the world’s nuclear weapons – there will be little done to stop the spread of these weapons. Fortunately, the atmospherics have changed dramatically in Moscow. The receivers are on and the transmitters are off. The same is true in Washington. There is a willingness to listen.”²⁴



In their April 2009 Joint Statement, President Obama and President Medvedev pledged to take the first steps to disarmament and laid out a “step-by-step process.”²⁵ The two leaders spoke with unusual clarity, defining intentions and joint projects. As they noted, their words must be translated into action, but these words are a sharp break from past, self-congratulatory, diplomatic dodges.

First, their nuclear discussions had a distinct frame. They did not start, as did almost all Bush-era statements, with warnings of new nations or terrorists getting nuclear arms, but with a focus on their own arsenals and their own obligations. They declared their commitment to achieving a nuclear-free world. They restored arms control and conflict resolution to central policy roles.

Obama and Medvedev committed to replacing the 1991 START treaty (talks began on April 24) and called for a progress report by their July summit. These are not the words of officials just going through the motions. They do not specify numbers, but that is reasonable. They will have to talk before committing to a figure lower than current agreements. The number of 1,500 deployed warheads has been widely mentioned, which is below the 1,700–2,200 limit referenced in the Bush SORT treaty.

They called for “joint assessments” of the missile threat, something some experts have advocated for years.²⁶ The U.S. and Russian leaders clearly want to work out a compromise on anti-missile weapons in Europe. Obama recognizes that the system Bush was rushing to deploy does not work and Medvedev seems to acknowledge that there are ways to deploy defenses that would not threaten Russia. This statement may be the beginning of a cooperative approach.

Both leaders pledged to bring the Comprehensive Test Ban Treaty into force. Russia has already ratified, Bush and Republican leaders refused to, and Obama now promises to finish the job. This marked the beginning of a serious administration effort, since confirmed by the naming of Vice President Joe Biden to head the ratification effort.

Above and beyond the specifics, however, is the tone and vocabulary of the document. Diplomatic double-speak often hides disagreements and obscure intentions. (See, for example, the Bush-Putin statement at the 2006 G-8 meeting.)²⁷ The April 1 statement is filled with action verbs, dynamic adjectives and specific nouns. The very first paragraph talks of a “substantive agenda” and their “resolve to work together,” “jointly meet contemporary global challenges,” and about “addressing disagreements openly and honestly in a spirit of mutual respect.” By the third paragraph they have already “committed our two countries to achieving a nuclear free world.” It would have been easy to say, instead, “support the vision of” or “agree to work towards.” But the chosen phrase indicates a feasible goal and a determination to reach it. This is an indicator of a new, committed approach.

This intention is underscored by talk of a “work plan,” and repeated references to “joint” work, “coordinated” approaches, “new impetus,” etc. The discussion is broadened beyond security issues near the end of the statement to their “desire for greater cooperation not only between our governments, but also between our societies” and plans for scientific cooperation, and student and cultural exchanges.

If there was any doubt about their commitment, the two leaders clearly state in the final paragraph: “Now it is time to get down to business and translate our warm words into actual achievements.”

OBSTACLES PROGRESS

There will be opposition, both in the United States and in Russia, to this approach, as indicated by the cynical coverage by some in the U.S. media, and statements by some in the Russian foreign policy apparatus. Officials in both countries, however, are forging ahead. Russian Foreign Minister Sergey Lavrov said he was hopeful of quick agreement on joint reductions,

“The U.S. approach seems very constructive to me.” Assistant Secretary of State Rose Gottemoeller and Russian negotiator Anatoly Antonov report steady progress in their talks.

This joint statement, coupled with Obama’s Prague speech April 4, marked the beginning of the attempted transformation of U.S. nuclear policy. The struggle to implement the change has now begun. The question is: “Can he finish the job?”

There are four major obstacles. First, the global economic crisis presents a difficult context for a bold agenda. If the global economy worsens, it threatens to swallow any transformational agenda, including on nuclear policy.

Second, the nuclear hardliners, those with financial or ideological ties to the existing nuclear bureaucracy and posture. They will put up formidable resistance to change, however, this is a group in decline, with shrinking influence in the military and strategic thinking.

Third is a more serious problem: the divisions within the administration itself. The tensions between the *transformationalists*, who share the president’s vision of a world without nuclear weapons, and the *incrementalists*, who do not believe elimination possible or proliferation reversible, will intensify. Though all are serious people, the half-steps favored by the *incrementalists* will not give us full security. Going slowly when we must go boldly, risks the failure of the president’s agenda. Still, with skill, presidential leadership and the active participation of nongovernmental organizations, these divisions can be softened, coalitions forged, and the forces of reaction defeated.

The last obstacle is cynicism. This is the perhaps the most serious as it pervades much expert thinking and media coverage. There is cynicism of the right, which holds that nuclear disarmament is undesirable. Critics from the American Enterprise Institute and other neo-conservative bastions regularly mount their opposition from this posture.

Moderate cynicism holds that nuclear disarmament is unachievable. This is the pose of many editors and journalists. It argues with vapid phrases, little knowledge and nonsensical assertions that eliminating nuclear weapons is as futile as eliminating gunpowder. It is the pose of those who wish to appear worldly and wise-without exerting too much effort.

We also have the left cynicism of those who believe disarmament is both desirable and feasible, but who do not believe this president is up to the task. They disparage the appointments that are not good enough, the reports that do not go far enough, and a president who does not believe deeply enough.

Overcoming this pervasive cynicism may be the greatest challenge, for it can sap the will of officials, filling them with a fear of appearing weak or foolish, and demoralize proponents, who will shrink from commitment to an apparently hopeless cause.

Cynicism is sometimes justified. But it should never substitute for research or reason. We should not let attitude replace analysis. Obama understand this. In his Prague speech, he says “such fatalism is our deadly adversary.” He notes: “Now, I know that there are some who will question whether we can act on such a broad agenda. There are those who doubt whether true international cooperation is possible, given inevitable differences among nations. There are those who hear talk of a world without nuclear weapons and doubt whether it’s worth setting a goal that seems impossible to achieve.”

He rebuts that pessimism: “But make no mistake: We know where that road leads. When nations and peoples allow themselves to be defined by their differences, the gulf between them widens. When we fail to pursue peace, then it stays forever beyond our grasp. We know the path when we choose fear over hope. To denounce or shrug off a call for cooperation is an easy but also a cowardly thing to do. That’s how wars begin. That’s where human progress ends.”



And speaking directly to our experience: “I know that a call to arms can stir the souls of men and women more than a call to lay them down. That is why the voices of peace and progress must be raised together.”

THE NEW REALISM

Overall, the arrows are moving in Obama’s direction. The growing consensus that the policies of the past administration have failed is now joined with a new consensus that sees disarmament and nonproliferation as two sides of the same coin – that disarmament develops the unity needed to prevent proliferation, which, in turn, provides the security needed for disarmament.

This is an historic shift of the center of America’s security elite to a renewed embrace of disarmament and arms control.

Arms control seems to have become the new realism. There is a global sense of urgency that is fueling new efforts, new alliances and new progress in New York, Geneva, Vienna, Moscow and Washington.

Two examples demonstrate how American conservatives who just a few years ago condemned treaties as “the illusion of security” are now backing agreements to reduce nuclear arms.

The first is James Schlesinger, former Republican secretary of defense and energy, who just endorsed a new treaty with Russia, “The moment appears ripe for a renewal of arms control with Russia, and this bodes well for a continued reductions in the nuclear arsenal,” said the U.S. Strategic Posture Commission he co-chairs. Schlesinger once led the charge against further nuclear reductions and helped frame the Bush administration’s alternative approach. He wrote in his 2000 article, “The Demise of Arms Control?”, “The necessary target for arms control is to constrain those who desire to acquire nuclear weapons.” In this view, the threat comes from other states, and a large, robust U.S. nuclear arsenal was needed to counter proliferation.

In early May 2009, Schlesinger switched. The commission (whose leadership he shared with former Secretary of Defense Bill Perry) reported to Congress that: “the United States must seek additional cooperative measures of a political kind, including for example arms control and nonproliferation.”

The second is Brent Scowcroft, a perennial realist and a representative of a different wing of the Republican Party. He was never ideologically opposed to negotiated reductions with the Russians; however, in 1999 he opposed the Comprehensive Test Ban Treaty. Also in early May 2009, Scowcroft shifted. The Council on Foreign Relations Task Force he co-chaired with Bill Perry recommended the Senate ratify the nuclear test ban he once questioned. They also agreed, “U.S.-Russia relationship is ripe for a new formal arms control agreement, ‘one’ that would reflect current defense needs and realities and would result in deeper arms reductions.”

Charles Curtis at the *Nuclear Threat Initiative* describes the effect of these shifts and other changes as the thawing of frozen seas. Each day, we see new passages opened to Europe, Russia, and Asia.

We should not overstate the shift of hardliner positions. Secretary Schlesinger is still opposed to nuclear disarmament; Scowcroft still favors a large U.S. nuclear arsenal. But both (and many of their colleagues) have shifted significantly. While not endorsing Obama’s ultimate goal, they support several of his preliminary steps.

The Obama strategy seems to be to promote the ultimate vision, but to concentrate on the forging broad agreement on the immediate policies whose fulfillment can build confidence in the realism of nuclear disarmament. The success of this strategy, then, can be judged by its ability to achieve these steps. We will not have long to wait. Obama seems determined to mount a campaign over the next 12 months on this issue, which he listed as his top foreign pol-

icy goal. If he can build bipartisan support for the process, we should see results on the following steps:

- A follow-on treaty to START with a further lowering of the number of strategic nuclear weapons allowed under the SORT treaty.
- Negotiations underway for a new treaty to limit total U.S. and Russian forces to 1,000 or fewer weapons.
- U.S. Senate ratification of the Comprehensive Test Ban Treaty;
- A new U.S. Nuclear Posture Review that will reduce the role of nuclear weapons in security policy and begin the transformation of the nuclear force to the 21st century threats;
- A successful 2010 NPT Review Conference that will increase the barriers to proliferation;
- Negotiations well underway for a verifiable ban on the production of nuclear weapons material;
- The containment and possible roll back of the North Korean program;
- Negotiations for the containment of the Iranian program, with some tangible signs of progress.

An accelerated program for securing and eliminating where possible all loose nuclear materials and weapons, propelled by an historic Global Summit on the Prevention of Nuclear Terrorism.

The U.S. administration, other governments, and many independent non-governmental organizations are already working on strategies to achieve these steps. Some are already in motion. Achieving most or all of these steps will be real progress, making the world more secure and more peaceful.

But tough problems will remain. The hard work will not be over. Indeed, it will never be over. But whereas 12 months ago the chances of achieving the accomplishments listed above were close to zero, the chances are high that Obama will realize most or all of them by the middle of the 2010.

Note

¹ This article was written with the assistance of *Ploughshares Fund* research assistant Benjamin Loehrke.

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³ Sam Nunn, *Ploughshares Fund* Panel Presentation at Embassy of Italy, Washington, D.C., May 20, 2009.

⁴ Cited in *Business Week*, September 2005, http://businessweek.com/bwdaily/dnflash/sep2005/nf20050920_2248_db016.htm (last visited on May 20, 2009).

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⁶ Roland Timerbaev, "Nuclear Weapon-Free World: Ways of Moving Ahead," *Security Index*, No. 2, Spring 2009.

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- ¹⁹ Roland Timerbaev, "Nuclear Weapon-Free World..."
- ²⁰ H.S. Truman, C.R. Attlee, W.L.M. King, Declaration on the Atomic Bomb by President Truman and Prime Ministers Attlee and King, November 15, 1945.
- ²¹ J.F. Kennedy, State of the Union Address, Washington, D.C., January 11, 1962.
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- ²³ C. Hanley, "Gorbachev, Schultz Find Reykjavik Revived in Rome," Associated Press, April 28, 2009.
- ²⁴ C. Hagel, *Ploughshares Fund* Panel Presentation at Embassy of Italy, Washington, D.C., May 20, 2009.
- ²⁵ Joint Statement by President Dmitry Medvedev of the Russian Federation and President Barack Obama of the United States of America, London, April 1, 2009.
- ²⁶ A model for such assessments has been provided by a new U.S.-Russian expert assessment of the Iranian missile and nuclear program. The May 2009 report, published by the East-West Institute is titled "Iran's Nuclear and Missile Potential: A Joint Threat Assessment by U.S. and Russian Technical Experts." Available at <http://www.ewi.info/announcements/news/index.cfm?title=News&view=detail&nid=716&aid=7747> (last visited on May 25, 2009).
- ²⁷ Joint Statement by President George W. Bush and President V. V. Putin, St. Petersburg, July 18, 2006. Available at <http://georgewbush-whitehouse.archives.gov/news/releases/2006/07/print/20060717-2.html> (last visited on May 20, 2009).



Sergey Smirnov

MISSILE DEFENSE: DISINFORMATION, THREAT OR REALITY?

There's hardly a topic that politicians, pundits and military experts love more to discuss these days than U.S. plans to bolster the regional component of its missile defense system. But for a number of reasons, these discussions, as well as well-founded criticism, tend to focus mostly on plans to build regional missile defense facilities in Eastern Europe – the radar station in the Czech Republic and an interceptor missile launch site in Poland. These plans, however, are the most visible but hardly the most important component of what is called the National Missile Defense System in the United States.¹

In order to understand the threat to international security posed by an uncontrolled build-up of missile defense systems, several issues need to be taken into account. One is the impact of scientific and technological progress on the means and methods of ballistic missile defense. Another is a whole set of military and political issues that inevitably arise from the deployment of missile defense systems. There is also the question of impact of missile defense on strategic nuclear deterrence and other *collateral effects*.

MISSILE SWORD AND MISSILE-DEFENSE SHIELD: THE PERIOD OF NUCLEAR ROMANTICISM

The beginning of mass production of intercontinental ballistic missiles (ICBMs) symbolized the sad triumph of the product of human genius over its own creator. Each side now had a mere 30 minutes from the moment of the launch of ICBMs – the average flight time to target – to evaluate the situation, make a decision, issue the launch command to its own nuclear forces and... pray. Because for the leadership of a superpower under attack, the chances of survival were close to zero.

Naturally, neither the United States nor the Soviet Union was happy with such a grim state of affairs. That is why as soon as the first ICBMs were built, work began to develop some means of ballistic missile defense. The task of early detection of ICBM launches was solved more or less successfully by building super-powerful missile defense radars and launching spy satellites. But target selection, designation and actual interception was too much of a task for the technology of the 1960s-1970s.

Still, both the United States and the Soviet Union managed to create the first *working* missile defense systems by the early 1970s. These used monstrous decimeter-length radars for target tracking. The radars, stationed in Alaska, Greenland, the U.K., Azerbaijan, the Soviet Baltic republics and other locations, consumed gigawatts of electricity and cost mind-blowing amounts of money. But they were not advanced enough to be able to pinpoint the exact coordinates of the missiles in flight or provide target designation for the intercept-



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tors. This is why interceptor missiles were equipped with thermonuclear warheads, thus obviating the need for precise targeting.

But the efficiency of the first missile defense systems was never put to the test, neither in test firings nor in real combat, and for obvious reasons. Experts had grave doubts about the usefulness of those systems in a real-life situation. A series of atmospheric nuclear explosions of interceptor missiles could itself have catastrophic consequences, and not just for electronic or telecommunications equipment. And the technical requirements for the initiation of nuclear interceptor warheads made those interceptors unsuitable for defending against wave after wave of a massive nuclear missile attack. And there was also the cost of the missile-defense shield, which was far higher than the cost of the missile sword, mainly due to the expense of building target-detection and target-tracking stations.

All that probably explains why the United States and the Soviet Union agreed to sign the Anti-Ballistic Missile Treaty in 1972. Under the terms of the treaty, each side was allowed two sites at which it could deploy an ABM system – one to defend an ICBM base and another for the nation's capital. The ceiling for the number of combat-ready interceptor missiles at each site was set at 100. The treaty banned the creation of sea-based, air-based and space-based ABM systems, as well as mobile land-based systems and launchers capable of launching more than one interceptor missile at a time. The treaty also prohibited the building of ABM early warning radars other than those “located along the territorial boundaries of each country and oriented outward.”² The treaty did however allow further development and testing of new ABM systems so long as the above limitations on the numbers and deployment sites were observed.

ABM AFTER THE COLD WAR

In 1983, President Ronald Reagan announced plans to build a layered ABM system³ capable of protecting the entire territory of the United States from a massive ICBM attack. It cannot be ruled out that Reagan himself did believe such a system was possible – and some Soviet leaders did come to believe that as well. The truth is, the SDI program was a red herring. But it did serve its disinformation purpose and tricked the Soviet Union into a meaningless spiral of the arms race, which finally broke the back of the Soviet economy and helped build public support in the United States for developing new large-scale ABM systems. The development of such systems began after the dissolution of the Warsaw Pact and the 1991 war with Iraq.

Out of the dozen or so elements of the SDI program, the Americans have made serious progress on just two over the past 20 years – the kinetic kill vehicles (which do not carry an explosive charge) and the X-band ABM radars. One other program, the air-based chemical laser, is still at the experimental stage. The rest of the Star Wars exotics, including particle beam weapons, orbital interceptor missile stations and such like will probably remain the domain of Hollywood studios.

All the existing American interceptor missiles and those still in development are equipped with kinetic kill vehicles (KKVs). These vehicles don't have the drawbacks of explosive warhead interceptors – unlike nuclear charges, they don't damage the environment, and they do not require precision distance detonators. KKV interceptors rely on an infrared homing device to find their target. Identifying a superheated warhead flying through the vacuum of outer space is a fairly simple task that can be accomplished using relatively simple, cheap, and, most importantly, compact devices. But any malfunction in KKV electronics, a collision with a tiny speck of space debris or even the slightest deviation from the flight trajectory will cause the vehicle to miss its target, and there may simply be no time left for a second attempt.

The X-band ABM radars (working frequency 8–12 GHz, wave length 2.5–3.75 cm) are very different from the previous generation stations. They work in the same way as roadside speed

cameras, but they are a million times more powerful and rely on complex hardware and software methods of beam formation and focusing. According to American sources, the diameter of the radar beam at 200 km from the radar is no more than 2 meters. These radars can identify warheads hidden among decoys, track them very accurately and provide target designation for interceptors. Their tracking range can reach 5,000 km and more.⁴

The combination of X-band radars and interceptor missiles with kinetic kill vehicles is the basis of all American missile defense systems. It has passed several test firings, and on February 22, 2008 it was used to intercept an American satellite, *USA-193*, which was not responding to commands from ground control and losing altitude. Official U.S. sources stress that this combination has proved highly efficient. But that is only a half-truth, or, more likely, part-truth, part-PR stunt and part-disinformation. All the test firings were carried out under ideal conditions, in perfect weather, and the time of the launch, as well as the trajectory of the target were well known – a far cry from real-world conditions.

There is one other thing about the X-band radars that should be kept in mind. Thanks to the high frequency and power of the beam, as well as its precise focusing, these radars can be used to disable electronics at a distance of several hundred kilometers.⁵ Not enough to knock out an ICBM warhead, of course, but enough to damage a plane's electronics, causing it to crash.

FROM REGIONAL TO GLOBAL ABM SYSTEM

In parallel to improving anti-missile technology, the United States has been trying to figure out the best way of configuring its ballistic missile defense system as a whole. The technology available has been a substantial part of this equation, but there are also other factors that determine the structure and configuration of ABM systems.

In the 1960s, the only option available was deploying several ABM sites on U.S. territory, consisting of interceptor missile launch sites and tracking radars aided by a network of early-warning radars in the Northern hemisphere. Such a system was designed to protect key strategic facilities in the United States from a nuclear missile strike.

In the 1990s, the main emphasis was put on protecting large groups of American forces abroad, mainly in the Middle East and North-East Asia. Such *regional* ABM systems were meant to deal with tactical ballistic missiles of *third-world* countries. Launch detection is done by spy satellites, while target tracking, designation and interception rely on existing air-defense and missile-defense systems of the Army (Patriot missiles) and the Navy (Aegis cruisers and destroyers).

And finally, by the start of the 21st century, the United States came up with the concept of a national ballistic missile defense system (NMD), which had some key differences from the previous systems. Most importantly, according to official claims, it is designed to protect from solitary ICBMs launched by *pariah nations*. Another difference is that it integrates all the missile defense components at all levels, from tactical to strategic, into a single system. Regional missile defense components become elements of the national system, saving resources and substantially improving the efficiency of the entire system. According to the proponents of the idea, enemy ICBMs will be tracked by X-band radars and intercepted by various missile-defense systems at every phase of the ICBM's trajectory, substantially improving the chances of a successful intercept.

The U.S. leadership liked this national missile defense idea so much that it did not hesitate to bury the 1972 ABM treaty for the sake of its implementation. Washington spared no effort to secure the consent of its European allies to host regional ABM elements in the Czech Republic and Poland, despite the serious deterioration of relations with Russia such a move would obviously cause. The natural question is, why is the NMD system so important to Washington?



NMD: LIGHT AND SHADOW

Of course, spending \$10 billion a year to deal with a threat that does not exist is something one would never expect from the pragmatic Americans. NMD proponents cite North Korea's and Iran's alleged secret ICBM programs as their main argument at the Senate hearings and in public pronouncements – but such arguments are nothing more than scary tales for the laymen.⁶

It is quite certain that as of this moment, none of the so-called pariah nations has ICBM technology, and in the next five to ten years that is hardly going to change. North Korea is the third world's informal leader in developing and exporting missile technology. But all it has managed to achieve, trying to take its obsolete technology as far as it can possibly go, is a single test launch in 1997 of the Taepodong missile, which had a range of less than 3,000 km. That hardly counts as a serious breakthrough in missile technology.

Even if one of the pariah nations acquires a prototype ICBM, it will take many test launches and an ability to achieve the required range before the missile can be passed into service. These tests will take several years, and even the world leaders in missile technology would find it impossible to speed up this process. Neither would it be possible to conduct those test launches in secret. This is why America's feverish haste in deploying NMD components raises a number of questions.⁷

There aren't any clear answers to those questions. But any explanation for why the United States believes NMD should be such a high priority for it probably includes a number of military, political, economic and psychological reasons. Not all of them can be found in official documents – but let us look at the most likely ones.

From the military point of view, the main advantage of NMD is its flexibility, modularity and scalability. In its current configuration the system can already provide an acceptable degree of protection, and not from some abstract pariah nations, but from the very real Chinese ICBMs. All the existing X-band radars are transportable, and can be redeployed fairly quickly depending on where the threat is coming from. The KKV's weigh no more than 75 kilos, so launching them into orbit does not require heavy launch vehicles. At present they are based in missile silos, but once the test firings are completed, the strategic ground-based interceptors (GBI) can easily be put onto mobile platforms since the United States is no longer bound by the 1972 ABM treaty, which banned mobile land-based systems.

In addition to its primary purpose, the NMD system can also be used to destroy enemy satellites on low and medium orbits. That is not an assumption, that is a hard fact showcased by the already mentioned destruction of *USA-193* satellite in February 2008. The Standard Missile-3 interceptor was launched from USS *Lake Erie* cruiser off the coast of Hawaii. The U.S. Navy now has almost 100 warships capable of carrying and launching interceptor missiles. Shore-based GBI missiles are even more capable.⁸ All this means that in a few years' time the American NMD system will be capable of destroying most of the potential adversary's satellites in a matter of days, which in modern warfare means a quick and bloodless victory.

Politically, a full-scale deployment of the NMD system would certainly grant the United States the status of the world's only superpower for an indefinitely long period of time. The consequences of this would be numerous, but the most important one is that Washington will be able to make any foreign policy moves it wants with impunity. Clearly, America's adversaries will not be able to respond by simply increasing the size of their nuclear deterrents because that would make them look the aggressors and enemies of the popular ideas of peace, nuclear disarmament, etc. The economic, foreign trade and foreign policy consequences for the countries in question could be catastrophic.

Deploying regional NMD elements in allied countries can also be viewed as an instrument of Washington's foreign policy in strategically important regions. Despite the propaganda effort

by the American Missile Defense Agency,⁹ it has failed to demonstrate any direct military need for deploying ABM elements in Eastern Europe. But the political dividends have already been reaped – by playing on the differences between the *old* and *new* NATO members, the Americans have secured the approval of their NMD plans at the Bucharest summit.¹⁰

The economic side of the importance of NMD to the United States is probably the least obvious – but it is truly hard to overestimate. The already mentioned SDI program seemingly ended with nothing to show for it. But the \$50 billion spent on it had given American corporations a colossal lead in key areas of science and technology, because almost all the technologies developed as part of the program were dual use technologies. No private company could ever afford to spend this kind of money on research and development.¹¹

Today, when the United States is facing a recession, huge budget spending on research and development for the NMD program could once again help save the American economy. In addition, Washington has managed to secure the participation of Japan, Israel and several Western European nations in the development of NMD, which could help the United States reinforce its technological lead.

The psychological aspects of the NMD could seem irrational, but they probably play a certain role in serious political decision-making. Many Americans believe that the SDI program made Ronald Reagan into a great president who laid the foundations of America's victory in the Cold War. It is quite possible that another Republican, George W. Bush, hoped to win the global war on terrorism with the help of NMD. The Democrats have traditionally been less inclined to pursue global military-political projects, preferring other means instead.¹² The fact that the project has now been put on hold suggests that just like several decades ago, ABM is turning into a foreign policy bargaining chip. That, however, does not rule out the possibility of Washington returning to the idea of deploying the system once the United States overcomes its economic difficulties.

GEOGRAPHIC ASPECT OF NMD

Geographically, the NMD system the United States is deploying now is very different from the situation of 40 years ago. Almost all the components of the new system are deployed in the Pacific, including:

- Two operational bases of strategic silo-based GBI interceptor missiles in Alaska and California;
- The world's largest Pacific missile range, where all the existing and experimental ABM missiles are test-fired;
- The GBR-P X-band ABM radar located at Kwajalein Atoll. The radar was commissioned in 1998. It is this radar that will eventually be moved to the Czech Republic;
- The SBX sea-based X-band radar, the most powerful in the world. Mounted on a semi-submersible self-propelled platform (built at the Vyborg shipyard in Russia), this radar can be moved easily to any location in the Pacific Ocean.
- Two mobile FBX-T X-band radars in Japan. The first one, in Aomori Prefecture in the north of Honshu Island, became operational in 2007. The second will soon be installed in the south of the country. In future, a similar radar station may be deployed in Turkey, but so far the project is at the stage of sounding the public opinion.
- Ships of the 7th Fleet equipped with Standard Missile-3 interceptors, which patrol the south of the Sea of Japan, ready to intercept North Korean missiles.



Such a concentration of ABM components cannot be found anywhere else in the world, including the NATO area of responsibility. All these high-tech weapons are based in the direct vicinity of Russia's borders in the Far East, and pose a very real threat to the Russian nuclear deterrent.

To be fair, it must be said that from the military-strategic point of view, the importance the Americans attribute to the Pacific region is well-justified. If a military conflict breaks out on the Korean peninsula, the American military bases in Japan will be the main target for North Korea's ballistic missiles, and there is now the possibility that those missiles will be armed with nuclear warheads. And China is considered America's main potential adversary in the 21st century. Deploying the main ABM elements along the arc of Japan – Aleutian Islands (the default location of the sea-based SBX radar) – Alaska – California would enable the United States to intercept medium-range North Korean missiles, as well as Chinese ballistic missiles along their entire flight trajectory to U.S. territory.

Politically, focusing on the Pacific region has already yielded some very good results. Playing on Japan's paranoid fear of the so-called North Korean nuclear missile threat, the United States has easily resolved the issue of deploying its ABM elements there and using the Japanese Navy to patrol against any missile threat along with U.S. warships.¹³ Let us give the Americans credit where credit is due: the combination is very elegant. The United States have got themselves an ABM deployment area practically for free, and in return the Japanese, grateful as they are for the missile shield, will probably stop demanding the withdrawal of U.S. troops and military bases from their territory.

WHAT NEXT?

There is hardly any reason to believe that the Americans will stop the NMD project – so far it has been earning its keep. At any rate, the political dividends of the project are already flowing in.

But things are not so simple where military considerations are involved. Modern anti-missile technology is not advanced enough to guarantee 100-per-cent protection even from a tactical missile attack¹⁴ – a massive wave of ICBMs, with MIRV warheads and multiple decoys, would be a far greater challenge for any ABM system. The price of failure would be very high. And the barbaric ideas of the 1950s and 1960s about *acceptable/unacceptable* losses simply have no right to exist in the 21st century.

The idea that the NMD system can guarantee absolute protection from missile threat is a dangerous delusion. Its danger stems not just from its ability to provoke the leadership of the country into rash actions. The entire history of weapons has demonstrated that it is impossible to create a *super-weapon*. The *sword* and the *shield* have no separate existence, their development is interlinked – otherwise either all the wars would have stopped by now, or the world itself would have ceased to exist.

A new spiral of the arms race, in its classical sense, would probably be impossible now because no nation on the planet can afford to spend as much on its armed forces as the United States can. But there are many alternative ways of overcoming the layered NMD defenses, and they do not even require increasing the size of the existing nuclear arsenals. The only question is how justified a new asymmetric spiral would be right now from the point of view of international law, security, economy and the environment.

As for international terrorism, the NMD system could hardly be of much use here. And even if a reliable ABM system can be deployed, the pariah nations would still be able to use terrorist methods of nuclear blackmail instead of ballistic missiles to achieve their political ends, either directly or using international extremist and terror groups as their proxy.¹⁵

And finally, there is one other way in which the NMD system would jeopardize international security. We are talking about the program's transparency and ways of its verification and

monitoring. Soviet-American arms control and arms limitation agreements of the 1960s-1980s had legally binding and effective mechanisms of verification. Unfortunately, those mechanisms are next to useless in monitoring new ABM systems.

As already stated, over-the-horizon X-band radars are the core of the NMD system. Without those radars, the missile-defense interceptors are blind and deaf. The ABM radars of the 1960s were built to look in just one and only direction, covering a narrow predetermined sector of the skies. Modern radars, however, are shielded from view by radio-transparent domes. Inside those domes the radars can be turned in any direction in a matter of seconds, and no inspection will be able to tell for sure where exactly the radar is looking at any given moment. It will be impossible to determine whether the radar is covering the skies over Iran, spying on a missile launch at Plesetsk or providing target designation for a satellite while it is in shadow.

That is why the question in the headline of this article – on whether ABM is a case of disinformation, a threat or reality – is largely rhetorical. A modern ABM system is all of those things – three in one, as they say.

Notes

¹ National Missile Defense (NMD) is the current name of the program. Several years ago it was called the Ballistic Missile Defense Organization (BMDO). It had been known under other names as well, and there is no guarantee that its name will not change again – that does not change its essence.

² Treaty between the United States of America and the Union of Soviet Socialist Republics on the Limitation of Anti-Ballistic Missile Systems, May 26, 1972, Articles V, VI.

³ Known officially as the Strategic Defense Initiative (SDI), its unofficial moniker coined by Senator Edward Kennedy is the *Star Wars* program.

⁴ Glen Goodman, "Large, powerful radar systems underpin U.S. missile-defense efforts," *C4ISR*, March 2006, p. 26–28.

⁵ Provided of course that those radars can focus their beam as well as claimed.

⁶ Speaking at the Marshall Institute on January 29, 2007, the deputy head of the NMD program, Army Brigadier General Patrick O'Reilly, made some wild claims about the range of the Taepodon-2 missile allegedly test-launched by North Korea on June 4, 2006 - 6,200 miles (9,920 km) in the two-stage configuration and 9,300 miles (14,880 km) in the three-stage configuration. See Bill Gertz, "How the 'axis' seeks the killer missile," *Washington Times*, January 30, 2007. For information: existing ICBMs have a range of no more than 11,000 km. There is simply no need for them to have a longer range.

⁷ One example of this is the haste during the construction of the GBI launch site in Fort Greely, Alaska. The interceptor missile silos were not even equipped with water detectors, and seven of the 26 silos were flooded in June 2006. This incident was reported by an NGO called *Project on Government Oversight* and later confirmed by the U.S. Missile Defense Agency. The United States has not even decided yet which type of interceptor missile to go for, as the hastily cobbled together offerings of the two rival contractors, *Lockheed Martin* and *Orbital Sciences*, looked far from finished. *Directory of U.S. Military Rockets and Missiles*. Appendix 4: Undesignated Vehicles. GBI.

⁸ They can intercept targets at an altitude of 2,000 km and more. *Ibid*.

⁹ See for example the official web site of the Missile Defense Agency, <http://www.mda.mil/mdalink/html/mdalink.html>

¹⁰ Bucharest Summit Declaration. *NATO Press Release* (2008) 049, April 3, 2008, <http://www.nato.int/docu/pr/2008/p08-049e.html> (last visited on July 8, 2008).

¹¹ For this, plus a very detailed account of various aspects of the program, see: A.I. Shmygin, *SDI As Viewed By a Russian Colonel (Everything about ABM)* (Moscow: TSP Veteran Otchizny, Megatron, 2000).



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¹² We must not of course oversimplify the differences in the approach of the Republicans and the Democrats to missile defense. For example, George Bush Senior, a Republican president, essentially put an end to the SDI program by radically curtailing its scale and objectives – whereas Bill Clinton, a Democrat, signed on July 23, 1999 a bill on launching the national missile defense project (though he did so only six months after the bill was approved by the Republican-controlled Senate).

¹³ On December 17, 2007 a Japanese destroyer, the *Kongo*, test-fired a Standard Missile-3 interceptor at the Pacific missile range. This is the first and so far the only case of the Americans giving a modern missile defense system to a foreign navy.

¹⁴ This is well understood by the Israelis, who have built the world's only combat-ready missile defense system, the Arrow. Louis Rene Beres, Isaac Ben-Israel, "Ballistic-missile defense and WMD," *Washington Times*, March 19, 2007.

¹⁵ Ibid.



Alexander Golikov

MODERN AGRICULTURAL BIOTECHNOLOGY AND NATIONAL SECURITY

Most people won't hesitate to name a strong army as the foundation of national security. That is only to be expected. Napoleon's dictum that a nation that doesn't wish to feed its own army will have to feed someone else's has been an adage for over two hundred years. Therefore a strong army, well equipped and well trained, is seen as the best guarantee of national security. But a strong army is only the tip of the iceberg where national security is concerned. Most people tend to forget about the massive apparatus the army needs to be able to function – the logistics and technical services, the managers, the medics, let alone the civilian companies that supply the equipment and technology. These services are far more numerous than the army itself – otherwise the army will not be able to function properly. And even these services aren't worth much unless they are backed up by a reliable system of national food security that is not dependent on foreign sources. Bismarck completed Napoleon's truism by adding that a nation that does not want to feed someone else's army must feed its own – emphasis on "must feed". This "must feed" is, I believe, the key element of national security, and it is largely based on stability and competitiveness of national economy.¹

Jared Diamond in his book *Guns, Germs and Steel: The Fates of Human Societies*, cites the following example. "Why is it that you white people developed so much cargo and brought it to New Guinea, but we black people had little cargo of our own?" the author was asked by a civil activist from Papua-New Guinea.² Cargo here means all the inventions, all the industrial and consumer goods brought into the country. It really is a question worth asking – how come that such a small number of countries have achieved such dominance in the world in terms of industrial power as well as military strength? Strange as it seems, the answer to this question can be found in the role of agriculture in society.

At the dawn of mankind, the entire "food policy" consisted of hunting and gathering. At that stage, no ethnic group could achieve dominance, because whatever the racial or ethnic differences, the ability to hunt and gather was the same for everyone, only the scale of it was different.

Basic analysis suggests that the current status quo in the international standing of nations began with the technological transition from hunting and gathering to agriculture and animal husbandry as the main source of food and non-food items. The key engine of development for any technology (especially in the conditions of an "open" unsaturated market) is the continuous growth of profit achieved through constantly falling costs and prices thanks to technological improvements and optimization of the cost structure. The instinctive pursuit of this strategy even at the earliest stages of the development of various ethnic groups led to the appearance of agriculture as a separate and independent industry that ensures survival. That freed up substantial human resources that could then be applied in other areas and industries, including various crafts, metal working, construction, science, infrastructure, the arts, etc. The appearance of the army as an instrument of expansion or, conversely, as an instrument of



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defending against external threats, required – and still requires – a reliable system of food supply.

It is no longer important which ethnic groups had the better geographic conditions to transition from hunter-gathering to domesticating and breeding animals and plants, or to irrigation. What is important is that the nations that treat agriculture as a “high technology” and constantly improve that technology are the ones that continue to dominate on the world arena and to strengthen their leadership.

The role of agricultural technology was perfectly articulated by Henry Ford back at the beginning of the 20th century. Ford said in his book,

“The primary functions are agriculture, manufacture, and transportation. Community life is impossible without them. They hold the world together. Raising things, making things, and earning things are as primitive as human need and yet as modern as anything can be. They are of the essence of physical life. When they cease, community life ceases... The farmer follows luck and his forefathers [nowadays]... That the farmer can stay on shows how wonderfully profitable farming can be... The moment the farmer considers himself as an industrialist, with a horror of waste either in material or in men, then we are going to have farm products so low-priced that all will have enough to eat, and the profits will be so satisfactory that farming will be considered as among the least hazardous and most profitable of occupations....”³

For the purposes of this discussion on the role of agricultural technology in national security, “modern biotechnology” is defined as technologies covered by Paragraph (i) Article 3 of the Protocol on Biosafety to the UN Convention on Biological Diversity:

“Modern biotechnology” means the application of:

- a. In vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and direct injection of nucleic acid into cells or organelles, or
- b. Fusion of cells beyond the taxonomic family, that overcome natural physiological reproductive or recombination barriers and that are not techniques used in traditional breeding and selection.”⁴

That means that “modern agricultural biotechnology” is synonymous with genetic engineering and genetic modification. Although both technologies have been widespread for many years, public attitude to them ranges from wholehearted acceptance to outright rejection. But it is those technologies and their products that have the huge potential to ensure reliability and security of food supply, as well as the health of the agricultural markets.

There are several key factors that are critical for national security in terms of guaranteed supply of food and non-food agricultural items. These include:

- the choice of strategic agricultural crops;
- maintaining large spare capacity, minimizing dependence on climate, pathogens, pests and impact of other industries, and protecting the environment;
- intellectual property rights and geopolitics
- agroterrorism

Choice of strategic crops. This is an essential element of preventing a nation’s dependence on foreign imports. The importance of it was appreciated even by Tsar Nicholas I in the early 19th century. Given the tense international situation at that time, with a large-scale military confrontation between Russia and an international coalition looming on the horizon, the tsar’s government took care to ensure uninterrupted food supply even in the event of a long war compounded by military or economic blockade. As a result we have potato, which was chosen as a strategic crop in the 1830s, and which is still a vitally important crop for the whole country. A transition to using strategic monocultures can hardly be completely smooth and free of any

social risks (an extreme example of such risks is Russia's potato revolts of the 1830s-1840s, an outbreak of peasant protests against the imposition of a "new" and unusual crop which sometimes had to be quelled by the army). But it is such monocultures that constitute the basis of a nation's food security. The criteria for the choice of strategic crops are simple: their productivity must be consistently high; they must be highly economical for the producer; they must survive long storage; and, very importantly, they must be a valuable source of both food and animal fodder. Of course, the traditional local crops must be kept as well, primarily for social reasons.

There are several of these strategic crops in the world, including of course cereals (wheat, rice and corn), soya, rape, sugar beet, and cotton.⁵ These crops are the key targets of genetic engineering and modification.

In 2008, genetically modified crops were grown on 125 million hectares (310 million acres) of farmland in 25 countries, including GM soya (53 percent), corn (30 percent), cotton (12 percent) and rape (5 percent).⁶ In the United States, 85 percent of the soya and more than half of the corn grown is genetically modified. Herbicide-resistant GM wheat has already passed food safety tests and is ready for commercial launch. But it is being deliberately held back because its spread would lead to a rapid and drastic redistribution of the world market for wheat, causing unpredictable social and economic upheavals that could destabilize the situation in the producer counties as well as internationally.

GM crops bring real economic benefits to the farmers and nations that have embraced them. In 2005, the use of just four GM crops – soya, corn, cotton and rape – generated an additional \$5 billion for the farmers growing them. That figure rises to \$5.6 billion if the second crop of soya in Argentina is included in the tally. That is about 3.5–4 percent of the total worth of the world market for these four crops.⁷

Maintaining large space capacity, minimizing dependence on climate, pathogens, pests and impact of other industries, and protecting the environment. Food security does not just mean having plenty of food– or plenty of money to buy it – right here and right now. It means a guaranteed ability of the nation to rely only on its own internal resources for a fairly long period of time. That requires a large spare production capacity. In practice that translates into intensive farming of the existing farm lands while maintaining a large reserve of virgin and fallow lands. This approach has significant environmental benefits as well. GM crops allow intensive farming to reach its full potential. Genetic modification has increased crop yields by an average of 31 percent over the past 10 years.⁸ In Romania, GM soya brought productivity gains of 33 percent while reducing the use of chemical herbicides and pesticides by almost two thirds. In 2007, Romania imposed a ban on growing GM soya (for purely political reasons, after joining the European Union), leading to estimated losses of \$100 million every year.⁹

In Russia, about half the crops is lost in the fields, even before harvesting. Some 20 percent is lost to weeds, 14 percent to pests and 15 percent to pathogens.¹⁰ In 2004, the authorities in the Primorsky krai decided to stop growing corn because of lack of funds and resources needed to fight weeds and insect pests, although the territory's climate is just what is needed for corn. There is no doubt that using GM crops resistant to insect pests, plant diseases and herbicides would radically improve productivity, as well as provide significant cost and labor savings.

Another important consideration is the efficient use of fresh water, a crucial resource that is vital for the environment, the economy and life as a whole. There is an obvious link between water resources and agriculture, but this tandem is also an important factor of national security and stability. Suffice is to recall the recent border confrontation between Tajikistan and Kyrgyzstan over water needed for irrigation, which came close to an armed conflict, or the overthrow of the Malagasy president in March 2003, partly caused by water problems in South Korea, of all places. Due to growing food supply problems in South Korea, which does not have enough water to boost domestic production, the *Daewoo* concern signed an agreement with Madagascar to lease at last half of the country's farm lands to produce grain for South Korea.



Public discontent over the terms of the agreement made the Malagasy president very unpopular, and the new government's first step was to withdraw from the *Daewoo* deal.¹¹

Agriculture is the largest consumer of fresh water, accounting for at least 50 percent of the world's fresh water use. The UN Food and Agriculture Organization predicts that the figure will grow to 60 percent by 2030. Feeding one man for a day requires 5,000 liters of water (for example, a kilo of beef takes 15,000 liters to produce, and one kilo of wheat or corn 2,000 liters). Creating plants that are resistant to drought or salt in the soil is a key area of agricultural biotechnology, and fairly good results have already been achieved. Using biotech crops also helps the spread of no-till farming, which led to savings of \$3.5 billion dollars in the United States in 2002 by reducing the bill for cleaning drainage and irrigation systems, treating drinking water and processing sewage. Agriculture, and plough land in particular, is one of the key sources of man-made carbon dioxide. Using GM crops reduced CO₂ emissions from agriculture by 9 million tons in 2005 by cutting down on the use of machinery to spray chemicals and helping the spread of no-till farming. That is equivalent to removing almost 4 million cars from the roads.¹²

Intellectual property rights and geopolitics. Access to food production technologies is a central element of food security, and security in general. The UN Convention on Biodiversity urges that the countries "...which provide genetic resources are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights."¹³

The issue of intellectual property rights is used by the opponents of agricultural biotechnology, as well as anti-globalists. Their argument is that "security of the farmers and the country as a whole will be compromised by dependence on foreign and multinational corporations, which are the key producers of biotech plants and crop protecting agents". But on the other hand, globalization will provide the farmer with a choice of suppliers. There is only a handful of key GM technology suppliers, but they are all in stiff competition with each other. In addition, countries that have embraced agricultural biotechnology are finding their own ways of ensuring their technological independence. India relies chiefly on joint ventures, which bring production facilities into the country. China announced several years ago that it will treat agricultural biotechnology as a national security priority. It has declared the industry off limits to foreign investors, pouring instead its own formidable resources into the R&D effort. The country has no lack of expertise in the area thanks to the Chinese expats returning back to the homeland.

There are many ways of tackling property rights issues, but it is obvious that a nation can feel completely "secure" if the bulk of the technologies it relies on are indigenous. That gives it a competitive edge and can be used as a potent geopolitical instrument. China is now using agricultural technology to bolster its international clout – it has become a large donor of the UN Food and Agriculture Organization and given \$30 million to a trust fund that supports developing countries in improving their agricultural productivity to achieve the Millennium Development Goals. As part of the agreement, China will provide experts to developing countries for technical assistance and training as well as agricultural inputs and small equipment.¹⁴ Chinese plant biotechnology is also strengthening the country's regional leadership. Pakistan is close to withdrawing from a protocol of intentions with *Monsanto* on buying the multinational's GM cotton technology, because China has offered a similar technology on better financial terms. And it would be quite reasonable to assume that America's geopolitical weight, especially in the developing world, is based to a large extent on its exports of food aid, seeds and agricultural technology, as well as its international role as a leading agricultural producer. There is obvious synergy between geopolitical clout and agricultural exports – the more food and animal fodder a country exports, the stronger its geopolitical influence, which in turn offers better export opportunities, resulting in greater competitiveness and bolstering national security.

Agroterrorism. Many countries view the possibility of a terrorist strike on agricultural targets (agroterrorism) as a serious threat to national security, especially after the events of 9/11.

Agroterrorism is defined as a deliberate introduction of plant and animal diseases to create a climate of fear, damage the economy, and undermine public order and stability.¹⁵

Agriculture can hardly be viewed as a potential primary target for terrorists, because such an attack would not result in direct human casualties or large-scale destruction, therefore lacking the crucial shock factor. But it is still a vulnerable target. That is why plants resistant to potential terrorist weapons such as pathogens or pests can be an effective means of bolstering security. An additional benefit of developing GM organisms is that this process always involves the creation of diagnostic kits and DNA analysis instruments, which can be very important for monitoring and early detection of any problems.

Of course, destroying plants and animals is not the end in itself for agroterrorists. It is just a means of inflicting economic damage to create a climate of social tension and undermine confidence in the government's policies, which constitutes a fundamental threat to the nation's stability and security. Everyone is entitled to an opinion, but opponents of agricultural biotechnology often build their argument on mythical and spurious risks to win the public over to their side. Government decisions designed to protect public health and wellbeing and based on professional advice from the expert community are often subjected to unwarranted criticism. Amplified by the scaremongering media, this "criticism" does an excellent job of achieving the terrorist goal of spreading fear and undermining confidence in the government's decisions. The state has an important role to play here by launching a public education campaign, which would make a fundamental contribution to national security. Many countries are already doing this. In September 2008, the Chinese approved the decision to invest \$3.5 billion in the twin programs of developing GM crops and educating the consumers about the GM products.¹⁶

CONCLUSION

Agricultural biotechnology is hardly the solution for every problem of food security or national security. But it is a powerful instrument, especially when used in combination with the existing traditional technologies.

These technologies appear to be easily available, but their effective use requires many other boxes to be checked. No country can put them to good use without a strong biological research capability, a modern seed breeding program, or a system of protecting intellectual property rights. The importance of public education and the role of the media have already been discussed. In addition, any living organisms – including farm animals and plants – that have been engineered to possess new traits require careful and meticulous risk analysis to see how they will interact with the environment and what effects they will have on the health of the consumers.

The essence of modern approach to biotechnology was accurately reflected in the final communiqué of the G8 summit in Hokkaido in June 2008: the G8 leaders have agreed to "accelerate research and development and increase access to new agricultural technologies to boost agriculture production; we will promote science-based risk analysis, including on the contribution of seed varieties developed through biotechnology."

Notes

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Seth Kinkade

THE IMPORTANCE OF THE RUSSIAN-CHINESE ENERGY DIALOGUE

In a time of collapsing energy demand, it may seem counterintuitive; however, building a strategic partnership among Russia, its neighbors, and the Western energy giants for accelerating the development of Russia's Eastern Siberian and Far East energy reserves is vital to Russia's long-term economic health, as well as the world's economic recovery, and should be a priority for the Kremlin. While Russia has seen its energy production steadily rise for most of this decade, that trend is now reversing itself and will likely lead Russia into a long-term spiral that will crash into an economic depression. Furthermore, as the engine of the world economy sparks back into life, it will need the energy to fuel it, but if energy demand quickly outpaces supply, and energy becomes scarce, a global recovery will sputter to a halt.

Russia holds a unique and critical position in any sustainable global economic recovery as it stores the energy to fuel that recovery right next to the economy that is likely to serve as the factory producing the goods for the rest of the world. While Russia is one of the few places on the Earth where a major energy discovery is not only possible, but likely, the challenges to finding and unlocking that potential are enormous. The lackluster exploration and development of Eastern Siberia and the Far East is a function of this region's nonexistent infrastructure and the difficulty of transporting the treasure trove of energy locked away in the region to a consumer who is willing to pay for that transport. Only a small fraction of Eastern Siberia and the Far East has adequate transport infrastructure, making intelligent and comprehensive exploration of this region formidable. But the real challenge to the development of this vast region is the complex and laborious relationship between Russia and its most natural customer, China.

While Chinese demand for oil imports has been stagnant for the most recent months, this short-term trend is a blip in the overall long-term trend of its burgeoning demand. It would be foolish to forget that China's thirst for oil grew 15 percent in 2003 alone, and as the proliferation of vehicles saturates the vast Chinese market we can expect growth to continue exponentially.¹ Industrialization in China has been uneven, engineered to serve foreign markets. If the economy remains focused outward, it would be reasonable to assume that Chinese energy demand would plateau, as most of the growth in the industrial areas has already been achieved, and development would remain restrained to the urban regions. However, as demand in the global market has slumped, Chinese leadership has acknowledged its dependence on exports and is looking inward for future economic growth.²

The Chinese represent 20 percent of the world's consumers, twice the population of the EU, and if the Chinese government is even marginally successful in realigning their economy, and spawning domestic consumption, demand for world energy will balloon. If supply is not able to accommodate that growth, and energy becomes prohibitively expensive, the world economy will falter, bringing Russia down with it. Russia cannot wait for the price of oil and gas to increase before making the needed investments to develop Eastern Siberia and the Far East. It takes years to bring such resources online and to market; if Russia waits for the price of its



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resources to skyrocket to strengthen its negotiating position, it will miss the opportunity to power a sustained global economic recovery and it will prolong its own recession.

While, exploration has occurred in only seven percent of the gas zones in Eastern Siberia and the Far East, over 198 trillion cubic feet of proven gas reserves have been discovered. This exceeds all the reserves of both the United States and the Gulf of Guinea. Moreover, while only four percent of the oil zones have been searched with over seven billion barrels of proven reserves identified, this region is thought to contain 75 billion barrels of oil. This would rival all the reserves in the U.S. and Caspian combined. The two most promising discoveries for near term production of gas and oil are the Kovykta and Sakhalin fields, which are located in Eastern Siberia and the Far East, respectively. According to Alastair Ferguson of *TNK-BP*, “the resource base in Kovykta (2 trillion cubic meters) alone is more than the whole of China’s gas resource base.” If developed, this would go a long way to satisfying East Asian demand.³

The problem is that these fields are technically very difficult and expensive to develop, and Russian firms, many of which are still using Soviet-era technology, have neither the expertise nor the capital to develop these deposits alone. Foreign companies have been invited to bid for leasing contracts in which they partner with *Rosneft* or another Russian entity, but intense battles of control are common, as illustrated by the *TNK-BP* corporate battle, and the long-term prospective for profit is cloudy. Additionally, the government’s efforts to ensure that foreign companies are not exploiting Russia’s resources have had the effect of discouraging the amount of involvement and investment by global energy companies necessary to develop this energy-rich region.

The development of the Sakhalin reserves serves as a great example of the need for direct foreign investment in this sector as well as the complications that the government’s involvement poses to foreign investors. Standing alone in the very, very far east of Russia, Sakhalin Island hosts six major projects for the development of its vast reserves of oil and natural gas. Domestic firms lack both the capital and expertise to develop these reserves alone. Most of the oil and gas locked away in this region requires highly unique and advanced oil platforms for extraction, which must be designed specifically for these projects.

The ice-encrusted sea means that the platforms must be covered for the rigs to function; however, that complicates crew rescues if something goes wrong on the platform. To compensate for this risk, engineers have to design extraordinarily strong structures such as the *Orlan*, the largest offshore platform in the world. Furthermore, due to the size of the reserves, the extraction equipment has to be uncharacteristically powerful for such a platform. Additionally, to ensure a generous flow of hydrocarbons, companies have installed a vast web of horizontal wells that employ a smart extraction system, which ensures adequate bottomhole pressure and flow rate for successful extraction at every productive layer. These technologies are not only expensive, but proprietary. A Russian firm would have to both raise a war chest of capital, and reinvent these sophisticated tools and practices if it sought to develop these reserves alone.⁴

Russia attracted investment in the Sakhalin reserves in the early 1990s by offering production-sharing agreements, which allowed foreign firms to recoup their investment before sharing revenue with the state. *Exxon Mobil* was the first multinational to negotiate such an agreement with the Russian government at a time with the government’s coffers were empty and the price of oil was low. Paradoxically, after a decade and billions of dollars of investments, *Exxon*’s greatest challenge was the ever-growing price of oil and the subsequent Russian government’s interference in the project.⁵

With all the platforms in place, *Exxon* attempted to extend its production license to include the northern portion of its field. *Rosneft*, *Exxon*’s partner and the largest government-owned oil company, weighed in, explaining that the production target will not be met without the inclusion of this section. The government refused to extend the license even as the rig sat ready to pump the oil. More worrying still, the government is reneging on a key stipulation of the original agreement. According to the agreement, *Exxon* could decide where to sell the oil. This allowed *Exxon* to achieve maximum return on its investment. However, when *Exxon* attempted

to sell its gas to China, the most economically attractive buyer, both *Rosneft* and the government balked and suggested liquefying the gas so that it could be transported on tankers to other markets. The further processing of natural gas into liquid form and shipping the gas to the U.S. or Japan is expensive, and *Exxon* has decided to return all of its natural gas back into the soil until a profitable agreement is found.⁶

THE CHINESE HURDLE

Even if Russia were able to successfully develop its Eastern Siberia and Far East energy deposits, getting that energy to the market efficiently is complicated by more than terrain. Because of the gargantuan amounts of investment, the long-term nature of any such agreement, and the fact that all energy assets in Russia are state-owned, politics play a very decisive role in forming an effective deal that would lead to the development of Eastern Siberia's and the Far East's reserves. Both Russian and Chinese leaders realize the potential of an energy partnership, and have been painstakingly negotiating a long-term energy arrangement for years. A very large component of this partnership was forged in February 2009, when the Deputy Prime Ministers of both Russia and China Igor Sechin and Wang Qishan announced an agreement that would result in the export of 15 million tons of Russian crude oil annually for 20 years in return for \$25 billion of Chinese investment.⁷

The outcome of this deal is still uncertain and a clear picture will be hard to piece together until the details surface in the next few months and *Transneft* and *Rosneft* release their timetable of expenditures; however, this deal is very significant and may be the mainspring to the prolonged flow of investment necessary to unlock the regions resources.

China has longed searched for a stable supply of oil. Their current supply chain for imported oil relies on precarious shipping routes, and their current imports of oil from Russia are dependent on relatively expensive railroad transportation over Mongolia.⁸ Paradoxically, even as overall oil imports to China increased by 11 percent to 90.53 million tons in 2008,⁹ China reduced the amount of oil it was importing from Russia in 2008 to 11.64 million tons.¹⁰ This represents a 20 percent decline in Russian imports from 2007, at a time when *TNK-BP* finally started commercial production for the large East-Siberian Verkhnechonsk oil field. The lack of commitment to build an efficient network to carry oil from Russian to China is responsible for the decline of oil exports. Finance for both the development, transport, and refinery of oil in the East Siberian reserves has been hard to obtain as all three components must be in place for any one project to pay off. This requires tremendous upstream, midstream, and downstream investments, as well as trust that all players will commit wholeheartedly to the success of the project. A firm, legal commitment by both the Russians and Chinese for developing the East Siberian oil fields, building the network of pipelines, and constructing the refineries and distribution networks should propel the overall development process of this region.

While oil is very important to the comprehensive development of Eastern Siberia's and the Far East's reserves, the potential growth in trade for natural gas is greater than that of oil. Russia has signaled that it would be willing to sell as much as 40 billion cubic meters of natural gas to China annually through the East-Siberian Pacific Pipeline.¹¹ This is the equivalent of 36 million tons of oil, most of which would originate from Kovykta and Sakhalin.¹²

Natural gas remains a small component of China's primary energy consumption; accounting for only three percent in 2007 or a little over 67 billion cubic meters. This level of natural gas consumption pales in comparison to the market saturation of natural gas in the other large economies (12.4 percent for Japan, 23.3 percent for North America, and 32.1 percent for the European Union).¹³ To date, China has lacked the infrastructure and national organization necessary for underpinning a robust domestic network for using natural gas to meet China's energy needs. However, China has been steadily adding natural gas pipelines and support facilities that would permit an increase of natural gas consumption at a 29 percent annual rate between 2007 and 2010. This infrastructure would allow China to plug into Russia's vast supply of natural gas. As natural gas is most efficiently carried through pipelines over land, proximity is very



important, giving Russia leverage over current and potential suppliers of liquefied natural gas to China. By 2030, if natural gas makes up only 10 percent of China's primary energy mix, Liu Xiaoli, Deputy Director of the Energy Economy and Development Strategy Research Center under Energy Research Institute of the National Development and Reform Commission (NDRC), suggests that China will demand 350 billion cubic meters of gas annually.¹⁴ This projection is well over the 200 billion cubic meter mark that *TNK-BP* analysts have set for demand necessary to justify Russian pipeline exports.¹⁵

China's natural gas market is as or more important to Russia than its oil market. Oil is a very fungible energy source, and therefore the prices are generally global. Japan, South Korea, Germany, and China pay the same price for Ural crude; however, natural gas is much more difficult to transport and prices are set regionally. If Russia wants to sell natural gas from Sakhalin or Kovykta to the U.S. or Japan, it has to liquefy it first, which adds costs and acts like a bottleneck in the transportation chain. The remote and extreme location of the East Siberian and Far East gas reserves adds near prohibitive costs to the development of these assets. Any additional costs or complications diminishes the return on investment in East Siberian and Far East energy projects, dramatically reducing the potential to develop this region by keeping private capital weary of investing in the development of these reserves. By not opening the Chinese market, only the gas reserves that can be cheaply recovered will attract investment, slowing the overall development of this region as investment will trickle in, rather than pour in, to East Siberia and the Far East.

Unfortunately, however mutually beneficial a gas partnership between Russia and China would be in the long term, there are significant barriers to developing a working partnership between the two nations now. Natural gas competes poorly against coal and syngas in China to meet residential, industrial, and utility needs, as it sells for twice the price of its competitors.¹⁶ Further delaying any deal on supplying Russian gas to the Chinese market is the fact that China is currently able to meet its demand of natural gas with domestic production, and is building pipelines from Turkmenistan and Kazakhstan that would supply gas to China for less than \$200 per million cubic meters to satisfy any near term growth in consumption.¹⁷ The inability of Russian gas to compete on the Chinese energy market today will subdue the development of East Siberia and the Far East in the medium term, which could have serious implications to both the Russian and world economy if Chinese demand rises quicker than expected.

Currently, the Russian energy export structure is organized to satisfy the European markets from Western Siberian reserves. The proximity to market, volume of resources, ease of development, and available infrastructure have kept Russian energy exports flowing westward. Furthermore, the hope for technological advances to prolong the productivity of those reserves has attracted much of the recent investment in Russia's oil resources. With the application of modern extraction techniques, *TNK-BP* has been able to increase productivity of its wells by as much as 30 percent. Tatiana Mitrova, Director of the Center of the Study of International Energy Markets, suggests that oil companies can *theoretically* recover just as much oil from the Western Siberian reserves as has been pump thus far. Unfortunately, further raising production from mature reserves is exorbitantly expensive and time consuming, and would consume significant sums of capital and a require long-term investment structure. Moreover, the major analytical organizations, such as the *IHS Energy* group, estimate that the reality is that most of the large oil and gas fields of Western Siberia are largely depleted of recoverable assets.¹⁸ Even before the fourth quarter of 2008, when most of the world fell into recession, Russian oil exports declined over five percent in year -on-year estimates.¹⁹

Unfortunately for Russia, European oil demand is expected to stagnate over the next 20 years, growing at only three percent from 2005 to 2025.²⁰ The simultaneous trend of weak demand and falling production will weaken Russia's export structure and potentially undermine its market, underlying the importance of the Chinese market.

If Russia does not develop its Eastern Siberia and Far East energy resources and restructure its distribution network to satisfy Chinese demand, it could depress more than just Russia's energy exports.

China serves an important role in the world economy and has become the factory floor for the world. As the world economy regains its footing, demand for Chinese goods is likely to be robust. The failure of China's factories to secure the energy to power those factories could slow or even stall an economic recovery, causing a repeat of today's financial mess. Restructuring Russia's energy framework to serve the emerging markets in East Asia, especially China, can ensure that Russia is capable of capitalizing on the world economic growth, as the world emerges from the current global crisis.

Notes

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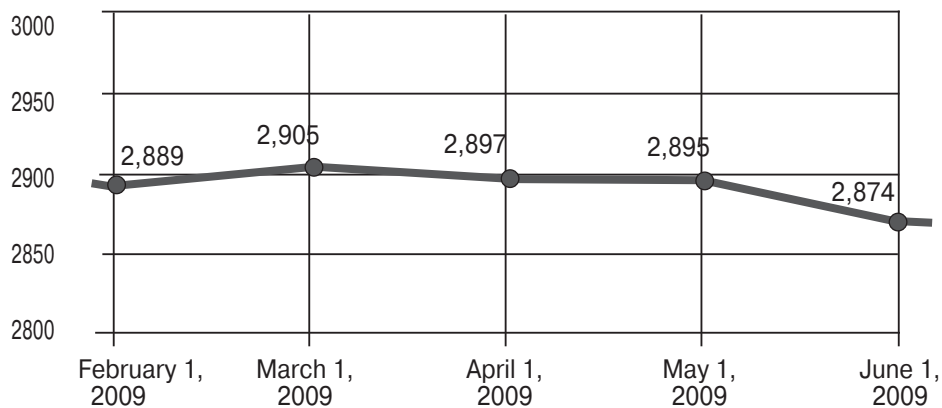
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Washington Office
1747 Pennsylvania Avenue NW
Seventh Floor
Washington, DC 20006
U.S.A.
+1 202 296 4810 t
+1 202 296 4811 f

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Figure 1. The *iSi* International Security Index (February – June 2009)



➡ **Albert Zulkharneev. INTERNATIONAL SECURITY INDEX – SPRING IS BACK.**

➡ **Yury Fedorov. A VIEW BY A RUSSIAN LIBERAL: “THINKING ABOUT THE UNTHINKABLE, OR WHY HERMAN KAHN WAS RIGHT.”**

➡ **Dmitry Evstafiev. A VIEW BY A RUSSIAN CONSERVATIVE: “WAITING FOR HOPE.”**

➡ **Konstantin Eggert, Andrey Kortunov, Abdulaziz Sager, Yevgeny Satanovsky, and William Potter. COMMENTS BY MEMBERS OF THE INTERNATIONAL EXPERT GROUP**



After sharp downward trend in summer/fall 2008, the index has moved into the stable zone of 2,900 in the first months of 2009. This indicator is 20–30 points lower than in spring 2008 and this could be accounted for by the economic crisis. Meanwhile, the level of military, political and terrorist threats in the world has returned to the same figure as a year ago. On February 1 it was 2,889; on March 1 – 2,905; on April 1 – 2,897; on May 1 – 2,895; on **June 1 –**

In spring 2009 the impact of strategic and nuclear security increased. Intensification of the U.S.-Russian dialogue and the emergence of the nuclear-weapon-free zone in Central Asia had a positive effect. However, it was deteriorated by the increased tensions around North Korea and aggravating situation in nuclear-weapon Pakistan.

Another reason for the decrease in *iSi* is the deteriorating situation in Sudan, Middle East, Pakistan and Afghanistan. The issues in this region are interconnected and require complex solutions.

And here allies, partners and even adversaries of the United States are waiting for the American decisions. Despite the economic crisis and weakening of the only superpower, the world still expect from this country and its new administration some fresh initiatives and solutions related to various issues – from strategic arms to global economic crisis, Afghanistan, Iran, or Europe. The U.S. proposals are cautiously supported, are rejected with fury, or are creatively incorporated into one's own political positions. Believe it or not, but even the declaration of the Obama plans has mostly a positive impact on the index.

- The **world economy** lives in the conditions of crisis. After repelling the first blows of it, the governments and corporations continue to correct their development plans. Most of the participants of the G-20 summit in April did not comply with their own commitments undertaken in November 2008 in Washington (e.g. on protectionism). The parties have different positions on the need and ways of reforming the global financial system. France and Germany, as well as Russia, China and other nations stand for stricter regulation of the financial market, while the United States and the U.K. are against such approach.

In February-March the differences between Western and Eastern members of the EU grew. They concern the terms of financial assistance to individual members and the cuts in expenditure. The governments of Hungary, Latvia and the Czech Republic had to resign.

There is an ongoing debate on the tax safe-havens – Switzerland, Lichtenstein, Monaco, Hong Kong (China) and other exotic zones are under pressure.

Nonetheless, the G-20 summit in London in April managed to take some common decisions. In the next 18 months the governments will spend \$5 trillion on solving economic problems, including the increase in the IMF resources; the money will be allocated to the most suffering nations; the struggle against off-shores will continue; the control of financial markets will be tightened, etc.

- **Strategic stability and nuclear security.** On March 21, 2009, the Treaty on NWFZ in Central Asia entered into force. The territory, surrounded by nuclear-weapon Russia and China, by *de facto* nuclear-weapon India and Pakistan, by such difficult neighbors as North Korea and Iran, will have a ban on production, acquisition and deployment of nuclear weapons, their components and other nuclear explosive devices.

Another positive factor is the intensification of the U.S.-Russian negotiations – from the Lavrov-Clinton meeting in Geneva in March to the Obama-Medvedev summit in April in London. Two statements were issued. The first one in a shorter form revives the agenda mentioned a year ago in the Putin-Bush *Strategic Framework Declaration*, which did not help to save the relations from decline. The agenda, as usual, will be based on strategic stability and security matters. The second statement urges the parties to agree on reduction and limitation of strategic offensive arms before the expiration of the START I Treaty in December 2009.

As far as missile defense is concerned, like year ago, the parties stated their differences and discussed possible interaction in this area. However, Washington now slows down the implementation of the project. On March 17 the Czech Government refused to ratify the agreement on deployment of the U.S. radar signed in July 2008. Barack Obama connects the issue of missile defense in Eastern Europe with the solution of the Iranian issue and Moscow's more active pressure on Iran.

- ❑ **Iran** demonstrates that its position is unchanging and proceeds with the testing of new missiles. The United States has changed the tone and is ready for a direct dialogue with Tehran on nuclear matters and on conflict settlement in the Middle East and in Afghanistan. Barack Obama demonstrated his willingness to apply such new approaches in his TV appeal to the Iranians on the eve of Nowruz. On April 8 at the meeting of the *Six*, Tehran was offered direct dialogue with Washington once again. At the same time, while Washington expects positive response from Iran, it does not hesitate to extend sanctions against the regime for another year.

Tehran's relations with some Arab states have also deteriorated. In late February a famous Iranian politician – Ali Akbar Nategh Nouri – claimed for a territory of Bahrain, but soon this position was denounced by the Iranian president. This could be the end of the scandal, but Morocco used it as a pretext to disrupt diplomatic relations with Tehran. This is another proof that Arab-Iranian relations are not smooth.

- ❑ Politico-military tensions around **North Korea** were growing. On March 9–20 the U.S.-South Korean exercises were conducted. In response on March 9 Pyongyang closed the border and communication channels with Seoul and put the army on alert. On March 21 *the hot line* was restored and the border was opened once again.

On March 12 Pyongyang informed the international organization on the launch of the rocket with the satellite in early April. Japan, the United States and South Korea assume that the D.P.R.K tested an ICBM in fact. Despite the international pressure, on April 5 the rocket was launched and this proved the missile capabilities of North Korea. On April 13 the UN Security Council adopted the statement condemning the D.P.R.K, as it violated Resolution 1718 banning any activities with ballistic missiles. Despite the intentions of the parties to continue the work within the framework of the *Six*, Pyongyang declared on April 14 that it would withdraw from the talks on denuclearization of the Korean peninsula and resumed activities at the nuclear complex in Yongbyong. Besides, the D.P.R.K expelled the IAEA inspectors on April 16.

- ❑ **The Middle East.** After the end of the Israeli operation in Gaza the parties got back to the attempts to seek the peaceful solution to the existing problems.

Israel and *Hamas* try to come to a truce, despite the ongoing missile attacks against the Israeli territory and reciprocal bombings of the militants and their infrastructure.

After the February elections in **Israel**, the new government was formed. It is headed by Benjamin Netanyahu, whose position on negotiations with the Palestinians is quite tough. Netanyahu is working out his strategy with respect to the Arab-Israeli conflict settlement. At the same time, Foreign Minister Avigdor Lieberman argues that the Annapolis peace process may be abandoned.



The intra-Palestinian and inter-Arab dialogues continue. With the mediation of Egypt the representatives of *Fatah* and *Hamas* look for the conflict resolution between themselves. In March the leaders of Syria, Saudi Arabia, Egypt and Kuwait met in Er Riyadh to overcome the differences and elaborate common approach towards regional issues.

Afghanistan and Pakistan – the situation in these countries remain one of the key factors for the decrease in *iSi*. The positions of the *Taliban* movement in Afghanistan are strengthening. Barack Obama set forth the new complex solution implying the socio-economic reforms, establishment of the strong Afghani Armed Forces and police. The strategy connects the efforts in Afghanistan and the policy in Pakistan, the major aim of which is to defeat *Al Qaeda*.

Meanwhile, the United States faces some difficulties in the region. In February Kyrgyzstan informed Washington that the *Manas* base would be closed and withdrawn within the next six months. The bargaining is under way, but this undermined the U.S. transit capacity.

Pakistan is at the edge of economic default. It is shaking with political confrontation and large terrorist attacks. In spring NATO facilities and local police fell the victims of the militants and terrorists; the Sri Lanka sports team was attacked; explosions with numerous casualties took place in Rawalpindi, Islamabad, and Chakwal. Political struggle does not stop – March was marked with the clashes between the rally participants (illegal manifestation of Nawaz Sharif supporters) and police. The restoration in power of Chief Justice Iftikhar Chaudhry, whose resignation triggered the 2007 political crisis, did not mitigate the tensions.

- ❑ **Africa.** The situation in **Sudan** remains complicated – it was exacerbated by the warrant for arrest issued by the International Criminal Court against President al-Bashir. In response Khartoum suspended the activities of international humanitarian organizations in Darfur. Arab states, the Organization of Islamic Conference, China, and Russia maintained that the ICC decision would deteriorate the situation.

President Joan Bernardo Vieira was killed in **Guinea Bissau**. **Madagascar** survived the coup in March, but the confrontation between the legitimate president (Marc Ravalomanana) and the opposition leader (Andry Rajoelina) continues – the country faces one mass protest after another. The military are highly involved in political struggle. The African Union suspended the membership of Madagascar in this organization due to the unconstitutional change of power in the country.

- ❑ **Europe.** April marked the 60th anniversary of NATO. The summit of the Alliance demonstrated the ability of this organization to keep up with the current situation and to seek new security solutions for its members. Despite the protests of Turkey, NATO elected new Secretary General Anders Rasmussen, ex-prime minister of Denmark. His first visit was to Istanbul to attend the international forum of the Alliance of Civilizations. Relations with Russia are being slowly resumed, despite the spy scandals and fuss around the NATO exercises in Georgia. France is back to the NATO military structures. Albania and Croatia are now full members of the Alliance. NATO is developing a new strategy that would take into account the non-traditional security challenges.

For the first time in the last few years the large terrorist attack occurred in Northern Ireland against the British military base. In April Moldova was destabilized with the manifestations of the anti-Communist opposition, which transformed into pogroms of the government buildings. Chisinau blamed Romania for the riots and introduced the visa regime with this country. The political and economic situation in Ukraine remains unstable either.

Albert Zulkharneev



THINKING ABOUT THE UNTHINKABLE, OR WHY HERMAN KAHN WAS RIGHT

The review of November 2008 – January 2009 reached the conclusion that the transformation of the international system, which had been looming on the horizon for several years, has finally begun to come about.¹ Events of the first quarter of 2009 have borne this out. Leading Western powers are coming to the realization that the key economic and political problems require new approaches. NATO Secretary General Jaap de Hoop Scheffer said on March 11, 2009, “What we need are more visionary policies within our institutions and greater coherency between those institutions. I believe that for all of us, there is now a major opportunity to realign our approach to security to the new realities.”² NATO’s anniversary summit at the beginning of April 2009 gave the go-ahead for the development of a new strategy for the alliance. America’s idea of pushing the *reset* button in relations with Russia (and not just Russia) is an important element of Washington’s new foreign policy, but there are other components to it as well.

Part of the reason for all this is the global economic crisis. The *world after crisis* will be very different from the world as we know it now. And although the shape of this new world is still hard to discern and a subject of much debate, wise politicians are already assessing the various turns world affairs might take, and pondering the ways of adapting strategic doctrines to new reality. That, however, is a task for a fairly distant future. Far more pressing is the fact that the conventional approaches developed over the past decade and a half for dealing with the key problems in international affairs, such as Iraq, Afghanistan, Russia and the Iranian nuclear issue, are failing to deliver. This has forced the Western powers to start reviewing and reassessing their ideas and strategies. The resulting debate will eventually lead to the emergence of a fairly clear set of policies the Western powers will pursue on the international arena. This consensus among the Western elite will probably come in the form of shared views rather than some formal doctrines.

UNITED STATES: NEW FOREIGN POLICY IDEAS

The emerging shifts in U.S. foreign policy are the key driver of change on the international arena. The Obama administration has inherited a very difficult foreign policy situation from its predecessor. The United States is mired in nearly hopeless wars in Iraq and Afghanistan. Efforts to stop the Iranian nuclear program are failing. The political instability in Pakistan is threatening to degenerate into total chaos and a collapse of the state, which could result in Pakistani nuclear weapons falling into the wrong hands. America’s European allies, primarily France and Germany, saw the previous American administration’s foreign policy as the main reason for the global economic and political malaise. Russia’s invasion of Georgia and Moscow’s constant saber-rattling have added to the already long list of headaches.

Given all this, America’s decisionmakers have probably reached the conclusion that the existing policies need to be revised. America’s military, political and economic effort is now focused on Iraq and Afghanistan. There is no solution in sight for these problems, not in the short term anyway. But the geopolitical significance of the two countries is not as large as it seems. They only serve to draw America’s and NATO’s resources from the really important issues such as the Iranian nuclear threat, Europe’s energy security, and mass migration from poor countries to the United States and Europe, which could lead to ethnic tensions, etc.

As of late March 2009, Washington has not yet formulated a detailed foreign policy program. But some of its key elements are fairly clear. Vice President Joe Biden outlined them in his speech at the Munich security conference on February 7, 2009. The new administration in the White House believes that the key challenges and threats to national and global security lie in the spread of weapons of mass destruction and dangerous diseases; a growing gap between rich and poor; ethnic animosities and *failed states*; a rapidly warming planet and uncertain sup-



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plies of energy, food, water; and “the challenge to freedom and security from radical fundamentalism.” In order to tackle these threats and challenges, Washington intends to cut extreme poverty in half by 2015; eliminate the *global education deficit*, cancel the debt of the world’s poorest countries; launch a new *green revolution*; and “advance democracy not through its imposition by force from the outside, but by working with moderates in government and civil society to build the institutions that will protect freedom.”

All these bullet points are not very original and, on the whole, not very interesting. They repeat almost word for word the ideas that have long been circulating in the Western liberal circles. The ideas themselves are not in question. All these *new threats and challenges*, as they’ve come to be termed, are a real danger. The question is, how exactly the United States, alone or in partnership with its allies, is going to close the gap between the world’s rich and poor, eliminate extreme poverty or fight global warming, if it really exists.

More interesting are the vice president’s ideas about America’s relations with its allies. The current administration is going to listen carefully and work together with them. But America’s partners should have no illusions that the United States alone will shoulder the whole burden of resolving the shared problems and neutralizing the shared threats.

“The threats we face have no respect for borders. No single country, no matter how powerful, can best meet them alone. We believe that international alliances and organizations do not diminish America’s power – they help us advance our collective security, economic interests and values. So we will engage. We will listen. We will consult. America needs the world, just as I believe the world needs America. But we say to our friends that the alliances, treaties and international organizations we build must be credible and they must be effective. That requires a common commitment not only to live by the rules, but to enforce them. ... America will do more, but America will ask for more from our partners.”³

And, finally, the most interesting changes in America’s new foreign policy include its willingness to hold direct talks with Iran, the order by President Obama to hold a strategic review of America’s policy in Afghanistan and Pakistan, “to make sure that our goals are clear and achievable,”⁴ and the idea of pressing the *reset* button in relations with Russia. The question is, what the current American policymakers mean by all that, given the reputation for tough pragmatic realism they have earned themselves over their many years in politics.

AMERICAN CHALLENGE AND IRANIAN ANSWER

It was during the election campaign that Barack Obama first said he was willing to hold direct dialogue with the Iranian leaders. This statement was severely criticized by those who believe, rightly or wrongly, that talking with Tehran is, a) pointless, and b) immoral. Nevertheless, right after his inauguration, the new American president repeated his already famous words: “If countries like Iran are willing to unclench their fist, they will find an extended hand from us.”⁵ Secretary of State Hillary Clinton has clearly indicated that Iran will be offered a real opportunity to normalize its relations with the international community. In March 2009, Barack Obama congratulated Iran on the Persian New Year and said he was ready to use diplomatic means to settle the existing serious differences between the United States and Iran. That was a direct invitation to dialogue without any preconditions, aimed at reaching a mutually acceptable solution.

That attempt was entirely logical. If Tehran were to be persuaded to abandon its nuclear weapons program and stop supporting Islamic terrorist organizations, primarily *Hamas* and *Hezbollah*, the strategic situation in the Middle East would change very radically. Iran could expect generous economic aid, expand and modernize its oil and gas industry and, most importantly, turn itself from a source of tension into a factor of stability in the region. The question is whether Tehran is ready to strike a deal with the United States.

The Iranian answer was not long in coming. In January 2009, Mahmoud Ahmadinejad said that the United States must “apologize for all its crimes against the Iranian nation.” The list of the



Abdulaziz Sager (Saudi Arabia), Chairman of the Gulf Research Center – by e-mail from **Dubai**: "The growing concern about the Iranian interference in domestic conflicts is exacerbated by the Tehran statements that call into question the legitimacy of the Gulf monarchies and contain territorial claims to the neighboring states – this undermines regional stability and security. Iran demonstrates no willingness to seek compromises on the nuclear program and this is a tough position of its current leadership. Another negative factor is instability in Pakistan, Afghanistan, and Yemen, which paves the way towards increasing extremism. New U.S. administration, at least, put an end to the destructive policy of George W. Bush. At the same time, there are fewer actions than declarations. The pressure of the U.S. administration on the new Benjamin Netanyahu government will demonstrate the U.S. course in the Middle East."

crimes included America's efforts to stop the Iranian nuclear program. The Iranian leader also demanded that the United States end its military presence in various parts of the globe, which he described as interference in the internal affairs of other countries. In March 2009, Ayatollah Khamenei, the Iranian supreme leader and the true ruler of Iran, said he saw no real change in American policy towards his country.⁶ Khamenei's ally Hossein Shariatmadari, the editor-in-chief of the Iranian newspaper *Kayhan*, formulated the position of the Iranian ruling elite in the following way: "In order to establish any U.S.-Iran ties, one of them must change its principles and its way of thinking; Iran will never do this. Hence, it is America that must change, and must view its international relations in a new light."⁷

In other words, Iran responded to the American offer by setting out its preconditions for talks, including the demand for the United States to stop working against the Iranian efforts to acquire nuclear weapons. That makes the talks themselves quite pointless. Essentially, the Iranians responded to the proposal of

"*unclenching their fists*" with an unambiguous, high-handed and insulting rebuff. That was only to be expected from the Iranian theocracy, and not just because of its manifest megalomania. Tehran takes any attempts to defuse the confrontation, find a compromise and achieve a political solution as a sign of weakness and an invitation to new bellicose gestures. Such behavior is typical for ideologically driven authoritarian regimes.

The only area where the Iranian interests coincide with the interests of the civilized countries is preventing the victory of the *Taliban* in Afghanistan. In the Islamic world, the fanatical Sunni Islamists of the *Taliban* are the natural competitors of the equally fanatical Shia leadership of Iran. That is why the Iranian leaders have no objections against the American military effort to contain the *Taliban*. And that is probably why Tehran agreed to take part in the UN conference on Afghanistan held in early April 2009 in the Netherlands.

Of course, Tehran's response to the American proposal was not limited to arrogant declarations. Far more dangerous is Iran's progress in creating longer-range ballistic missiles, a progress that only recently seemed almost entirely unlikely. According to Russian experts, by the end of 2008 the Iranian rocket engineers managed to increase the range of the Shahab 3 missile to 2,000 km, and its payload to 1.3 tons. It is believed that in order to deliver a primitive nuclear warhead Iran could one day acquire, a missile should be able to carry a payload of 400–900 kg.⁸ On February 2, 2009, the Iranians launched Safir 2, a two-stage space rocket which put a satellite into orbit. Iran's ability to build two-stage rockets is fundamentally important because single-stage rockets can never go beyond a certain fairly short range. A transition to two-stage configuration increases the combat range of the rocket to several thousand kilometers. That means that a substantial part of the European continent, including almost the entire south of Russia, is within range of the Iranian missiles, which could soon be equipped with nuclear warheads.

Washington's offer of unconditional talks with Iran, albeit unexpected, was hardly a sign of political naivety. In a way, it was a challenge to the Iranian regime, and a test of its sincerity. If



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Iran's reason for trying to acquire nuclear weapons is just to protect itself from an attack by the United States (no other country could pose a real threat to Iran in the foreseeable future) then the American offer was a chance for Tehran to remove this threat by political means. At the very least, the Iranian leadership could try to obtain a more or less reliable security guarantee from the United States. But it seems that normalizing relations with the leading Western nations is not part of the Iranian establishment's plans. That establishment is driven by its fanatical aspiration to spread the Iranian order around the globe. Witness the recent statement by one of the top Iranian religious leaders, Ayatollah Ahmad Khatami: "Globalization will happen only after the coming of the Mahdi. ... There will not be a house left in the world to which Islam does not come."⁹

But if Iran refuses to *unclench its fist* and rejects America's extended hand, the United States will have the full moral and political right to take tough measures. Whether those measures will come in the shape of tougher sanctions, including a full-blown economic blockade, or even military action is hard to predict right now. But what is clear is that the more progress the ruling Iranian regime makes towards acquiring nuclear weapons, the more likely the use of military force against Iran becomes. Clearly, Washington is doing everything it can to avoid having to launch military action against Iran. The military, political and economic consequences of such action would be unpredictable. What is quite predictable though is the consequences of Iran acquiring nuclear weapons: Tehran's expansionism, fuelled by Islamic fundamentalism and dreams of restoring the Persian empire will be backed by a nuclear arsenal. Containing a nuclear Iran would be much more difficult, or even impossible. As a result, the United States and Israel, for whom the Iranian nuclear weapons would be an existential threat, could simply be left with no choice but to take military action.

AFGHANISTAN: MISSION IMPOSSIBLE

Afghanistan is one of the key foreign policy challenges to the United States and NATO, along with Iran. After almost eight years of combat operations in that country, the objectives set out by the members of the international coalition fighting in Afghanistan have not been achieved. The secret bases of *Al Qaeda* on both sides of the border between Afghanistan and Pakistani are still operational. The *Taliban* has reared its head again, albeit in a slightly different form. Armed *Taliban* groups have lately been active in 17 out of the 34 provinces of the country, mainly in the south. Another piece of bad news is the appearance of *Taliban* fighters in Kabul itself. Although the capital is heavily guarded by Afghan security forces and foreign troops, several terrorist acts have been committed there in the past few months. The country is still suffering from extreme poverty, despite all the foreign aid being sent there. Hamid Karzai's administration is deeply corrupt and ineffectual, causing growing popular discontent. Russian and foreign analysts say a certain military and political balance has settled in the country, whereby several big cities and key roads are controlled by the central government and international coalition troops, whereas in rural regions the real power is in the hands of tribal leaders, warlords and gangs. In the south of Afghanistan, American and British troops regularly clash with *Taliban* fighters and drug gangs. The northern regions, populated mainly by the Uzbeks and Tajiks, are ruled by the local chiefs, many of whom have shady reputations – the most notorious of them being Uzbek general Abdul Rashid Dostum.

Such a state of affairs could potentially carry on indefinitely, which of course is not in the interests of the United States or NATO – hence the interest in new U.S. strategy on Afghanistan announced in late March 2009 by Barack Obama. America's objective is "to destroy *Al Qaeda* in Afghanistan and Pakistan", the president said. To this end, an additional 17,000 U.S. troops will be sent to Afghanistan, including 13,000 combat troops to fight mobile guerilla groups. Among them is the *Striker* brigade of the 2nd Infantry Division of the U.S. Army. In addition to that, Washington plans to increase the size of the Afghan armed forces to 134,000 by 2011, and the size of the local police force to 82,000 people. Several thousand civilian specialists will be dispatched to Afghanistan to teach the latest agricultural techniques to the locals and improve healthcare and education. The political strategy includes involving the so-called moderate *Taliban* in dialogue with the government and drawing them into in a wider political coali-

tion. According to U.S. intelligence, only about 5 percent of the *Taliban* are staunch supporters of *Al Qaeda* – the rest have been drawn into the war against the government and foreign troops by the government’s own mistakes and corruption.¹⁰ Another key element of Washington’s new strategy is involving neighboring countries in Afghan settlement. President Obama has proposed creating a contact group on Afghanistan that would include China, Iran, Russia, and India, as well of the countries of Central Asia and the Persian Gulf.

At first glance, this strategy looks promising. But a closer examination reveals that it is in fact very similar to the Soviet strategy in Afghanistan in the 1980. The Soviet Union also sent civilian specialists and advisers to the country in addition to soldiers, and tried to build relatively wide political coalitions there. The outcome of that strategy is well known. Twenty years on, the central government in Afghanistan is less than enthused about entering a coalition with the *moderate* opposition, because that would deprive it of its monopoly not just on power (which is in any case limited to several big cities) but, most importantly, on the distribution of foreign aid.

Sending more U.S. troops will hardly bring about any radical change in the military and political situation in Afghanistan. The experience of counterinsurgency in the 20th century suggests that there are only two ways of winning a war against the insurgents who enjoy the support of the local population. One is brutal reprisals against the locals, used by the Soviet Union to crush the nationalist movements in the Baltic republics and Ukraine after World War II. The other way involves shifting the burden of fighting the insurgency on authoritarian local rulers, by making allies of some of the local warlords to crush the rest with maximum brutality. That is how Russia managed to stabilize the situation in Chechnya. But in Afghanistan, there is no leader at this moment capable of consolidating a substantial part of the local elite. And American experts believe that in order to be able to take over the security responsibility from coalition forces, the Afghan army must grow to at least 240,000 people, triple its current size. That will not happen until 2016 at the earliest.¹¹

As for the international contact group on Afghanistan, creating such a group and securing wide international participation in it is of course entirely possible. But there is no reason to expect any meaningful efforts from it. Russia, Iran and China would prefer to leave the military and economic burden of fighting the *Taliban* and *Al Qaeda* with the United States. They also realize that the deeper Washington is mired in Afghanistan, the less energy and resources it will have to work against China’s plans in the Far East, Russia’s meddling in the former Soviet Union and Eastern Europe, and Iran’s nuclear ambitions.

There are three main avenues for solving the Afghan problem. The first is to support the emergence of a strong central government in Afghanistan, rooted of course in Islam and local traditions but capable, with some help from the outside, of eliminating Islamist terrorist groups and finding some way of coexisting with the tribal and local leaders. That is in fact the avenue now being pursued by the United States and its allies. But the chances of success here are close to zero. The second avenue is increasing foreign military presence to the point where the coalition could eventually destroy the *Taliban* and *Al Qaeda* armed groups and effectively control the entire territory of Afghanistan, as well as the tribal areas of Pakistan. But that would require deploying the entire U.S. armed forces as well as all the NATO armies in Afghanistan, which is out of the question. And finally, the third avenue is pulling Western troops out Afghanistan without achieving a military victory over the *Taliban*.

Right now, this third avenue seems unthinkable. It is thought that such a turn of events would represent a strategic defeat for the United States and especially for NATO, leading to a serious increase of the terror threat. But there is another way of looking at this. First of all, it is important to realize that the military presence of the United States and its allies on the territory of Afghanistan has not led to the elimination of main *Al Qaeda* bases there or in the tribal areas of Pakistan – and there is no guarantee that this objective will be achieved any time soon. So the question is, why carry on with a policy that is failing to deliver? Instead of trying to stabilize the situation in Afghanistan, would it not be better to concentrate on the main task of preventing Islamic militants from spreading into Europe, the United States and the Persian Gulf? To that



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end, strong support should be given to three Central Asian states – Tajikistan, Uzbekistan and Turkmenistan. The governments of these countries, especially the first two, are extremely worried by the threat of terrorist groups from Afghanistan appearing on their territory. Therefore these governments will (a) fight those terrorist groups as hard as they can, and (b) need cooperation with the United States even more than they do now. The main effort, however, should be focused on stabilizing the situation in Pakistan and turning that country into a reliable buffer sealing off the territories controlled by Islamic terrorists from the south and the southeast.

The military and financial resources required for these tasks are far smaller than those needed to continue the war in Afghanistan. And the pullout of Western troops from Afghanistan – indeed, even the very possibility of such a pullout – would prod Iran, China and possibly other countries as well to focus more of their effort on Afghanistan using their clients and agents there. Moscow will have to focus on the problems of Central Asia, which would distract its attention from Ukraine, Georgia, and Central and Eastern Europe. It is quite possible that after an initial period of chaos and a return of the *Taliban* to power, leaders and forces capable of restoring basic order will emerge from among the Afghan elite. Meanwhile, the United States and NATO will be able to focus their efforts on key security problems, especially in the regions directly adjacent to NATO's traditional area of responsibility.

THAT FASHIONABLE WORD, RESET

After Joe Biden's Munich speech, the word *reset* became part of the political vocabulary. Senior politicians and diplomats in the United States are falling over themselves trying to pronounce it in broken Russian. American experts are often seen in Moscow these days, trying to establish informal contacts with the Russian ruling elite. Meanwhile, Russian diplomats are condescendingly explaining that smart people in Washington have finally realized that Russia has *risen from its knees*, and that America will now take Russia's interests into account. There are other ways of looking at this, of course. This is what Andrey Illarionov, a former Russian presidential adviser on economic policy, had to say on the matter:

"Such behavior by the United States cannot even be described as a retreat. It is not even a *policy of appeasement*, which we are all sadly familiar with after the second Munich agreement of 1938. This is capitulation.... This is a crystal-clear signal to all the democratic and liberal forces in Russia and other former Soviet republics that the United States is withdrawing even its moral support for them in their struggle against the forces of the past, and taking the side of their mortal enemies. This is a clear invitation for the KGB regime in Russia to meddle some more in the former Soviet space and beyond."¹²


Such assessments do not, however, accurately reflect the essence of the new U.S. administration's approach to dealing with Russia. Washington has offered Moscow a deal: in return for real Russian help in ending Iran's nuclear program, the United States could scrap their plans to deploy missile defense in Europe. Under Secretary of State William Burns made the terms of the deal extremely clear during his visit to Moscow in mid-February 2009. "If, through strong diplomacy with Russia and our other partners, we can reduce or eliminate that (Iranian) threat, it obviously shapes the way in which we look at missile defense."¹³ The deal could also include the United States not pushing too hard for Ukraine's and Georgia's NATO membership in return for Russian help on Afghanistan. As for the fate of Russian democracy, pragmatists in Washington and other Western capitals have long decided that if the Russian people enjoy living under an authoritarian dictatorship so much, there's no reason to waste time and effort trying to convince them to change their mind. What is really important to the West is not how good or bad the Russian regime is, but whether it is capable of making rational decisions.

One would imagine that Moscow should welcome America's offer with open arms. The U.S. leadership has rightly decided that the *Taliban* is a threat not just for America, but for Afghanistan's own neighbors too, including Russia. If the Taliban is left undefeated, if America quits Afghanistan, Russia's interests in Central Asia and, even more importantly, in the North Caucasus will suffer. The success of the Iranian missile program means that a large part of

Russian territory will be within range of Iranian nuclear missiles. And most importantly, if Moscow agrees to cooperate with Washington on Iran and Afghanistan, the United States will stop pedaling the issue of Russia's aggression against Georgia.

ENEMY REBUFFED

But as always, Moscow has its own very special approach to world affairs. President Dmitry Medvedev has rejected the very possibility of linking the Iranian issue to the deployment of missile defense in Europe. "I don't think you can just trade one thing for another," he said in a *BBC* interview. "Reports that an offer was made to trade one thing for another are not true. This is not serious talk. But I have no doubt that we'll discuss both issues – missile defense and Iran's nuclear program."¹⁴ And on March 20, 2009, Russian deputy foreign minister Sergey Ryabkov reiterated that Moscow saw no evidence that Iran was trying to build nuclear weapons. "We still believe that there is no evidence at this stage to support the allegations that this program is pursuing military objectives."¹⁵

 **William C. Potter (U.S.A)**, Director, James Martin Center for Nonproliferation Studies and Sam Nunn and Richard Lugar Professor of Nonproliferation Studies Monterey Institute of International Studies – by e-mail from **Monterey**: "The most positive development of the recent months is the improvement in U.S.-Russian relations, especially in nuclear arms control. Barack Obama's speech in Prague, which denounced the approaches of the George W. Bush administration towards nuclear disarmament and non-proliferation, was welcomed in the world and become a good message for the PrepCom of the NPT Review Conference. The efforts of the Obama administration to engage Iran are a litmus test indicating the actual readiness of the Mahmoud Ahmadinejad government to settle the problems with the United States. The presidential elections in Iran in July will determine the future of the Iranian nuclear program and the potential for diplomatic solution."

Claims by the Russian diplomats that Iran is not trying to build nuclear weapons are not convincing. All they prove is that from Moscow's point of view, Iran's nuclear ambitions are not running counter to Russia's own interests. It appears that Russia would prefer to freeze the Iranian nuclear problem in its current state. This way Moscow keeps its leverage on the West by being able to toughen or soften its opposition to economic and political sanctions on Tehran. In addition, the Iranian problem draws America's political and military resources away from the post-Soviet space and neighboring European countries. Russia's *Gazprom*, the largest gas supplier to Europe, benefits from lack of competition from the Iranian gas fields. And in general, the more headaches the U.S. administration has, the better the Russian leadership feels. This stance encourages Tehran to carry on with its nuclear weapons program because the Iranian leaders are convinced that this will go unpunished.

Furthermore, in mid-March 2009, a senior official of the Federal Service for Military and Technical Cooperation said that in 2007, Russia signed a contract with Iran worth hundreds of millions of dollars to supply the S-300 SAM systems. Although no missiles have actually been delivered to Iran as yet, the implementation of the contract is "gradually proceeding," and Russia has no plans of cancelling it.¹⁶ If Iran really acquires those missiles, the military balance in the Middle East will shift quite seriously in Iran's favor. According to American estimates, the S-300 missiles of the latest modification are capable of defending against an attack by the Israeli air force, which consists mostly of the *F-15I* and *F-16I* jets. Only the latest American *F-22* fighters are capable of overcoming the S-300 defenses. This means that the chances of a political settlement of the Iranian issue will be reduced even further. It is quite possible that as soon as Iran acquires the S-300 missiles, Israel will be left with no other choice but to launch an air strike on missile launch sites before the missiles are combat ready, as well as on the Iranian nuclear facilities and ballistic missile launchers.



Russia's response to America's offer of cooperation on Afghanistan was also quite telling. President Medvedev was unambiguous in his speech in Tashkent in January 2009:

"As far as I understand, the new U.S. president considers this issue a top priority. ... We are ready for cooperation on this issue with any nation, including the United States. ... This is the commitment that Russia has undertaken, as well as the commitment to help in the fight against terrorism."¹⁷

But it has turned out that the Kremlin has a very peculiar understanding of its own commitment to help the United States in fighting terrorism. Only a few days after Medvedev's Tashkent statement, Moscow finally managed to arm-twist Kyrgyz President Bakiev into ordering the withdrawal of the U.S. airbase at *Manas*, the Kyrgyz capital's airport. Speaking in Moscow after a lengthy haggling session to secure a \$2-billion loan, Bakiev said the Americans would be given six months to withdraw. The international coalition in Afghanistan relied on the *Manas* airbase for logistics, troop rotation, etc. This is what Russian Central Asia expert Alexey Malashenko had to say about this decision by Moscow:

"The removal of the U.S. airbase from *Manas* is part of the ongoing strategy to expunge the Americans from this region. But was this step really advantageous right now? First, it has made Moscow look as though it does not want to cooperate on Afghanistan. Second, the price Moscow has had to pay is very high. Third, Bakiev was so reluctant to order the Americans out that it is obvious he did not do it willingly. And fourth, logistics and troop movements will now be done via Uzbekistan or Tajikistan, and it cannot be ruled out that a new airbase will be set up in one of those countries, from where it will be much harder to expunge."¹⁸

However, right after its success in Kyrgyzstan, Moscow said it would allow non-military land transit from Europe via the Russian territory. The Kremlin's meaning here was obvious: it wanted to demonstrate that it is in control of the situation in Central Asia, and that unless the West wants more problems in Afghanistan, it will have to deal with Moscow.

On future talks with the United States on strategic arms reduction, Russian diplomats are doggedly insisting on obviously unacceptable demands, linking these talks to American plans for missile defense in Europe. Russia also wants any new agreement to cover the breakout potential (the warheads that are in storage as opposed to being actively deployed). The previous analysis already detailed why this approach would be unacceptable even to Russia itself.¹⁹ But most importantly, Moscow surely realizes that it needs a strategic arms control deal more than the United States does. It is no secret that the Russian strategic arsenal is shrinking, and will continue to do so. The Russian defense industry cannot replace all the strategic arms that are being decommissioned as their shelf life expires. The obvious solution would be to try to reach an agreement that would reduce the gap between the United States and Russia by limiting America's strategic arsenals. But Russia continues to pursue its own way, forcing the talks into a deadlock before they even started, to everyone's consternation.

À MAUVAIS JEU, BONNE MINE

The meeting between the American and Russian presidents in London on April 1, 2009 was supposed to dot all the I's in the hectic diplomatic game that was kicked off by comments on pushing the reset button. "After this meeting I am optimistic about the future of our relations," President Medvedev said after the talks with President Obama.²⁰ The Russian president is apparently following the old French recipe of *making the best of a bad job*,²¹ because the documents signed during the meeting give little for optimism.

The only tangible outcome of the talks between the two presidents is the agreement to begin new strategic arms talks. The statement that affect specifies that "the talks will aim to reach a new agreement on strategic arms reduction and limitation."²² In other words, Russian diplomatic efforts to link strategic arms reduction to missile defense have come to nothing.

The rest of the documents signed during the meeting are fairly vague declarations that do however reflect the differences between the two countries on key issues. This is what the joint statement said on American missile defense plans in Europe: "While acknowledging that dif-

ferences remain over the purposes of deployment of missile defense assets in Europe, we discussed new possibilities for mutual international cooperation in the field of missile defense, taking into account joint assessments of missile challenges and threats, aimed at enhancing the security of our countries, and that of our allies and partners.”²³ Translated from diplomatic language, this means that the two leaders had discussed what could be done in this area (“we discussed new possibilities”), but had not reached any agreement (“differences remain”), and that the United States will take into account the security interests of its allies (including of course the Czech Republic and Poland).

As for Iran, the two presidents “reiterated their commitment to pursue a comprehensive diplomatic solution, including direct diplomacy and through *P5+1* negotiations, and urged Iran to seize this opportunity to address the international community’s concerns.”²⁴ There is nothing new in this formula, apart from the mention of “direct diplomacy,” which apparently means talks between the United States and Iran. It is well known what Tehran thinks about such talks. And there is no evidence of any shift in Russia’s stance on the Iranian issue.

Finally, the wording of the Russian idea on a legally binding agreement on European security was a fine example of diplomatic lingo. “We discussed our interest in exploring a comprehensive dialogue on strengthening Euro-Atlantic and European security, including existing commitments and President Medvedev’s June 2008 proposals on these issues,” the joint statement said.²⁵ “Discussing our interest” here is an extremely polite way of saying that the United States is not interested in such dialogue – otherwise, the statement would have mentioned “mutual interest” or something like this.

THE LOGIC OF ALOGISM, OR THE METHOD IN THIS MADNESS

Moscow obviously has its own understanding of what *resetting* the relations with the United States should mean. As a result, Washington will soon lose interest in the whole *reset* idea, because the Kremlin is unwilling to offer any serious cooperation on Iran, and instead of real help on Afghanistan it is determined to create new problems for the United States in Central Asia.

The easiest explanation for the strange ways of Russia’s foreign policy is the unique nature of the mysterious Russian soul, deeply traumatized by the *greatest catastrophe of the 20th century* (as former President Putin famously described the collapse of the Soviet Union) and the prospect of transition to democracy, deeply inimical to the authorities as well as ordinary Russians, happy as they are to let the government make decisions for them. Nikolay Berdyaev may have been right when he bitterly declared that “There is a dark irrational core in Russian politics and Russian statehood, which defies all theories of political rationalism or any rational explanation. This irrational core is the source of the unforeseen and the unexpected in our politics, and it turns our history into fiction, into some kind of novel. It has lately become especially obvious that at the core of our state policy is not state wisdom and reason but something irrational and fictional.”²⁶ These words were written almost a hundred years ago, but the part about it being “especially obvious lately” is still true.

However, such explanations fail to take into account some details that do make Russian politics logical, in a twisted kind of way. There is every reason to suggest that Moscow does not actually want to see the Afghan and Iranian problems solved any time soon. The deeper America and the West as a whole get mired there, the less political and military resources they will have left to counter Russia’s meddling in the former Soviet republics and the countries of Eastern and Central Europe. Even more importantly, the Russian elite is not interested in normalizing relations with the West based on any *honest deals*. Western reaction to Russia’s invasion of Georgia has convinced the Russian government that similar action against other countries is unlikely to meet with a tough response. Therefore, Russian politicians and diplomats have come to believe that there is simply no need to make concessions. Speaking at the Moscow Institute of International Affairs in September 2008, only a few days after the recognition of so-called *independence* of Abkhazia and South Ossetia, Russian Foreign Minister



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Sergey Lavrov cited an extremely dubious statement by A.M. Gorchakov that Western policy “has given Russia full freedom of action,” and the equally dubious remark by F.I. Tyutchev that “it’s Russia’s sworn enemies who have done the most for its greatness.”²⁷ The meaning of these excursions into history is obvious: Western reaction to the invasion of Georgia has given Russia “freedom of action” and helped it on its way to “greatness”.

In addition, there are many people and many forces in Moscow who want a degree of “controlled confrontation” to exist between Russia and the West, a *mini-version of the Cold War*. That would allow tougher action to be taken against the opposition. Given the worsening crisis, even a weak and incoherent opposition could pose a threat to the regime if the living standards fall below a certain *red line*. Tension in Europe would also give the Russian military a pretext to deploy several dozen *Iskander* missiles at the western borders. The purpose of such a move would not be to neutralize America’s missile defense in Europe. Russian military commanders realize perfectly well that neither the radar in the Czech Republic, nor the handful of interceptor missiles in Poland could pose any real threat to Russia. But Russia’s conventional forces are deteriorating and could not stand up to NATO in any hypothetical conflict, whereas using strategic arms could lead to a thermonuclear catastrophe, which Russia would naturally prefer to avoid. Therefore, the thinking goes, the only available option for strengthening Russia’s military might and putting pressure on Europe is to deploy the *Iskanders*, including nuclear-armed versions, to menace the Eastern and Central European nations, as well as the countries of Northern Europe and the Baltic states.

But the conclusion that Europe has already gotten over Russia’s invasion of Georgia is at the very least premature. Only a few relatively minor figures in Europe still doubt that Moscow has crossed the *red line* and insist on continuing the policy of involvement with Russia. As Bismarck used to say, “stupidity is a gift from God, but never overuse it.” The absence of a tough and tangible reaction so far probably means that the European capitals are still working on formulating a united policy towards Russia. It is also quite possible that European leaders are following Napoleon’s advice: “Never interrupt your enemy when he is making a mistake.”

Nevertheless, the European political elite has already drawn certain conclusions. In March 2009, Ukraine and the European Union signed a declaration on modernizing the Ukrainian gas transit system, under which Kyiv will be given a \$2.5-billion loan. The money will be spent on modernizing some of the pipelines, upgrading the gas pumping stations and two gas storage facilities, and building several gas metering stations. But the key part of the declaration is that the European energy companies are intending to start taking delivery of the Russian gas on Ukraine’s eastern border with Russia, not on the western Ukrainian border, as they do now. In other words, *Gazprom* and the Russian government will no longer be able to link their gas conflicts with Ukraine to the transit of Europe-destined gas via Ukrainian territory. That’s the part of the declaration that has caused a near-hysterical reaction of the Russian leadership, which believes that Russia is losing a powerful instrument of influence on Ukrainian and European politics.

There are also other signals suggesting that the European countries are changing their policy on Russia – without making a lot of noise about it. On March 20, 2009, the European Union approved the *Eastern Partnership* program, which aims to strengthen its ties with Ukraine, Belarus, Georgia, Moldova, Azerbaijan and Armenia. The program includes the creation of a free trade zone with the six former Soviet republics. That will strengthen the geopolitical potential of those republics and help them in their very difficult relations with Russia.

A HOPELESS RUSSIA?

Only a year ago a lot of people were discussing Russia’s seemingly unstoppable transformation into a powerful Eurasian empire menacing Europe and Central Asia. But these days, with the economic crisis in full swing, the more topical question is whether Russia will share the fate of the former Soviet Union. There are a lot of indicators pointing in that direction. Much has been said about the fact that Russia has been affected by the economic crisis much worse that

the developed countries or China. The reason for that is the severe dependence of the Russian economy on oil and gas exports, huge debts racked up by Russian companies, and belated and incompetent government action. But that is only a part of the problem. Another, and possibly an even more significant one, is the degradation of the institutional structure of the Russian economy and society in recent years.

Instead of the weak but functional structures that guaranteed ownership rights and the resolution of business disputes based on the rule of law, the government has created a deeply corrupt *vertical of power* that controls the economy. A.N. Illarionov was quite right when he said this:

“The business climate ... is extremely poor. The main challenge the Russian businesses have been facing in recent years is protecting themselves from various risks such as extortion by corrupt tax officials, attempts by the raiders to take over the business using corrupt judges and loopholes in the law, or endless inspections by various government agencies looking for a payoff. While credit was cheap, there was enough money to cover those risks as well as the running costs and the social care for the employees. But as soon as the credit contraction kicked in, this rickety system collapsed. There’s no court to go to for recourse if your supplier is holding up the deliveries; there’s no competing bank to go to if your own is demanding an [early] repayment of the loan; corrupt officials are extorting huge kickbacks to allow you to stay in business, but there’s no law-enforcement agencies to help you fend them off.”²⁸

In other words, the authorities are unable to steer the economy out of the crisis. That raises a number of political questions. The idea being advocated in the democratic circles is that President Medvedev should sack the bankrupt cabinet, which is responsible for the failed economic policies of the past and unable to take effective anti-crisis measures. According to some of the leaders and ideologists of the Russian democratic opposition, that move should be followed by political steps such as fresh elections or even the creation of a new legislative assembly to resolve the issue of government and produce an effective economic policy. In addition to these ideas, a number of media outlets and political figures that had previously avoided any association with the democratic opposition have lately taken to criticizing the authorities. That could be an indication of growing discontent among the political and business elite, especially those that have come under pressure in recent years from the so-called *siloviki*, the faction in the Russian government made up of people with law-enforcement background.

Formally, the president has the right to sack the cabinet. It cannot be ruled out that if the economic situation continues to deteriorate, jeopardizing the political stability in the country, the president will have to do just that, taking personal responsibility for steering Russia out of the economic crisis. But that clearly would not be in his interests. And there is no rational reason for the president to call fresh elections or convene a new legislative assembly. All other considerations aside, this could end for him with the loss of any real power or even his job itself.

Another side of the problem is that the sacking of the cabinet would most likely lead to a serious loss of power by the *siloviki*. It cannot be ruled out that some of the senior representatives of this faction could be prosecuted if their implication in various corrupt dealings comes to light. Even more importantly, the cabinet’s sacking would lead to a serious redistribution of economic and political decisionmaking power between the various government departments and agencies. The top brass, secret services and law-enforcement chiefs would stand to lose the most. That can – and probably will – forestall any attempt to oust the prime minister, because such a move could trigger tough and decisive action by the *siloviki* that goes beyond the boundaries of the acceptable.

Therefore the most likely scenario in Moscow is political deadlock. The cabinet is unlikely to come up with an effective anti-crisis program, whereas the president is unlikely to risk ousting the prime minister. And unless the economy starts to go on the mend, thanks for example to a rather unlikely increase in world energy prices, tension will keep growing both at the seat of the Russian government and in the provinces, fuelled by the continuing struggle over the division of the shrinking financial pie. The ongoing economic crisis is in fact undermining the very foun-



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dition of the regime that was built in recent years in Russia. That regime depends on keeping the sundry groupings of the Russian elite loyal by redistributing the flows of financial resources between the various clans that have formed through the merger of economic, bureaucratic, political and law-enforcement factions.

All of this will most likely result in growing separatist sentiment in the Russian provinces. The creation of the *vertical of power* has not eliminated the basis of regional separatism. Power in the provinces belongs to various clans and factions that were formed back in the Soviet times and now control the key economic resources and bureaucratic institutions. These regional clans tend to stick together and try to keep the central government out of their internal conflicts. The Kremlin-appointed governors either hail from these regional clans themselves, or keep the clans' interests high on their list of priorities. If they fail to do that, they soon end up isolated from real life on their patch by their own apparatus.

Since back in the Soviet days, the interaction of the regional and central authorities has been based on a simple formula: the provinces remain loyal to the center in return for financial resources from the federal budget and non-interference in their local provincial affairs. If the central government finds itself unable to satisfy the financial requirements of the regional elites, or, worse, to form a clear and coherent policy that the regional authorities can understand, the growth of separatist sentiment in the regions becomes inevitable. It will be especially obvious in the border regions, which still have a chance of compensating for the reduction in financial support from the center by using external sources, as well as in the powerful regions that can survive without any support from the center – primarily the oil and gas producing northern and Siberian regions.

Growing separatism can of course trigger tough action by the central government, especially the *siloviki*, aimed at severely curtailing the powers of the regional authorities and ousting the key regional leaders. But that would only fuel separatism even further and eventually lead to Russia's disintegration because secession from the federation could well become the only way for the regional elites not only to preserve their status but to survive in the physical sense of the word.

REMEMBERING HERMAN KAHN

Only a few still remember the books written in the 1960s-1970s by Herman Kahn, an extraordinary and controversial American scientist and writer. His studies focused on the question of whether and how a nuclear war could be won. The general academic community, which lacked Kahn's intellectual mettle, turned a blind eye to such questions, preferring instead to argue that a nuclear war was totally unthinkable. Maybe that is why the title of one of Kahn's books was *Thinking about the Unthinkable*. The book proceeded from the notion that every possible future turn of events should be studied, including those that at present appear impossible and unthinkable. Kahn wrote that history often "has turned out to be more imaginative and perverse than even the most fertile minds would have thought possible. The detailed "outbreak scenario" of World War I would probably be rejected as the plot for a third-rate comedy of errors as simply too outrageous. But the bizarre series of events did occur and brought with it enormous sufferings."²⁹

Ignoring the scenarios that now appear *unthinkable* – such as the United States leaving Afghanistan without first defeating the *Taliban*, a new Cold War breaking out, Russia's disintegration, a war against Iran or a sudden and unexpected change of regime in that country leading to a new U.S.-Iranian alliance – does not just make the scientific analysis of the world politics poorer. It could also lead to some very unpleasant consequences for those political leaders who cannot escape the narrow confines of what is seemingly obvious.

Yury Fedorov

Notes

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WAITING FOR HOPE

People everywhere and forever live in hope. It is hope that leads them to do things that lie beyond the mundane, beyond basic survival. In other words, hope is the factor that ensures development: of a human being, a country, the whole world. The moment hope goes, real development usually stops. Irrespective of whether one likes it or not, in the early 20th century it was the Bolshevik Revolution that gave the world hope. Hope that it is possible to live differently. Not like in Victorian England with its colonial frenzy; not like in Russia *that we have lost*, where not only the majority of the population were illiterate but their children also did not have a chance of ever becoming literate; not like in Germany that was run by the senseless junkerhood which had turned the country into a barracks worse than that created by Arakcheyevshchina.

True, the hope turned out to be false and the individuals who stood at the helm of the October 1917 events in Petrograd were far from ideal. But there was hope, hope that there exists another way of social existence, another way of life; not a better or a worse one but just a different one. That hope justified many things: filth, sweat, blood, humiliation at the hands of one's superiors, which, incidentally, are common in today's Russia too, and even the civil war.

One can argue as to when that hope ended: when the *demon of the revolution*, Leon Trotsky, was expelled from Russia; or when the old *Leninist* guard were destroyed in the 1937 purge; or when Soviet tanks entered Prague in 1968; or when Mikhail Gorbachev was diffidently leaving his office under the accompaniment of jeering from Yeltsin's tipsy gang; or when a mediocre official from the U.S. State Department, Francis Fukuyama, proclaimed the *end of history*. It does not matter. What matters is that that hope died. But a new one was born: the hope that capitalism, which Russia ushered in with so much enthusiasm, will make us happier, richer, brighter. The hope that not only we shall have a life like *they* have but that we shall become *them*. And that hope, too, justified everything: poverty, starving pensioners; criminal wars with bodies found in the woods in spring once snow has receded; oligarchs with their luxurious lifestyles and surprisingly unintelligent faces; the war in Chechnya; *Russia's rise from its knees*, which has strangely not affected everybody but has concentrated on (socialite) Ksenia Sobchak, who has come to symbolize Russia's modern statehood.

The above was true not just for Russia: the whole world was in a state of new hope summed up by a *Pet Shop Boys* song "Go West". Both, Europeans and Americans, were hoping that the new world would become a safer, more comfortable and prosperous place for all of them. The Europeans were making the most of the expansion of the *European family*, while the Americans were enjoying their *solitude at the peak of power*. It should be said that they were fully entitled to that: no matter how we may feel about them but it was the U.S.A that in the late 1980s gave the world the hope that it is possible to live in a world of absolute harmony and consumer prosperity, a hope that had been driving the world until recently.

Now that hope is dead too, although it had lasted far less than its predecessor, draped in the red calico of revolution flags, a mere 20 years. It died because it had turned out that capitalism, as an economic system, had not become much cleverer over the past 100 years; that the capitalist world is in a complete economic and social dead-end; that the celebrated European *social state* is no more than a propaganda myth; that although Soviet propaganda officials clearly lied to us about socialism, what they were saying about capitalism was true. In other words, humankind has found itself in a strategic dead-end, which the current crisis has mercilessly revealed by exposing first the senseless nature of modern economy, then the inadequacy and inefficiency of social systems and now by gradually approaching political institutions, too.

In other words, the symbolic and at the same time the tragic nature of today's world is that having got rid of alternatives (unless you count a bunch of *antiglobalist* clowns a real alternative), the world has lost hope. Therefore there is no point in development. This is not the end of history, this is the end of development. The end of history will come a bit later. However, this is not the end of international relations either and it would be very interesting to see how the key players will be trying to achieve their goals in the face of strategic pointlessness.

ON OIL, RESOURCES, AND MILITARY MIGHT

It has been a long time since the world has seen such energetic and tough maneuvering, and at times open confrontation between different forces, in the fight for control over the transportation of hydrocarbon resources. Moreover, never, at least not in the last 100 years, has such maneuvering taken place at a time of economic crises, when it would seem that demand for energy raw materials should fall. Suffice it to say that the number of alternatives to the *Nabucco* pipeline project, which is itself an *alternative*, has exceeded all imaginable limits. There is clearly not enough oil and gas in the world to fill all the declared pipeline projects with.

This is unlikely to be driven just by expectations of a new rise in oil and gas prices. It is extremely unlikely that in the foreseeable future oil and gas prices could reach the ethereal and, let's be frank, much removed from the economic reality figures that had economists mesmerized. The thing is that all the strategic calculations of leading world politicians (what makes a leading world politician different from a politico is that they are engaged in politics, not business disguised as politics, and calculate their steps for at least 15 years ahead) have in recent years been based on the expectation that postindustrial society will be able to make a breakthrough in development, that a new technological cycle will emerge, accompanied by a new technology platform in energy generation that will be free from, or at least less dependent on, hydrocarbons. Indeed, from the political point of view, for industrial nations (the United States, EU countries, Japan, and even some new industrial economies) hydrocarbons are rather inconvenient. Not only because of the long-standing, albeit ambiguous, practice of using oil and gas as a weapon, but also because of a whole range of immanent problems related to the global turnover of hydrocarbons (production becoming more expensive and complex, the never-ending problems of transportation, a high level of political risks and other commonly known things). It is of course unlikely that world politicians were considering the global future, in which oil is declared a totally useless substance, still they must have been thinking along similar lines.

That is why the United States, and Europe too, with persistence that could have been put to better use, were destabilizing the Middle East (we all understand that the concept of the *wider*



Middle East is a concept of a permanent war in the region for some 15 years at least), were quarrelling with Russia, were laughing at Moscow's attempts to stake its claim for control over the Arctic zone, although one has to admit that at times Russian politicians did indeed look liked clowns.

However, suddenly it turned out that there is no sign of a new technological platform in the energy sector, that a new technological cycle had not emerged (while all the *steam* had gone into the *hooter* of financial speculations which must have burnt all the money that was meant to be used to create that new technological cycle). Now the world's leading industrial nations are facing the need to once again deal with the issue of providing their economies with the banal and boring conventional hydrocarbons. It would seem that all this is totally unrelated to issues of international security. But it is not. In fact already now the situation appears to be most acute.

Firstly, the era of a struggle over resources, even if for the time being things do not go beyond transport corridors (it is obvious that it is always easier and cheaper to have one's hand on the valve rather than try and control oil wells in marshes and deserts), will be unfolding on territories where the legitimacy of the relevant states is dubious, to say the least, and where there are many political, and not only political, forces that may see an armed conflict as a benefit for themselves. That benefit, unfortunate as it is, may consist in that they expect to be paid for their readiness to end violence. Incidentally, this is not about Ukraine. This is primarily about the Mediterranean and what lies *to the east of the Suez*, in the old British imperial terms.

Secondly, one can spend a lot of time arguing about whether the era of a struggle over resources has already begun or what we are seeing now are just its first outlines but one thing is obvious: when we are talking about a struggle for resources, we are inevitably talking about control over territory, that is about the ability of a country or a coalition to ensure the friendly nature of territory which houses a transport corridor, in our case a pipeline. No matter what is being said at international forums, the most real and effective way of exercising control over territory is through military force, moreover not just any military force but specifically infantry that is capable of seizing, occupying and controlling a specific territory for as long as it is told to.

Lastly, the problem—strange as it may seem—consists in that the era of a struggle over resources is coming at a time when the United States is in a relative (or possibly an absolute) decline. This decline will inevitably affect the U.S. military potential, already considerably undermined by the wars in Iraq and Afghanistan, which in the long-term have been a failure. One can sneer and gloat over it, but the sad truth is that the main deterrent in the modern system of international relations has disappeared, especially as regards those regional players that do not have access to nuclear weapons. The area on which Somali pirates are operating and which is expanding like an oil slick, is an indicator that many in the world now think that *anything goes*. A mere couple of years ago they would have been easily put in their place, for reasons of prestige if nothing else, whereas now this reign of sea outlaws, reminiscent of buccaneers' golden age, is beginning to claim a global role for itself.

As for Russia's position in the context of the above, one is forced to arrive at a disheartening conclusion: while congratulating ourselves on our ability to accumulate petrodollars, we have—as has happened more than once in our history—missed the beginning of a new era and less than any other large geopolitical player are ready for its trials and tribulations. Which is a shame, for we did have time at our disposal, but we squandered it.

RUSSIA AND THE UNITED STATES: RESET OR RESPITE

The word *reset* has entered the vocabulary of international relations thanks to State Secretary Hillary Clinton. A *reset* is a wonderful thing, particularly since the heavy touch, at times bordering on hysteria, of the Republican administration's policy has long since become tedious for many people. However, one should consider whether we and the Americans have the same understanding of the term *reset* and what exactly our U.S. partners mean when they are talk-

ing of a *new strategy* towards Russia, and not only when they are talking at the official level but also when they are talking at a level close, and in fact affiliated, to the official one. Here there is good news and not so good news, but let's take one thing at a time.

Firstly, and this is good news, it is acknowledged that Russia is not a crumbling state with half a dozen *mothballed* aircraft, but a serious partner, which is capable—if it chooses to—of making the United States' life very hard indeed, that is, plainly speaking, turning the United States into radioactive ashes. Incidentally, it is only with partners like these that the United States has any dealings because it recognizes only force (not necessarily military) and respects only those partners who have self-respect. Which justifies, despite all its downsides and seeming pointlessness, Russia's recent military *activism*. Yet it is clear that long-range bombers' flights to the New World are no longer enough for a future constructive dialogue with Washington. To further encourage a constructive approach from Washington, more serious and tougher steps are needed.

Secondly, which is not bad news either, it has been recognized—albeit reluctantly—that Russia has a certain influence on the world economy and finance. Of course we are still relegated to a stool at those *gatherings* where issues of economic development are discussed. Yet in the back of Western politicians' and strategists' minds an understanding is beginning to form that Russia is no longer the Soviet Union of the 1991 variety, whose main economic function was to consume humanitarian aid. In other words, Russia is beginning to be recognized for a serious geoeconomic player. And all that despite its complete lack of diversification in industry, trade, and transport corridors. So what would happen if we were at least to imitate movement in that direction?

Thirdly, which is also encouraging, it has turned out that the United States is ready to listen to Russia's concerns regarding post-Soviet countries and to postpone Georgia's and Ukraine's accession to NATO. Of course, this is far from readiness to recognize Russia's interests. This is so far just readiness to recognize Russia's right to having its own interests. Yet, one should be grateful for what one has.

All the above is directly related to issues of military security. For the more realistic the U.S. views of Russia and the world surrounding Russia are, the less likely unjustifiably clumsy decisions that the United States may take are. Yet, there are several quite simple questions that need to be answered before we can proceed to jubilation over a *new beginning*. Allow me to list the easiest of them:

- How will the United States prove to Russia its commitment to partnership? It is clear that the United States' reputation and trust in the United States (irrespective of which party runs the White House) in Russia are currently at their lowest point ever. After all the tricks and failed promises, Moscow does not and will never trust the Americans, especially if the United States does not go beyond verbal obligations. Perhaps it is worth signing (and then ratifying at a special ceremony) a legally binding document similar to the "Basic Principles of Relations between the United States of America and the Union of Soviet Socialist Republics" signed in Moscow on May 29, 1972?
- A key issue that is expected to demonstrate a *reset in relations* is currently believed to be the issue of strategic arms cuts. It is in our U.S. friends' interests to exchange their hypothetical missile defense system in Europe, creating which in a time of a global crisis appears doubtful, for real Russian strategic missiles. In any event, the issue of strategic forces is objectively not the most difficult, to say the least, in bilateral relations. Perhaps a *reset* should begin with something more substantial? For example, with the Conventional Armed Forces in Europe (CFE) treaty, where the United States could exercise its status of a NATO leader to its heart's content, while Russia—of course with U.S. support—could confirm its status of a leading element in the European balance of forces?
- What will the format of *renewed partnership* be like? Russian-U.S. relations over the past 20 years have seen many things but one thing is clear: emphasis on the two lead-



ers' personal relationship in the current situation cannot and will not work. In the U.S. interpretation, the bulk of the functional weight should be carried by bodies like *the Gore-Chernomyrdin commission* or *councils of wise men*. However, one is led to think that these options derive not from the real requirements of foreign policy but from infighting inside the U.S. administration.

- ❑ Is the United States ready and capable of *bringing back to their senses* some of its allies that have in effect provoked a geopolitical clash with Russia? Of course, the report on the future of Russian-U.S. relations that the best minds of U.S. *Kremlinology* have submitted for the consideration of Barack Obama's administration contains a bitter statement of the fact that in future one should refrain from giving third countries, primarily former Soviet Union states, an opportunity to play on differences between Russia and the United States. A statement of fact is a good thing, however in practice things will be more complicated. That is why, to begin with, the United States should make its system of ally obligations in the post-Soviet space transparent. Perhaps Washington should publish all (all!) agreements and protocols that George Bush Jr's administration has signed with former-Soviet-Union countries? They are sure to contain much that will be of interest both to the U.S. public and the Congress.
- ❑ Finally, what is to be done with the long-standing problems in economic cooperation? This is not so much about the WTO, whose future—given the current crisis—is more than vague. We could start with the dreary issue of the *Jackson-Vanik* amendment, which was first adopted in order to make the U.S.S.R agree to the right of Jews to emigrate freely but is for some reason now being used to expand the export of U.S. poultry into Russia. Perhaps, to begin with, to prove its good intentions, the United States could abolish this already becoming ludicrous rudiment of *the Cold War* without tying this issue up to anything else?

So what remains after the new U.S. initiatives have been studied? Despite some encouraging wording, one ends up with a rather amusing picture, which however is very far removed from the interpretation we are being offered from across the ocean. The United States wants new relations with Russia in order to get a *peaceful respite* since the amount of domestic and foreign problems it is facing is such that they cannot be resolved soon. Moreover, a whole set of problems cannot be resolved without Russia's participation. The question is whether Russia—even given the consequences of the world financial crisis—should give the United States this *peaceful respite*? After all, the United States is trying to retain, freeze the current state of affairs, where it has a considerable qualitative and territorial advantage. The United States is trying to preserve a favorable state of affairs in the post-Soviet space, particularly to achieve orange revolutions in Georgia and especially Ukraine. Also, the United States has not yet given up its *right* to set up and finance radical opposition in Russia. At least we have not heard any penitential statements to that effect.

In effect, the only concession that the Washington is ready to make to Russia is to recognize—on words—its status of a great power and a partner to *the only superpower*. So is this worth giving the United States an opportunity to sort itself out? After all, we ourselves know that Russia is a great power and this no longer needs to be certified by Washington. Generally speaking, should we be giving our U.S. partners an opportunity to freeze the picture till a better time? Ultimately, time is now clearly not on Washington's side and it is quite possible that the U.S. aspiration to improve relations with Russia may well have been caused by the fact that over the past three years Washington has lost all significant battles to Moscow. Perhaps we should better wait for another six months or a year, during which *Obamamania* and the hopes it has inspired will fade somewhat, while Russia will gain *a few extra points*? Perhaps one should wait for not a *reset* but a full-fledged *Brest peace* from the United States?

The word *perezagruzka* (*reset*) was used in the Russian title of one of the "Matrix" movies, the one that was followed by the final part in the trilogy, "The Matrix Revolutions". Could it be that the United States has Russia in mind for that movie?

MIDDLE EAST DEAD-END: NO RIGHT OF APPEAL

One can spend a long time trying to prove that Israel had the right to carry out the offensive in the Gaza Strip, all the more so since it was protecting its civilian population from insolent *Hamas* rockets. One can accuse Israel of waging a *dirty war*, covering residential areas with phosphorus and taking women and old people hostage, but one should always remember that there can be no such a thing as a *clean war* in the Middle East. One can express regret at the fact that the world's leading powers, the UN, and the European Commission were unable to influence the course of the military operation. All these statements have a large share of truth in them. One can maintain—and that is absolutely true—that the war was started, among other things, in order to raise the approval rating of the *Kadima* party. Yet, this is not the main thing. The main thing is what result Israel, and we all, have received following Operation *Cast Lead* in the Gaza Strip.

 **Yevgeny Satanovsky (Russia)**, President of the Institute of the Middle East— by e-mail from **Moscow**: “The level of security in the world is slightly higher, thanks to the Obama declarations. However, the same factor would aggravate the security situation in the region in the coming months. The right-centrist government in Israel with its tough security program has mitigated the conflict potential between Israel and Iran-sponsored *Hamas* and *Hezbollah* movements. The confrontation between Iran and Israel may aggravate, also probable are new counterterrorist operation of Israel in Gaza, deterioration of situation in Afghanistan, Pakistan, Iraq, Somalia, Sudan, and even intensification of *Al Qaeda* activities in Maghreb, above all in Algeria.”

The results are more than surprising: none of the *Hamas* leaders were destroyed and the organization itself is more alive than dead. Incidentally, the process of reconciliation that has begun between *Fatah* and *Hamas* is a clear confirmation of that. Despite complete support from the West, *Fatah*—instead of seeking to restore control over the Gaza Strip—suddenly decided to make peace with *Hamas* and even share its influence on the West Bank with it. The Gaza Strip was not only not cleared of gunmen but at the height of the operation its larger part remained under gunmen's control. But for the certainty that the Israelis were fighting in earnest, one could have suspected Tel Aviv of a conspiracy with *Hamas* to imitate a military conflict in order to improve Ehud Olmert's party's ratings. *Hamas*'s rocket potential was weakened but its full recovery is only a matter of time. Israel's international image has been smashed to pieces, although for Tel Aviv this has never

been an issue. Which is a pity, for Israel has now found itself in a situation which is close to complete geopolitical isolation, not tactical but strategic, which—given the world financial crisis and an objective reduction in the foreign policy capabilities of Tel Aviv's main patron, the United States—can be rather painful. And, most importantly, *Kadima* lost the election anyway.

All that happened when not only the United States had *greenlighted* the operation, but when Arab states (even, I shall venture a guess, Lebanon's *Hezbollah*) were up to a point quite tolerant of Israel's attempts to crack down on the pugnacious *Hamas*, which everybody had got tired of. All that happened after, according to the Israelis themselves, a year of preparations? And when Israel's military superiority was complete?

One could attribute it all to the ineptitude of the then Israeli leadership and personally Ehud Olmert, who decided to do this parting favor to his party. Olmert is no Ariel Sharon in every possible sense, but this is not it. The thing is that we should not be assessing Israel and Israeli society of the end of the first decade of the 21st century through the standards of the mid 20th century. Israel has changed, just as its people have changed. It is still capable of defending itself, and very well too, but is it capable of winning with the same panache as it did 40 years ago? The sooner Tel Aviv starts to ponder this question, the better it will be for everybody, both in the Middle East and beyond. For the repeating cycle of violence in the Middle East, which coincides with peaks of crises in Israeli domestic politics, produces fewer and fewer positive results for Israel and at the same time brings the probability of a large war in the region closer and



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closer. And that would be a truly large war since there are increasingly fewer people in the Middle East who believe in Israel's invincibility.

True, the emergence of the Netanyahu-Lieberman government in Israel is not the best of times for holding talks on achieving a lasting peace in the Middle East. Attempts to pressurize Tel Aviv on this will bring the exactly opposite result. Yet, paradoxical as it may seem, it is exactly because talking with Israel on the political level for the next 18 or 24 months will be pointless, the time is right for experts to try and outline what a system of security in the region should look like.

NORTH KOREAN BREAKTHROUGH

The hysteria surrounding the attempted launch of the North Korean satellite, on the one hand, looks strange but, on the other, is quite an objective phenomenon. It looks strange because accusations of an attempt to start a third world war—just think of it!—by disguising the launch of a ballistic missile against Japan as a satellite launch are being leveled at a country which, according to the Western press, is in a state of complete social and economic degradation and where people are starving. It seems that the proponents of these views do not even try to understand what they are writing. On the other hand, the hysteria appears logical because it reveals fear generated by the lack of knowledge: after all, the launch was carried out by a country that the rest of the world hardly knows anything about. In particular, it does not know the level of technological development of North Korea, the motives of its political behavior, the alignment of forces in the country's leadership, even taking into account the fact that Kim Jong Il turned out to be alive.

In other words, the situation surrounding the North Korean either satellite or intercontinental ballistic missile exposes the main source of instability in modern international relations: lack of transparency in strategies and military plans. One can join in the criticism of Pyongyang, accusing it of deliberately provoking international tension, which will be true.

 **Konstantin Eggert (Russia)**, employee of the transnational energy company, member of the Royal Institute of International Affairs – by e-mail from the **United States**: “The G-20 summit did not bear any real fruit and it could not. Massive pumping of state money in the United States followed by attacks against the businesses and saving of non-profitable enterprises do not guarantee that the recession will stop. The new U.S. president has no vision of how to preserve popularity and take decisions, which are not popular. The lack of foreign policy experience of Obama raises the potential risk of grave mistakes in this area. The lack of any clear plan of action on supporting the government in Pakistan and the inability of the international community to give a clear response to the ballistic missile launch by Pyongyang make result in serious crises in the future. Only the U.S.-Russian summit gives some reasons for cautious optimism.”

One can accuse the North Korean leadership of failing to adhere to the modern norms of international cooperation, of making North Korea even more closed in recent years. Yet one will have to admit that the North Korean leadership is masterfully and practically faultlessly using the unpredictability of its behavior and the lack of transparency in its policy as an important instrument of ensuring its own survival. But for this lack of transparency, the United States may have long ago decided on a military invasion of the north of the Korean Peninsula the potential consequences of which would have been rather ambiguous. As it is, unstable stability—if you will pardon the pun—on the Korean Peninsula has lasted for more than 50 years already but without a war.

After all, it does not matter if the North Korean satellite has reached orbit or not. It does not even matter if the new North Korean missile can, unless it falls into pieces like it did this time, reach the United States, although it is this that our U.S. partners are finding most displeasing. What matters is that D.P.R.K has

demonstrated its ability to carry out its plans, as Pyongyang wanted, without paying much attention to remonstrations from the great powers. The fact that everybody, including Russia and the United States, spent a lot of time arguing whether the satellite had been put into orbit or not only goes to prove that tales of powerful early-warning systems that are capable of tracking objects as small as a tennis ball are no more than semiscience fiction and harmful at that because they create a dangerous illusion of protection.

Of course, it is too early to be saying that the launch of the North Korean rocket creates a new strategic reality in Northeast Asia and the Pacific region. For that reality to emerge, a missile force of at least a dozen missiles is needed. What has emerged after the North Korean satellite launch, irrespective of whether it was successful or not, is a new feeling of vulnerability shared by all regional players. Incidentally, this is a problem for Russia too because its industrial centers in Siberia and the Urals fall within the *Milky Way's* range.

On the other hand, having watched the North Korean leadership's behavior for the past 15 years, one can assume that Pyongyang will now try and secure as many concessions and economic benefits from the vulnerability generated in the leading powers as it can. After all, North Korea has previous successful experience of exchanging its science and technology breakthroughs, or rather its readiness to give them up, for flour, potatoes, and fuel oil. Now their capabilities have significantly expanded. Incidentally, this has proven itself as quite a profitable foreign policy strategy and there are no grounds to expect that this approach will not work this time.

And, finally, a seemingly strange question. There are two Koreas. One is the world's major exporter of rocket and space technology, which is going to launch its own satellite (the number of countries which are capable of doing it is still less than a dozen), which has nearly created its atomic bomb and nuclear reactor and, most importantly, which is playing a key role in setting key trends not only in issues of regional but global security, too. In other words, it is a political subject in which one *great leader* replaces another. The other Korea is a supplier of average electronics, largely copied from Americans or Japanese models, of reasonably good but cheap cars, and other consumer goods. Politically, it is utterly dependent on and in effect occupied by the United States and its opinion is of hardly any interest to anybody. In other words, it is a political object where each new president considers it his duty to put his predecessor behind bars. As a result, two former presidents are now serving life sentences, a third one is about to be sent to prison, while two more former leaders were killed in palace coups. It would be an insult to ask which Korea is which. The question is: has the *Juche* strategy turned out to be as senseless as it seemed?

UKRAINE IN DARKNESS

The attitude of Russian and European politicians to developments in Ukraine, which is clearly entering a phase of a collapse of its state system, is causing some concern. None is any longer contesting that Ukraine has turned out to be a classical *failed state*, which is a positive sign in itself, indicating that our Western partners' perception of reality has clearly become more realistic. Yet for some reason nobody is yet viewing events in Ukraine as a military-political issue, which is a shame. For some reason everybody thinks that the collapse of a fairly large state, filled to the brim with military infrastructure, with a large army and still larger *security services*, with a huge military-industrial potential, which includes the ability to produce missile and space weapons and some types of weapons of mass destruction, will proceed as peacefully and calmly as the break-up of the Soviet Union did. Hardly. This is an extremely naïve view that does not take into account three key factors:

- The strength of criminal and oligarchic clans that have their own law-enforcement potentials. Indeed, Ukraine is a unique example of state structure, in effect the only truly oligarchic state where oligarchs have power and law-enforcement potential far greater than that of the state itself. One can venture the guess that this is what Russia would have been like too, had not oligarchs been distanced from power in due course.



- ❑ A considerably grown potential for a social explosion. Compared with 1991, the social situation in Ukraine has considerably worsened and, most importantly, many social institutions, which in 1991–1992 still used to function, have now been completely destroyed. Now Ukraine can offer recruits for *private armies*, all the more so since the Ukrainian army, only recently one of the largest in Europe, which is to be switched to *NATO standards*, is clearly in a phase of half-disintegration, perhaps with the exception of individual *Praetorian-Galician* units.
- ❑ The collapse of the very idea of the state as an arbiter, a structure that has *monopoly on blood*, which is very important for the development of any country. In 1991–1992 this idea was still there. Now it is not because those who until recently called themselves *the authorities* or claimed to be the authorities have destroyed this extremely important *metamyth*. Now almost any Ukrainian politician has the moral right to be a *batka*. We all remember too well that, as a rule, political instability in Ukraine manifests itself in two interlinked hypostases: *makhnovshchina* or Polish intervention.

Instead of lulling oneself with pictures—which look like narcotics-induced hallucinations—of how prosperous Ukraine is marching into NATO and the EU and, transferring to the *NATO standards*, is showing to Russia how one should develop relations with the world’s leading powers, it is necessary to already now start thinking about how jointly and in a spirit of partnership to dispose of all that will soon remain of that *beacon of democracy*. Ultimately, it is in nobody’s interest to end up with a wild field in the middle of Europe being roamed by whooping and shooting atamans, who have replaced their machine-gun carts with jeeps, that Ukrainian politicians will very soon turn into. It is obvious that this part of Europe is destined to—in one form or another—become an international protectorate, but certainly not a NATO one.

This territory should be completely demilitarized and deindustrialized because Ukraine’s export policy in the military-technical segment has proven that the country’s leadership is unable to use the military-industrial potential it has inherited from the Soviet Union in a civilized way by getting involved now in *gray*, now in *black* exports of arms (take for example the story with the ship loaded with Ukrainian tanks that was captured by Somali pirates) or by supplying weapons to dictatorial regimes from Saddam Hussein to Mikhail Saakashvili (interestingly, the same types of weapons, the best known of which were the famous *Kolchugas*). It is obvious that Ukrainian arms barons were interested not in ideology but in money but still they ended up pouring water to the windmill of destructive totalitarian forces. Whereas a future as an agrarian and recreational territory would fully meet the hopes and expectations of the majority of its population.

However, in the process of decommissioning the territory that will remain of Ukraine if the current scenario of the development of the political situation there is realized, other and far more complex problems of political and ethnic nature will arise, which one should start to prepare solving already now, taking into account—among other things—*the Kosovo precedent* that will define (whether we like it or not) the nature of international

 **Andrey Kortunov (Russia)**, President, *New Eurasia Foundation* – by phone from **Moscow**: “There is instability in the Russian periphery, for instance, in Georgia and Moldova. A recent gas conflict between Russia and Turkmenistan is an indirect indication of this. It took a harsh form and did not contribute to security in the region. The most positive event is the resumption of consultations on strategic arms reduction between Russia and the United States, as well as the signs from Washington on reviewing the decisions on missile defense and NATO enlargement. Among the key factors is the development of relations with Ukraine, especially bearing in mind the coming presidential elections and the difficult economic situation there. The dynamics of the economic crisis is another important matter. The less stable the financial and economic situation is, the more potential security challenges will occur.”

relations for years to come. For making Ukraine an international protectorate is merely a temporary solution which will make it possible to restore order to this territory and prevent it from becoming a source of threat to European and overall world stability.

AFGHANISTAN: SOMETIMES THEY COME BACK

News from Afghanistan and the Afghan-Pakistani border area is becoming increasingly alarming. It is not so much that the number of U.S. and NATO servicemen killed in Afghanistan is already times that of the death toll in Iraq. And even not that the *Taliban* have again assumed control over significant segments of Afghanistan's territory, where in effect parallel structures of power are emerging. And it is not, or rather not only, that the Afghan virus is actively spreading into the territory of Pakistan, which only recently was the United States' pillar in the region. The problem is that over the past three to four months all the institutions of power and administration that the United States and NATO spent so much effort in creating have begun to crumble like a house of cards. Hence the *sudden* emergence of a project to replace Hamid Karzai, who only recently was considered a role model, with—one is led to believe—a warlord who, *with fire and sword*, will be able to maintain at least some semblance of stability.

The above throws new light on an idea that has been gaining popularity in the new U.S. administration, to start talking to the *Taliban*. Indeed, while it is possible to agree with the *Taliban* (that suffered a strategic defeat at the hands of the Americans in 2001) from the position of force, the force that may replace the *Taliban* in 18 or at most 24 months' time may turn out to be impossible to have a dialogue with on the same terms.

On the other hand, one could look at the situation in a wider context. It appears that the United States was not ready to *give up on* Pakistan after all. The presence of nuclear weapons, a colossal demographic potential multiplied by a rise in Islamist sentiments, tense relations with neighbors – all the above should prompt Washington to continue trying to preserve at least a semblance of manageability in that country. The task has fallen on Washington because nobody else has so far volunteered to take on this burden.

However, having decided to contain the situation in Pakistan, the United States will be prompted—by the very logic of regional processes—to seek to ensure at least relative stability in Afghanistan, at least in its Sunni (the most belligerent) part. Here too the main burden will fall on Washington. It has not escaped anybody's notice how strangely quiet NATO has gone on *Europeans' wider participation* in the Afghan operation.

There is of course the possibility that the United States may decide to *optimize resources* and focus on saving Pakistan, having *left* Afghanistan to Iran or, possibly, Russia. In theory, this scenario appears quite possible—our U.S. partners are cynical enough—however, given the attending political circumstances, it looks unlikely. Afghanistan is one of those relatively rare situations in which when one link is broken, the whole chain is *broken*. All the more so since Barack Obama has publicly declared his determination to change the situation there for the better. Therefore our U.S. friends will never be able to fully free themselves of responsibility for the situation in Afghanistan.

Yet, instead of gloating over news from the front and adding up the numbers of U.S. and NATO losses in Afghanistan, it would be more constructive to think about what role Russia could play. So far all of Russia's efforts have boiled down to pushing the United States outside of the *Manas* military base. True, Moscow has reasons to suspect that under certain conditions the U.S. base could be used *differently to what it was intended for* and become a serious destabilizing factor in the region. However, one should think about the constructive aspect, too. A failure in Afghanistan and the emergence there of the second edition of the *Taliban* will do the United States only image damage, which in the current situation is unlikely to be seen as a major headache. It is no use crying over spilt milk. What is at stake is the United States' survival as a significant world force and the loss of a country that the majority of Americans will never be able to find on the map and where the United States does not have any vital interests is



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unlikely to provoke a national hysteria. Whereas for Russia a *collapse* in Afghanistan will create a whole number of extremely important and potentially dangerous challenges, in particular relating to stability in Central Asia. After all, nobody is seriously expecting the Shanghai Cooperation Organization to play a truly active part in the processes in the region if things go as far as real fighting.

From that point of view, the issue of a possible format for Russia's participation in the situation in Afghanistan is not an idle one. Although the deployment of Russian troops in Afghanistan is unthinkable, the possibility that Russia may have to render some form of assistance to the Afghan authorities cannot be ruled out. In particular, one should not rule out the possibility that Russia may set up paramilitary units on Afghan territory as part of conducting so-called *civilian operations*, namely, to restore the infrastructure. Russia should already now start putting together terms on which its participation could become possible.

Firstly, the United States should hand over control over the operation to a multinational headquarters that would have the relevant UN mandate. This headquarters can be formed on the basis of NATO structures but with participation of representatives from neutral countries. There should be full transparency of military plans. Not only Russia but the whole international community should be confident that there is no *hidden agenda* in the actions of the multinational coalition.

Secondly, the United States and its satellite nations should be made to bring the humanitarian standard of the operation in Afghanistan in line with the acceptable standard. Russia cannot have anything to do with the strategy of scorched earth and carpet bombings that the United States is pursuing in Afghanistan. If that cannot be done, Russia will have to refrain even from indirect association with the multinational force.

Thirdly, Russia can consider the possibility of its participation in civilian operations in Afghanistan only if there is a process of national reconciliation and creation of a political system that reflects the actual ethnic and political balance of forces. It is necessary to make sure that the political process involves all the political forces, including those abroad, in particular members of the *National-Democratic Party of Afghanistan*, who can play a considerable constructive role in political settlement.

These three criteria can play an important part not only as regards Afghanistan as such but also in a wider context. If the United States and its satellite states in NATO can meet these three criteria, this will mean that they are truly, not only on words, ready for a renewed partnership with Russia, that they can reconsider their previous positions and get rid of previous mistakes.

If not, then it is no use crying for the moon.

NEW HOPE, OR OUTLINES OF BIG GAME

Looking at the events of the last quarter, it becomes clear that there were comparatively many of them but they still lack strategic logic. It is obvious that under the cover of all the talk about the depth of the abyss of the current economic crisis, the leading world powers, primarily the United States, are already beginning to devise the plot of a new *big game*. Moreover, it is this *big game* that is probably seen as a way of overcoming global economic problems. What does it mean? It means, first and foremost, that not all the currently existing significant states will make it to the end of the *big game*.

It would be risky now to get carried away in a discussion of the contents and the tactics of the *big game* and the parties' plans, all the more so since the parties seem to have made up their minds about the strategy but are clearly rather vague on the tactics front. The most that we can be talking about now is the possible outlines of this *big game*:

- This will be a game for supremacy for a certain *transition period*, for a while, until new economic and technological solutions are developed that will make it possible to over-

come the global crisis (there is now no doubt that structurally this crisis will be a long one and that improvements will be short-lived).

- ❑ This will be a game one of whose main components will be big players' desire to prevent nuclear proliferation. This will be due not so much to the big players' humane values but to their unwillingness to complicate an already complex picture.
- ❑ This will be a game in which a key part will—for the first time in the history of the industrial world—belong not only to sea but also to land communications. This is what makes this situation special in terms of the degree of Russia's involvement in it.
- ❑ This will be a game which will, most likely, be based on the strategy of *manageable conflicts* since none of the currently existing geopolitical forces has the potential to be directly involved in more than two conflicts at the same time. Whereas the number of conflicts or potential conflicts will be far greater.
- ❑ This will be a game in which the well-established international institutions (the UN, NATO, the IAEA, ASEAN, the SCO) will play a relatively insignificant part for they are merely a product of international law in its post-war interpretation, which is rapidly being reduced to ashes.

It would be naïve to hope that Russia will be left untouched by this *big game*. The events of the late 20th century left Russia isolated in the northern end of Eurasia but even in that capacity it still has a huge potential in terms of influence on global politics and economy. Yet, in order to take part in this *big game* as a subject rather than an object, that is to have the position not of South Korea but of at least D.P.R.K, some strange stereotypes that have developed in recent years should be revised. One of them is that economy breeds politics. In the modern era, it will be politics that will define, moreover, form economic processes.

We began this discussion with the issue of the lack of global development alternatives and therefore of hope. It would seem that the lack of hope does not have much to do with military-political or security issues. Yet it does and the connection between them is simple: as soon as a system stops developing, there immediately are many those willing to destroy it. One should always remember that *hopelessness* is not when everything is bad. *Hopelessness* is when there is no hope. *The end of history* is not when opposing ideological systems disappear but when social degradation sets in. The winner in the new *big game* will be the one who will give the world a new hope. So perhaps instead of desperately trying to find a place for itself in the *big game* Russia should try and give the world a new hope?

Dmitry Evstafiev





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CONFESSION OF AN AMERICAN HAWK

John R. Bolton. Surrender is not an Option. Defending America at the United Nations and Abroad. Threshold Editions, A Division of Simon & Schuster, Inc.: 2007, 486 p.

Reviewed by Gennady Evstafiev

The title of this magnificently presented book would be quite fitting for memoirs by yet another retired American general reminiscing about battles long past. But what we have here in fact is a very interesting work by a civilian who played a prominent role in formulating the foreign policy of several Republican administrations over the past two decades. John Bolton is one of the most *hawkish* apologists of the idea of *American Age*, and a proponent of an unfettered use of America's military might to achieve the egoistic and selfish ends of the most aggressive circles of the Washington establishment.

The Republicans like to emphasize Bolton's working-class background (his father was a firefighter in Philadelphia), thereby claiming that their hard-line policies attract not just the upper classes but *ordinary* Americans as well. This reminds me of an old Soviet joke – «we all hail from the people but we're not going back there again». There's no doubt of course that Bolton had talent – he managed to win a scholarship to one of the most prestigious schools in the state of Maryland, the McDonogh School. In 1966 he went to Yale, one of the Ivy-league universities which was at that time in the grip of anti-government protests over the war in Vietnam. But by his own admission, Bolton, with his working-class background, felt himself an alien in those elite schools. He «didn't like the sons and daughters of affluent families» who spent their time protesting instead of studying. Bolton was not like them. An account of events of that time from the viewpoint of a student with a strongly conservative outlook could be quite interesting for history buffs studying the American political trends that have affected an entire generation of Americans.

BOLTON'S EARLY DAYS

Bolton's political activity began in Yale, and this activity helps explain the roots of his aggressive conservatism. At 16 years of age, he joined the 1964 presidential campaign of the ill-famed U.S. Senator Barry Goldwater – a campaign that ended with a crushing defeat. For some reason – probably due to lack of experience – Bolton took his hero's defeat very hard. The idea that «26 million voters (who voted for Goldwater) can't be wrong» defined Bolton's political views from then on. To many of his colleagues, these views appeared alarmingly rigid and inflexible, even for a conservative Republican – just like the views of his hero.

After graduating from Yale with a degree in Law, Bolton was well on track to becoming an affluent man. He got a job with *Covington & Burling*, one of the largest and most prestigious law firms in Washington, and started establishing useful contacts in the Republican circles in the U.S. capital, including the then vice president, Spiro Agnew, who was forced to resign soon afterwards. Bolton was eager to become part of the Nixon administration. Clever advisers told him, however, that he would be better off not rushing in. They proved to be right – Nixon's political fortunes soon went downhill, and with them the Republicans' chances of staying in power



in the 1976 election. Bolton escaped unscathed, and soon became part of the new generation in the Republican Party that would later become instrumental in Ronald Reagan's conservative revolution. At about the same time Bolton played a prominent role as a lawyer in the famous Buckley vs. Valeo case on the constitutionality of all the key provisions of the campaign funding reform passed following the Watergate scandal. That work made him even closer to the Republican Party's increasingly influential conservatives.

He soon gained acceptance among the leading politicians in Washington. His credentials as the rising star of the conservatives were soon noticed by political opponents. Even back then Bolton aspired to work at the highest political level, and his chance came after Ronald Reagan's nomination as presidential candidate and a resounding victory in the 1980 election. After 20 years in the political wilderness (apart from Richard Nixon's first term), the Republicans and other conservatives were back in power.

That was the time for people like Bolton, staunch adherents of right-wing ideas who did a lot for the victory of the Republicans, to reap their reward. Bolton decided not to wait for the offer of partnership in his law firm, and chose instead to try for a political appointment in the Reagan administration. As these things are usually done in America, he used his connections among the leading Republicans to ask Jim Baker, the new chief of staff at the White House, for a job. He spent some time working in the transitional team which handled the handover from the Carter administration, and soon grew lukewarm to Baker's offer of a position in the team of White House legal counsel Fred Fielding. Bolton did not want to be a mere member of staff, albeit in the White House. People tried telling him that everyone but the president himself is called *staff* in the White House, but he would have none of it – he wanted to be a boss. He had his way eventually, after becoming the third most senior official (deputy head) at the U.S. Agency for International Development (USAID).

The job gave him a lot of exposure to foreign policy as well as the internal problems of the countries receiving American aid. He was, as the bureaucrats say, part of the presidential team. During his time at the agency, Bolton acquired allies such as Carey Barnett, Milton Friedman and Sarah Tinsley, who would follow him in later years and who he worked with to try to defenestrate the Democrats' ideas on American aid to developing countries. It is during that period in his memoirs that he started labeling as *high minded* the people who held more reasonable views on how the United States should conduct its foreign aid policy. Working in close contact with the UN International Fund for Agricultural Development (IFAD), Bolton discovered Henry Kissinger's cunning scheme of using Arab petrodollars to finance the developing countries while keeping America's own spending to a minimum. He was quite outraged that the Arabs soon called the bluff on that ploy – as did America's European allies, unwilling to foot the bill for America's projects. Allies they might be, but they could still count their own money. He eventually decided that no glory awaited him at USAID, and returned to his law firm, which now offered to make him a full partner.

His political career was not however put on hold. In 1984 he became executive director of a committee working on the Republican election platform ahead of the presidential election later that year. The committee was chaired by Senator Trent Lott, an eminent hawk. Bolton's next job was Assistant Attorney General at the Department of Justice, where he worked on President Reagan's new appointments in the judiciary. That was quite a senior position, which required a lot of trust. He is quite open about what exactly the job involved: «In those states where there were no Republican senators, we carefully screened each candidate from the philosophical point of view» (p. 24). His work resulted in a large majority of the federal judges being Reagan's supporters. Our own democrats, who cite America as a shining example to follow, might find that quite interesting.

There were failures too, such as his failed attempts to push through the appointment of distinguished reactionaries Robert Bork and Douglas Ginsburg to the Supreme Court. Bolton's main defeat was the resignation of Attorney General Edwin Meese, who became *tarnished* by the Iran-Contra affair. It is quite interesting that although the affair spelt the end of many a career at the Justice Department, Bolton escaped relatively unscathed – just as he did in other damaging episodes (such as Iraq). Was it just his luck? Also, it was during the Iran-Contra hearings that Bolton became friends with Dick Cheney, the future vice president and *eminence grise*

under the 43rd U.S. president. Edwin Meese was then replaced by Dick Thornburgh, whose motto was «I don't like surprises» – and Bolton's habit of not mincing his words became his downfall.

His book contains a piece of advice any bureaucrat would be wise to heed: «When a new boss comes into a bureaucracy, one should not expect existing working relationships to continue. Things will change, and not just because one regime is better or worse than the other, but because different leaders do things in different ways. If you were comfortable with the old ways, it may well behoove you to move on to a different position, regardless of whether you are happy about it. It is better to hear the bad news sooner rather than later.» Shortly afterwards George Bush Sr. defeated Michael Dukakis, and Bolton realized that the time had come to act on his old ambition of landing a job at the State Department, now run by James Baker. Bolton had already established the necessary contacts with Baker, the latter being of course the boss and the former the subordinate.

BOLTON IN DEPARTMENT OF STATE

By that time Bolton had already become part of the Republican political establishment, and Baker, George Bush Senior's closest ally, was neither surprised nor unhappy when Bolton asked him for a job (yes, he just came over and asked). The job he wanted was to run USAID, where he had already worked before. But the agency's then chairman was battling cancer at the time, and Baker thought it unethical to fire him. So instead of the USAID position, Bolton was offered the job of Assistant Secretary for International Organization Affairs (IO), in charge of America's relations with the UN organizations. Bolton had already decided to place his bets on Baker, and accepted the job without hesitation. One must admit that Baker is an outstanding administrator and a fine diplomat. Even now he has a lot of clout in the Republican Party. In his book, Bolton makes a claim to being Baker's student and says he has learned a lot from his old boss. Unfortunately, Bolton is being far too flattering to himself – his entire foreign policy record has demonstrated that he is an *elephant in a china store* compared to Baker.

Nevertheless, he scored an early success in his new job when he backed prominent Democratic Senator Patrick Moynihan in his campaign against granting the Palestinian Liberation Organization (PLO) membership of UN international organizations such as the World Health Organization (WHO). That was a kind of job to Bolton's liking, and he soon earned a reputation as a man who can bring any process to a halt. Although the PLO enjoyed a lot of support in the UN, the Palestinians were denied a seat at the WHO or any such organizations, and Bolton earned himself the dubious nickname *Terminator*.

And now is perhaps the time for a small digression on the internal workings and balance of forces in the Department of State, for the benefit of non-specialists. Bolton is an ambitious man, and his career is very important to him. He is constantly being drawn to the seventh floor of the State Department building, where the offices of the top leadership are – the secretary of state, deputy secretaries, and undersecretaries, the so-called *seventh-floor principals*. (Coincidentally, in the Russian Foreign Ministry building, the seventh floor also plays an important role.) The offices of assistant secretaries are on the sixth floor. Bolton wanted to move to the seventh – but his wish came true only when George Bush Jr. arrived at the White House. In the State Department argot, all the seventh-floor jobs are designated by the following letters:

S – secretary of state;

D – first deputy secretary;

P – under secretary for political affairs (third most important job in the department);

T – under secretary for arms control and nonproliferation, also in charge of science and technology;

M – under secretary for management;

L – chief legal adviser



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Assistant secretaries are the second-tier managers at the State Department, in charge of geographic and functional bureaus. Bolton is very acerbic about the mood among the lower-ranking staffers and middle managers at the Department. In his opinion, their views are very different from the views of the political appointees, especially those appointed by Republican administrations. That is why those *high minded* people, as he labels the foreign policy professionals, often interpret the orders issued from the sixth and the seventh floors in their own peculiar way. That was especially true during George W Bush's presidency, much to the ire of Bolton, an uncompromising extremist and advocate of using America's military dominance in the world for maximum political gain.

Bolton failed to demonstrate any particular leadership qualities during his first coming to the State Department, when the White House was occupied by George Bush Sr. Back at the time, extreme conservatism was not yet in high demand, and Bolton himself was not part of James Baker's, Lawrence Eagleburger's or Brent Scowcroft's inner circle. So despite his propensity to trumpet personal diplomatic achievements, Bolton does not dwell too much on that particular period, which saw the collapse of the Soviet Union, the first Iraq campaign, the cancellation of the famous Zionism resolution of the UN General Assembly (N 3379), known in the State Department as *Z/r*, and a number of other events of global significance. His observations however are quite interesting, especially those about the personal relations between Eduard Shevardnadze and James Baker, which allowed the Americans to have their way with unprecedented ease. Some might also be interested in his comments about the election of Boutros Boutros Ghali as UN Secretary-General, as well as the Bush Sr. administration's intention to secure the appointment of Dick Thornburgh, the then Attorney General and Bolton's ally, as Ghali's deputy. Bolton says in his book that when Brent Scowcroft, Bush Senior's national security advisor, asked Baker whether Thornburgh had the necessary qualification for the job, Baker replied, «Brent, he was governor of Pennsylvania!» That phrase is an accurate reflection of the American leadership's attitude to the United Nations. Bush Senior's election defeat in 1992 sent Bolton back to political oblivion. In 1997 he became a senior vice president of the American Enterprise Institute, a prominent conservative think tank which worked on the program of the Republican Party's return to power. Bolton severely criticized the Clinton administration's *numerous mistakes*, especially its recognition of the jurisdiction of the International Criminal Court, which he described as a threat to America's global influence and a challenge to its sovereignty. With hindsight, that was the period when right-wing conservatives seized leadership in the Republican Party.

Bolton won the favor of George Bush Jr. and his team for his active participation in the farcical and dramatic ballot recount in Florida. He became a true-blue right-winger and expected to be richly rewarded with a senior office in the incoming Republican administration. His reward was not long in coming, but the office was not quite as senior as he had expected. He became disgruntled and rather sarcastic about his more successful colleagues. It was also the source of another danger that awaited him in the future – his zealous conservatism was noted by the Democratic senators.

On January 29, 2001, the new Secretary of State, Colin Powell, made a phone call to Bolton and offered him Job T, i.e. the under secretary for arms control and international security. Bolton denies the allegation that he was dishonestly *foisted* upon Powell by Vice President Dick Cheney and Secretary of Defense Donald Rumsfeld, the key engines behind George W Bush's right-wing course, as their *agent of influence*. From that moment onwards the book becomes something seldom seen in political memoirs – a candid account of the power struggle behind the outward decorum of the George W. Bush administration, the scheming and plotting of the key players, the difficult relations between the White House and Congress, and the undisguised ambitions of Bolton himself. That account would be interesting for every student of the nature of politics and of the American political system.

After the Florida recount, Bolton deemed it appropriate to ask James Baker to nominate his candidacy for Job D or, failing that, Job P – the second and third most senior posts in the State Department. Baker delicately avoided making any promises, but Cheney, who became Vice President, said at one of the Republican dinner parties that «Bolton will get everything he wants.» That is why the latter kept haggling with Powell, but to no avail, and was eventually

forced to accept Job T. The reason for that was probably not just the internal intrigues in the Bush Jr. administration, but also the far-reaching plans of the new leadership on withdrawing from arms control talks, primarily with Russia. They thought that the *American Age* had dawned, and there was no longer any need for all those numerous delegations talking away for weeks to come up with complex and verifiable disarmament agreements. It was the American hawks themselves who began to forsake Ronald Reagan's famous principle of «trust but verify». They thought that America's power was overwhelming, so all those control and verification mechanisms were an obstacle, and the painstaking negotiations just a waste of time. A reliable man was needed to implement this policy without any deviation. And it must be said that Bolton answered that description better than any of the other potential candidates. One of the administration's key objectives was pulling out of the 1972 ABM treaty. Speaking at the first stage of the foreign affairs committee hearings, Senator Byron Dorgan of North Dakota was spot-on in his characteristic of Bolton's candidacy, describing him as «qualified to dismantle the arms control system but not to build it up» (p. 53).

That description later proved to be very accurate, and it must be said that Bolton himself is proud of it – very proud indeed. At about this point in the narrative Senator Joe Biden comes in – on January 20, 2009 Biden became Vice President of the United States. His attitude towards Bolton has always been rather ambiguous. Many senators had remarked that Bolton's presence in the narrow circle of senior State Department officials alongside Colin Powell looked rather strange, indirectly confirming the suspicion that he had been implanted there by the hawks.

Whatever the case may be, Bolton's appointment was confirmed by a comfortable 57–43 majority, and he rushed headlong into dismantling the ABM treaty. The Bush administration's objective at the ABM talks was to pull out of the treaty as soon as possible, consigning it, in Bolton's words, to the *dustbin of history*. Diplomats were given only three months for talks with Russia, in order to go through the motions of finding a mutually acceptable solution, and another six months for the actual procedure of withdrawing from the treaty. Bolton was adamant that the wording of the announcement should not include any mention of looking for a replacement to the treaty, and that there should not be any link between the fate of the ABM treaty and any new strategic nuclear arms agreements.

That was the essence of the new strategic framework formulated by Condoleezza Rice. One of the key arguments was that without at least a limited system of protecting national territory from a possible attack by the *Axis of Evil* nations, America's security was in mortal danger. Condoleezza Rice wanted to be the key strategist of this process, and she kept flooding the rest of the Principals Committee with various memos, which both Powell and Rumsfeld believed unnecessary – including memos on preparing America's NATO allies for Washington's withdrawal from the ABM treaty, which was considered at that time to be a cornerstone of international security. Bolton, who clearly did not hold Rice in much regard, quotes Gen. Powell's words about his method of fighting her on the bureaucratic level: «It is a bull ring technique: wave a red flag on her on unimportant issues until she is exhausted, then raise the issue that you really care about – not the other way around.» Bolton's decision to disclose a private conversation in his book seems rather unethical. What is more, he does it several more times later on, quoting privately made remarks by Powell and Rice, including Powell's outburst about Rice's «hormones» (p. 70). George Bush Jr. told Vladimir Putin in Ljubljana during a *tête-à-tête* meeting that the United States was determined to put an end to the ABM treaty, and that his administration did not care for Bill Clinton's ideas on theatre ABM, which were now completely off the table. He made comments to the same effect later on during a G8 summit in Genoa. The Americans were planning to complete the consultations with Russia in the second half of September 2001, and make an official announcement on withdrawing from the ABM treaty shortly afterwards.

But the events of 9/11 threw all those plans into disarray. Many critics of the national missile defense proposal argued that after 9/11, there was no need for a national ABM system. But Bolton became the chief proponent of the idea that on the contrary, after those events America needed such a system more than ever. The idea was backed by Rumsfeld and others. Colin Powell and Richard Armitage were accused of dragging their feet on withdrawal from the ABM



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treaty, thereby delaying the three series of test firings that the Pentagon had already prepared. Relations between Powell and Rumsfeld continued to deteriorate. (It is possible that by then the hawks had already decided to get rid of Powell during George W Bush's second term and were scheming to secure the backing of Condoleezza Rice.)

Bolton offers a detailed account of the ABM-related developments that took place in October and November 2001. Experts would be wise to have a look at those developments through the eyes of an American hawk who is proud of his role in dismantling the treaty. Much to the delight of the conservative camp, on December 13, 2001, George Bush Jr. announced America's withdrawal from the ABM treaty. In the words of John Bolton, «a dangerous relic of the Cold War was officially put to rest.» Most experts are still refusing to subscribe to that assessment, especially in light of America's subsequent steps. That is especially important to remember right now, when following Barak Obama's election as president, Russia and the United States are discussing the problem of the deployment of American ABM elements in Europe, a direct result of the demise of the ABM treaty.

Having dealt with ABM, *activists* such as Bolton and his ilk were eager to put an end to U.S.-Russian talks on strategic arms reduction. That, however, caused certain differences among the American *principals*, and President Bush himself had to sort those differences out. He opted for a legally binding Strategic Offensive Reductions Treaty, much to the dismay of Dick Cheney, Donald Rumsfeld and John Bolton. But in return, he finally said what the *activists* wanted to hear so much: «I am unhappy with all those talks in Geneva the same as you. This won't happen again.» The SORT treaty was negotiated in a fairly speedy fashion, and for two reasons. First, the bulk of the negotiating had already been done as the very talks that Bolton hated so much. And second, in the words of Condoleezza Rice's deputy Stephen Headley, the Russians met the United States three quarters of the way instead of halfway. On May 23, 2002, America and Russia signed the SORT treaty, officially known as the Moscow Treaty. Bolton says that to his satisfaction, this drew the line under the traditional arms control process. The fact that such a conclusion was premature became clear in the final months of the Bush administration, but by then John Bolton was no longer part of it.

Eight years and two presidential terms on, the new Obama administration is facing the historic choice of whether to continue the destructive policies of America's most unpopular president in arms control – or bring back the days when Russia and the United States were constructively cooperating in that area and making slow but steady progress in overcoming their differences to reduce the nuclear missile threat. It is clear that President Obama will not follow the policies of retired American hawks – but only time will tell if he will manage to overcome the difficult heritage they have left behind.

During the rest of George W Bush's first presidential term, Bolton and other advocates of unfettered development of nuclear missile arsenals managed to disrupt the ratification of the Comprehensive Test Ban Treaty (CTBT) by the United States. Bolton also secured the withdrawal of America's signature under the Rome Statute of the International Criminal Court and undermined the United Nations projects on small arms control. He was behind America's blocking of talks on the creation of a verification mechanism for the biological weapons convention. He also tried to *set to rights* the Organization for the Prohibition of Chemical Weapons (OPCW), and worked on the North Korean nuclear problem, as well as Iran's nuclear program. He always pursued a hard line, and tried to impose it on America's allies, with varying degrees of success. His views were increasingly diverging from those of his direct superior, Secretary of State Colin Powell. He was increasingly following the lead of Dick Cheney and other hawks... In addition to those he contemptuously called *high minded*, he also berated another category of sensible people who disagreed with George W. Bush's policies, calling them *true believers*. That term he mostly reserved for professional diplomats and political scientists who tried to contain the imperial adventurism of Bolton and his ilk.

BOLTON DURING SECOND BUSH TERM

It must be said that by the beginning of the George Bush Jr. administration's second term, Bolton had already fulfilled the task he was given of disrupting the negotiations process. In

addition, the new secretary of state, Condoleezza Rice, must have harbored a certain prejudice against the self-confident and ambitious *activist*. She must also have had her own candidate for Office T, an equally conservative figure from the National Security Council. Bolton became the victim of his own success. The arms control business was over as far as the administration was concerned, Bolton had done his job and had to go. His bid for Office D in the department failed. Trying to make the best of a bad situation, he was forced to accept the post of U.S. representative at the United Nations and the UN Security Council.

There was a time when this was considered a very important position in the administration, equal in stature to a cabinet minister, but over time its significance dwindled, although the formal trappings, such as the Senate approval procedure, remained in place. America's relations with the United Nations had long been fraught with serious and numerous problems. The Bush administration hoped that the pushy and experienced political *Terminator* would be able to shape the United Nations more to America's liking. There was a lot of talk at the time about the urgent need to modernize the UN, root out corruption there, make it more efficient, etc. The book offers an epic account of Bolton's struggle for his place in the sun, of the scheming and plotting, and of how even Jeane Kirkpatrick used to tell everyone that «he (Bolton) is one of the smartest people in Washington.» There is no need to recount Bolton's lengthy diatribes against his numerous detractors in the Senate, in the Republican Party itself, in the press corps and especially among the Democrats of all stripes. In one unpleasant episode, when the British proposed a joint operation against Libya's nuclear weapons program, they specifically asked that Bolton not be put in charge of the American part of the plan. On the other hand, he still had the support of the old knights of the *Cold War*, such as Alexander Haig, who said in Bolton's defense that «We have to stick together against the weak-kneed Republicans who flutter in the heart.» By the way, the story of Bolton's appointment as America's representative at the UN is very interesting, and deserves as separate study as a fine example of American democracy in action.

The fact is, Bolton did not pass Senate confirmation, and was appointed for one year by presidential privilege bypassing Congress, under the so-called recess appointment procedure.

In spite of his questionable status, Bolton showed himself at the United Nations as a pushy and arrogant representative of a fairly aggressive administration. According to Brent Scowcroft, a prominent moderate Republican who was close to George Bush Sr., that administration was made up of two types of people. One was the *traditionalists*, who believed that the United States should pursue its international policies in partnership with their friends, allies and international organizations. The other was the so-called *transformationalists*. Bolton is a fine example of this second group, who believe that «The world is deteriorating, and fast. We have the power, and we must use it to transform the world by forcefully implanting democracy.» On all the issues he dealt with at the UN, he acted as a *transformationalist*. His opponents and allies alike (the allies especially!) soon became sick of him onto death, exasperated by his blunt and clumsy ways at the Security Council. The feeling was mutual, of course. He condescendingly terms those opponents *Europeanists*, and says that they «do not have the American global vision of democracy, their interests are too selfish and shallow, they are prone to compromise too quickly, and cannot take it on the chin.»

Bolton gives a very detailed blow-by-blow account of his work at the UN, apparently laying the ground for more memoirs. He reserves especially scathing criticism for Kofi Annan's program of modernizing the United Nations. Here is what Brent Scowcroft wrote on the subject in 2008: «About three years ago Secretary-General Kofi Annan proposed a big reform of the organization, which has largely failed. I believe that one of the main reasons of that failure was the actions of the United States, which proposed over 700 amendments to Annan's text during a three-day discussion at the General Assembly. Need I say more?» But everyone seemed happy enough in the Bush administration. They showed the UN bureaucrats their place and proved that no political trend or concept can take off without America's backing.

Meanwhile, the one year allowed under the recess appointment procedure eventually expired, and in the autumn of 2006 the irreplaceable John Bolton found that he was on his own. No-one was prepared to fight for him in the Senate, and even Dick Cheney, whom Bolton had long cultivated, offered no more than token support. The *Europeanists* could barely suppress their joy



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at his departure, especially the British representatives at the UN, «those Whitehall mandarins.» On December 1, 2006, Bolton submitted his resignation of his own initiative, and returned to his ideological fortress, the American Enterprise Institute. Two years later, in 2008, he took his revenge on the Europeans by accusing them of inventing the concept of double standards, thereby undermining the foundations of diplomacy and hampering America's policies. Look who's talking, trying to lay his blame at somebody else's door!

CONCLUSION

John Bolton is not an old man yet, and we will surely hear more from him, expounding the views of the extreme right wing of the Republican Party on the pages of political publications. The Obama administration will be taking a lot of flak from him – witness the musings in his memoirs on *the new generation* of threats facing the United States. Apart from a few lucid thoughts, including his opinions on the problem of proliferation of weapons of mass destruction, his latest essay is full of the same thickheaded ideas about the United States being the only force capable of solving the world's problems, and about the need for America to avoid the trap of the United Nations.

«Unilateral American action (Grenada, Panama), bilateral alliances (U.S.A-Japan), multilateral defense alliances (NATO), ad-hoc military coalitions (Persian Gulf Wars One and Two), regional organizations (Organization of American States), enforcement coalitions of the willing (Proliferation Security Initiative) are entirely legitimate and potentially effective alternatives... America should choose from this set of instruments those that best serve its own interests instead of accepting that its interests inevitably coincide with those of the European Union or any other bloc of countries.»

The bottom line is, John Bolton has promised not to quit. We will surely hear more of him – we are in fact hearing more of him already. He is not the one to sit idle. 🐢



CLOCK TICKING FOR CHEMICAL WEAPONS CONVENTION

To the Editor-in-Chief,

Sir,

Your journal has kindly allowed me to see the manuscript of Alexander Plugarev's article «Chemical Weapons Destruction: Will Russia and the United States Fulfill Their Commitments by 2012?» In addition to detailed analysis of the progress of chemical weapons destruction programs in the United States and Russia, the author offers his view of the current situation with chemical disarmament in light of Washington's intention to extend the term of the completion of its chemical weapons disposal program until 2017 or even 2023, well past the 2012 deadline set by the Chemical Weapons Convention (CWC).

It is quite strange that this announcement by the United States has not elicited any reaction from the Organization for the Prohibition of Chemical Weapons, the OPCW. In its 2006 request to the OPCW for an extension of the deadline for the destruction of chemical weapons until 2012, the United States said that six out of its nine chemical weapons disposal facilities will not finish their work until 2017. Neither does the international community appear concerned by this announcement, despite the fact that it clearly jeopardizes the fulfillment of the key CWC requirement – a complete elimination of chemical weapons by the agreed deadline.

So what is really behind this announcement? The Americans themselves are trying to blame it on the lack of financial resources (have they traded places with Russia?) as well as unforeseen technical and environmental problems, which sounds completely implausible. Suffice is to recall that initially, before the CWC had entered into force, the United States was planning to destroy its chemical weapons stockpiles by September 30, 1994. Only later did Washington start to push the deadlines back in accordance with the CWC intermediary milestones and in line with Russia's progress in destroying its own stockpiles (there's hardly a need to explain why exactly America's progress had to be so tightly linked to Russia's).


The author offers several possible explanations for what is really happening, including Washington's suspicions that Russia has not fully declared its chemical arsenals and may try secretly to keep some of its weapons – but had this been the real reason, the United States could have used OPCW inspection mechanisms to reveal Russia's alleged double-dealing. Another explanation is that the United States is worried by the possibility that some of the 12 countries that have yet to ratify the CWC have chemical weapons. But even if that turns out to be the case, it would be preposterous to suggest that those chemical weapons can be used to attack the United States, or force Washington to use its own chemical arsenals in retaliation, especially because the CWC bans any use of chemical weapons, no matter what the nature of the conflict is. Yet another possibility is that the United States is trying to keep its influence in the OPCW – but the OPCW is not going to be disbanded once all chemical weapons are destroyed, the CWC will remain in force indefinitely, so there is no threat to Washington's influence.



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All the above explanations have the right to exist, but they do not paint the full picture. Several other possibilities should be considered.

- ❑ If financial or technical difficulties were the true reason for the American chemical weapons disposal program running behind schedule, Washington could have used the only legal mechanism of amending the CWC to extend the deadline, which, according to the information available, Washington has no intention of doing. And could it be possible that statements about the chemical weapons disposal program running beyond 2012 are only meant to provoke Russia? The Americans say that they will have about 10 per cent of their chemical stockpiles still awaiting destruction after the 2012 deadline expires. But if the technical capacity is available, these 10 per cent can be destroyed very quickly, in a matter of several months to a year. This means that Washington could potentially keep making those statements about running late until 2010–2011, and then go ahead and destroy all their chemical arsenals by the 2012 deadline regardless. If Russia takes these statements at face value and decides similarly to delay its own chemical weapons destruction, it will then be unable to make up for the lost progress in the year or so remaining until the 2012 deadline. And then it will be Moscow who will have to bear the responsibility for failing to comply with the CWC. Considering Washington's long-standing policy of undermining multilateral agreements on disarmament (witness its withdrawal from the ABM treaty, its work to destroy the verification protocol of the biological weapons convention and the lack of progress in nuclear arms reduction), the United States would clearly welcome such a chance to discredit Russia.
- ❑ If the purpose the United States is pursuing is to push back the deadline for destroying its chemical weapons (financial and technical reasons simply cannot be the real explanation), then if Russia cannot be baited, Washington will try to extend the CWC deadline by finding chemical weapons in some other country (such attempts have already been made with regard to Iran) or by pushing a country such as North Korea, Lebanon or Syria to ratify the CWC and declare possession of chemical weapons. If this happens, the CWC participants will then have to extend the deadline for chemical weapons destruction without any political damage to the United States.
- ❑ There is also the possibility that the United States is trying to prolong the chemical weapons destruction process because it wants to keep the hi-tech chemical weapons disposal facilities in operation, and the adjacent territories at the Pentagon's disposal. The question is then whether those facilities, with all their equipment, laboratories and highly qualified personnel, could be used to develop new types of weapons not covered by the CWC, as well as to test them in the laboratory and in the field.

There are many questions such as these, and it is important that experts not only ask them and analyze them, but also offer solutions. The clock is ticking for the CWC. 

Natalya Kalinina

*Lead Researcher,
International Security Center,
Institute of World Economy and International Relations,
Russian Academy of Sciences,
23 Profsoyuznaya Street,
Moscow 117997, Russia*



ABOUT THE AUTHORS

Çeviköz Ünal, Deputy Undersecretary of Foreign Affairs, Ambassador Extraordinary and Plenipotentiary. Born in 1952 in Istanbul. Graduate of the Boğaziçi University and got his master's degree from the Brussels University on European integration. Amb. Çeviköz entered the Ministry of Foreign Affairs in 1978. He held various posts in Ankara and abroad, including Moscow, where he served as 2nd secretary in 1980–82. He also worked for eight years at the NATO Secretariat. In 1998–2001 he was Deputy Director General for Central Asia and the Caucasus. In 2001–2004 he served as Turkey's ambassador to Azerbaijan. Then he headed the mission in Iraq (2004–2007) and after this post he moved back to Ankara, being promoted to Deputy Undersecretary.

Cirincione, Joseph, President, *Ploughshares Fund*. Cirincione is an honors graduate of Boston College and holds a Master of Science from the Georgetown School of Foreign Service. A renowned expert in nonproliferation and arms control, Cirincione joined Ploughshares Fund as president in 2008, after having directed nonproliferation and international policy programs at the Center for American Progress and the Carnegie Endowment for International Peace. He worked for nine years on the professional staffs of the House Committee on Armed Services and the Committee on Government Operations, and served as staff director of the bipartisan Military Reform Caucus. He teaches at the Georgetown University Graduate School of Foreign Service and is a member of the Council on Foreign Relations. He is an expert advisor to the Congressional Commission on the Strategic Posture of the United States, chaired by former Secretary of Defense William J. Perry and former Secretary of Energy and Secretary of Defense James R. Schlesinger. He also serves as a member of the Advisory Committee to the Commission on the Prevention of WMD Proliferation and Terrorism, headed by former Senator Bob Graham (D-FL) and former Senator Jim Talent (R-MO).

Diakov, Anatoly Stepanovich, Director of the Center for Arms Control, Energy and Environmental Studies of the Moscow Institute of Physics and Technology. Graduated the Moscow Institute of Physics and Technology in 1972 and got his Ph.D. in physics and mathematics in 1975. The area of research interests – arms control, strategic nuclear forces development, technical aspects of disarmament. Author of numerous publications on these issues and one of the founders of the Center for Arms Control, Energy and Environmental Studies.

Dvorkin, Vladimir Zinovievich, Maj.-Gen. (ret.), Consultant of the Carnegie Moscow Center. Dr. Dvorkin is a renowned military expert. He is one of the authors of the doctrines related to the development of strategic nuclear forces and strategic missile forces. In 1958 he graduated the High Naval College and for four years he served at the Central Naval Test Range, participating in the tests and first launches of Russian SLBMs. For many years he was involved as an expert in the elaboration of SALT II, INF, START I, START II, made a significant contribution to the



Soviet and then Russian position at the negotiations on strategic offensive arms. Prof. Dvorkin is the author of over 350 publications, a member of the PIR Center Advisory Board and of the Editorial Board of the *Security Index* journal.

Evstafiev, Dmitry Gennadievich, Vice President, KROS Corporation. Born in 1966. Graduated from the History Department of Moscow State University's Institute of Asian and African Countries with honors in 1989, then served as a junior research associate, and then research associate, at the RAS U.S. and Canada Institute, where he received a degree of candidate in political science in 1993, defending a dissertation in the area of military policy. In 1995–1998 worked as a senior, leading expert at the Russian Institute for Strategic Research (RISI). Later served as a senior research associate and project director at the PIR Center. Leading expert on the military and political facets of Russian national security, U.S. foreign and military policy, and regional aspects of nuclear nonproliferation. In 2001–2006 worked for the KROS Public Relations Development Company, serving part of that time as vice president. Later on joined the National Laboratory for Foreign Policy as Deputy Director General. Member of the PIR Center Advisory Board and *Security Index* editorial board.

Evstafiev, Gennady Mikhailovich, PIR Center Senior Vice President, Lieutenant-General (ret.). Born in 1938. He has worked in governmental agencies for over 40 years, including Soviet embassies in Pakistan and other countries, and the UN Secretariat. In 1986–1991 Lieutenant-General Evstafiev participated in CFE negotiations. In 2000–2003 he worked in the Russian mission to NATO headquarters in Brussels in charge of WMD nonproliferation and arms control issues. Email address: evstafiev@pircenter.org

Fedorov, Yury Yevgenyevich, Associate Fellow, Chatham House – The Royal Institute of International Affairs, London, the U.K.; Member of the *Security Index* editorial board. Graduated from Moscow State University's Physics Department. Candidate of Historical Sciences, Professor. Worked at the Sociological Research Institute of the USSR Academy of Sciences. Headed the section on disarmament issues at the Institute for International Economy and International Relations (IMEMO) of the Russian Academy of Sciences. Worked in the international division of the Soviet Communist Party Central Committee, after which, in 1991, he became deputy head of the political science department at MGIMO. In September 1998 he became section head, and in December 2000 head of the division on military policy research at the RAS U.S. and Canada Institute. In 2001–2002 he served as deputy director of the PIR Center. In 2002–2003 he was deputy director of the Institute of Applied International Research. Several of his academic studies have focused on energy security, particularly of the Caspian region. He is the author of a monograph entitled *Substrategic Nuclear Weapons and Russian Security Interests* (Moscow: *Nauchnyye zapiski PIR Tsentra*, No. 16, 2001). Fedorov is a member of the *Security Index* editorial board. Email address: yufedorov@rambler.ru

Golikov, Alexander Grigorievich, Executive Secretary of the Black Sea Biotechnological Association. He is a biochemist who worked for many years in the Institute of Bioorganic Chemistry in Moscow. He then was Deputy Director of the «AnalitEK – analytics in ecology» and Deputy Director of the Bioengineering Center of the Russian Academy of Sciences. In 1997–2001 he was an Academic Secretary of the Inter-Agency Governmental Commission for Genetic Engineering. In 1996–2000 he was a board member and rapporteur of the UN task force elaborating the Cartagena Protocol and UNEP expert on biological safety and security. Email address: golikov@mac.com

Goodby, James E., Nonresident Senior Fellow, Center for Northeast Asian Policy Studies, Brookings Institution. Born in 1929, he graduated from Harvard in 1951. He was a career diplomat holding a number of ambassadorial-rank positions until his retirement in 1989. In 1993 he returned from retirement to become the Chief U.S. Negotiator for the Safe and Secure Dismantlement of Nuclear Weapons. During this time he negotiated agreements with several former Soviet Republics to dismantle former Soviet nuclear weapons and to prevent nuclear weapons proliferation. Amb. Goodby is a specialist on nuclear nonproliferation and security issues in Northeast Asia, focusing particularly on the Korean peninsula. Currently he is associated with the Brookings Institution and the Securities Studies Program at MIT. He is the winner of the Heinz Award in Public Policy, the Commander's Cross of the Order of Merit of Germany,

and the Presidential Distinguished Service Award and the holder of an honorary Doctor of Laws from the Stetson University College of Law. He is also an Advisor to the British American Security Information Council.

Ifft, Edward M., Adjunct Professor in the Security Studies Program in the Walsh School of Foreign Service at Georgetown University. Edward Ifft has been involved in negotiating and implementing many of the key arms control agreements of the past 35 years. He has a Ph.D. in physics from Ohio State University. While a graduate student, he was selected to spend a year at Moscow State University and the Institute for Physical Problems of the U.S.S.R Academy of Sciences under the U.S.-U.S.S.R cultural exchange program. He is a graduate of the Senior Managers in Government program at Harvard University. Dr. Ifft began his government career at the U.S. Arms Control and Disarmament Agency. He then moved to the State Department, where he continued to work on strategic arms control, as well as on constraints on nuclear testing, serving as the Deputy U.S. Negotiator at the 1974 negotiations on the Threshold Test Ban Treaty in Moscow. In 1978, he accepted a detail to NASA for three years, serving as Head of the Office of International Program Policy and Executive Secretary of the U.S.-U.S.S.R Space Cooperation Agreement. Upon returning to the State Department, he served as Senior Policy Advisor and then Senior State Department Representative to the START negotiations in Geneva. After that he became Deputy Director of the On-Site Inspection Agency. In 1998, he became Senior Advisor and State Department liaison to DTRA until his retirement from the Senior Executive Service in 2002. He also served as the last U.S. Commissioner for the ABM Treaty until the U.S. withdrew from the Treaty in 2002. Dr. Ifft has lectured at many universities and government laboratories and in more than 10 countries. Dr. Ifft continues to work part-time in the State Department as a Foreign Affairs Officer.

Kinkade Seth, Production Manager, ANZU Technology (U.S.A). Born in 1980. Holds B.A. degree in international studies of the University of Illinois. In 1998–2004 served in the U.S. Army. In 2005–2006 was the President of the University of Illinois' Orchard Down's Family and Graduate Housing Council. Currently completes his masters in international trade policy at the Monterey Institute of International Studies in California.

Koshelev, Sergey Mikhailovich, Head of the Multilateral Disarmament Section, Deputy Director of the Department of Security and Disarmament Affairs at the Russian MFA. In 1983 he graduated the Institute of Asian and African Countries of the Moscow State University. In 1988–1992 he worked in New Delhi. In 1995 he joined the Department of Security and Disarmament Affairs, where he dealt with export controls. In 1998–2003 he was a counselor at the Russian Permanent Mission to the Conference on Disarmament in Geneva.

Kozyulin, Vadim Borisovich, Special Projects Director of the PIR Center. Born in 1965. In 1990 he graduated the Moscow State Institute of International Relations and in 2002 – the All-Russia Foreign Trade Academy. Dr. Kozyulin worked in the Russian Foreign Ministry, then in the Exclusive Information division of *Moskovskie novosti*, served as a representative of *Kazspetsexport* in Russia. Since 1994 he works as research associate in the PIR Center. Dr. Kozyulin is Professor of the Academy of Military Sciences. He currently cooperates with companies involved in military-technical cooperation in CIS and beyond. His research interests focus on Russia's military-technical cooperation with foreign states. Email address: kozyulin@pircenter.org

Lata, Vasily Filippovich, PIR Center Consultant, Lt.-Gen. (ret.). Born in 1944. In 1976 he graduated the command faculty of the Dzerzhinsky Military Academy. He has worked for the Soviet/Russian MOD for nearly 40 years, including as the Deputy Chief of the MOD Military Policy Administration in 1992–1994. After that, Chief of Operations, Deputy Chief of the Strategic Missile Forces Supreme Staff. Being a full member of the Academy of Military Sciences and Senior Research Associate of the Academy of the Strategic Missile Forces, Prof. Lata also teaches at the Military Academy of the General Staff. He is also Director General of the Science and Innovation Center for Rocket and Space Technologies. Member of the Editorial Board of the *Security Index* journal. Email address: lata@pircenter.org



Maltsev, Vladimir Vasilievich, Department Chair at the Military Academy of the Strategic Missile Forces. Born in 1952 in Ukraine and in 1982 he graduated the Dzerzhinsky Military Academy. In 1985 he defended his doctoral thesis and in 1992 became Associate Professor (since 2007 – Full Professor). He joined the academy in 1980. The area of research interest includes space technologies and engineering.

Orlov, Vladimir Andreevich, the founder and President of the PIR Center – *Center for Policy Studies (Russia)* and Editor-in-Chief of the *Security Index* Journal. He is the President of the *Centre russe d'études politiques, Genève*. Dr. Orlov is a member of the Public Board at the Ministry of Defense of the Russian Federation. He is the Chairman of the *Dialogue Club*. Vladimir A. Orlov was born in 1968 in Moscow, Russia. He graduated from the Russian Foreign Ministry's Moscow State Institute of International Affairs (MGIMO). In 2001–2002 he served as a UN consultant on disarmament and nonproliferation education by the appointment of the UN Secretary General. Dr. Orlov regularly publishes his views in Russian and foreign periodicals and has edited more than a dozen books on international security issues, published both in Russia and abroad. Dr. Orlov continues to teach on a regular basis, giving lectures on Russian foreign policy and WMD nonproliferation. Email address: orlov@pircenter.org

Perkovich, George, Vice President for Studies and Director of the Nonproliferation Program at the Carnegie Endowment for International Peace. He got his Bachelor degree in the University of California at Santa Cruz; then graduated the Harvard University and defended his doctoral thesis at the University of Virginia. He served as a speechwriter and foreign policy adviser to Senator Joe Biden from 1989 to 1990. Perkovich is an adviser to the International Commission on Nuclear Nonproliferation and Disarmament and a member of the Council on Foreign Relations' Task Force on U.S. Nuclear Policy. He is the author of the award-winning book *India's Nuclear Bomb*. He is coauthor of the *Adelphi Paper*, "Abolishing Nuclear Weapons", published in September 2008 by the International Institute for Strategic Studies. His research focuses on nuclear strategy and nonproliferation, with a focus on South Asia and Iran, and on the problem of justice in the international political economy.

Polikanov, Dmitry Valerievich, PIR Center Vice President, Editor of the *Security Index* journal (international edition), Chairman of the *Dialogue Club International*. Born in 1975. He graduated the MGIMO in 1998 and defended his doctoral thesis there in 1999. Ass. Prof. Polikanov started his academic career at the PIR Center in 1998–2001. He then joined the Moscow Delegation of the International Committee of the Red Cross and in 2003–2006 worked as Director for International and Public Relations at the All-Russia Public Opinion Research Center (VTsIOM). In 2006–2007 he was Director for Marketing and Opinion Research of the *PBN Company*. Since March 2007 he serves as an advisor to the Head of the Central Executive Committee of the United Russia Party and is Deputy Project Leader of «Human Resources Reserve – Professional Team of the Nation». He is the author of over 100 publications on international and European policy, Russia's foreign and domestic policy. He is a member of the IISS, International Sociological Association, VTsIOM's Academic Council, etc. Since 2001 he is a regular Guest Speaker for staff officers at the NATO School in Oberammergau. Email address: polikanov@pircenter.org

Plugarev, Alexander Valentinovich, Graduate Student of the MGIMO. His doctoral thesis is devoted to the international aspects of implementation of the CWC by Russia in 1997–2007. He graduated the Faculty of Political and Social Sciences at the Petrozavodsk State University. In March – July 2008 he was an intern at the PIR Center. His area of research interests includes chemical weapons, implementation of the CWC, Russia's contribution to this process. Email address: nightgust@gmail.com

Satanovsky, Yevgeny Yanovich, President of the Institute of Middle East Studies, President of the Ariel Group (metallurgy, chemical industry), Vice President of the Russian Jewish Congress. Professor Satanovsky is also the Vice President of the International Board of the International Center of University Teaching of the Jewish Civilization of the Jewish University in Jerusalem. He is the author of two books and over 50 articles.

Smirnov, Sergey Maratovich, Leading Expert of the Center for International Studies of the Nevelsky Naval University. He graduated the Far Eastern State University in 1982 and the Far Eastern State Technical University in 2002. In 2006 he was a research fellow at the NATO Defense College in Rome. Dr. Smirnov is the author of over 30 publications.

Timerbaev, Roland Mikhailovich, PIR Center Executive Board Chairman, Ambassador Extraordinary and Plenipotentiary. Born in 1927. He is a Russian leading expert in the sphere of nonproliferation and arms control, is world-renowned as one of the authors of the Nuclear Non-Proliferation Treaty (NPT) – the cornerstone of the nonproliferation regime. After graduating from the Moscow State Institute of International Relations (MGIMO) in 1949, Roland Timerbaev dedicated over 40 years to the diplomatic service, first in the Soviet Foreign Ministry and then the Russian Foreign Ministry, retiring in 1992 from the post of Permanent Representative of the Soviet and Russian Missions to International Organizations in Vienna. He actively participated in drafting several key international agreements in the nuclear sphere, including the Anti-Ballistic Missile Treaty, the U.S.-Soviet Agreement on Measures to Reduce the Nuclear War Threat, the IAEA safeguards system, the Threshold Test Ban Treaty, and the Peaceful Nuclear Explosion Treaty. In 1974–1978 he participated in the work to establish the Nuclear Suppliers Group. He has also taken part in six NPT Review Conferences. Professor Timerbaev has a doctorate in history, and has broad academic and teaching experience both at leading Russian institutions (Moscow State Institute of International Relations, Moscow Engineering and Physics Institute) and abroad (in particular, at the Monterey Institute of International Studies). His works include *The Peaceful Atom in the International Arena* (1969), *Verification of Arms Control and Disarmament* (1983), *The Complete Prohibition of Nuclear Tests* (1986), *Russia and Nuclear Nonproliferation, 1945–1968* (1999), *International Monitoring of Atomic Energy* (2003), and *The Current Status of the Nuclear Nonproliferation Regime and its Prospects: Towards the Upcoming 2005 NPT Review Conference* (2004). Email address: timerbaev@pircenter.org

Zavarzin, Victor Mikhailovich, Colonel General, Chairman of the State Duma Defense Committee. Born in 1948. Graduated from the K.E. Voroshilov Military Academy of the U.S.S.R Armed Forces General Staff. Served in the U.S.S.R and Russian Armed Forces, and was the chief military representative of the Russian Federation to NATO. Before his election to the Russian State Duma, served as first deputy head of the Staff for the Coordination of Military Cooperation with CIS States. Member of the Permanent Delegation of the Federal Assembly of the Russian Federation to the NATO Parliamentary Assembly. Has many government awards.

Zueva, Irina Victorovna, graduated the Moscow State University (the Faculty of History) in 1990. Since 1996 she lives and works in Belgrade.

Zulkharneyev, Albert Farkhatovich, Education Programs Coordinator at the PIR Center. In 2007 he received master degree in history with honors from the Central European University (Budapest, Hungary). Currently he is a graduate student of the Urals State University, International Relations Department. In fall 2004 he participated in the PIR Center's course on «*Nuclear nonproliferation: international legal, political and economic aspects*,» organized at the basis of the Urals State University. In 2007 he completed his internship at the PIR Center.





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Institute of Strategic Stability, Moscow, Russia

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Kirichenko Elina, Dr., Head, North America Research Center, Institute of World Economy and International Relations (IMEMO), Moscow, Russia

Kortunov Andrey, Dr., President, *New Eurasia Foundation*, Moscow, Russia

Krasnov Alexei, Head, Manned Space Flight Programs, Federal Space Agency of the Russian Federation, Moscow, Russia

Kurchatov Institute – Russian Research Center, Moscow, Russia

Ladygin Fedor, Col.-Gen. (ret.), Advisor to Director General, *Sukhoi Aircraft Holding Company*, Moscow, Russia

Laverov Nikolai, Acad., Vice President, Russian Academy of Sciences, Moscow, Russia

Lebedev Vladimir, Deputy Chief, International Relations Department, Moscow City Government, Moscow, Russia

Lewis Patricia, Dr., Deputy Director, James Martin Center for Nonproliferation Studies, Monterey Institute of International Studies, Monterey, U.S.A

Luedeking Rudiger, Permanent Representative of Germany to the UNO and Other International Organizations, Vienna, Austria.

Lysenko Mikhail, Amb., Director, Department of International Cooperation, the *Rosatom* State Corporation for Atomic Energy of the Russian Federation, Moscow, Russia

Margelov Mikhail, Chairman, Committee for Foreign Affairs, Council of Federation of the Federal Assembly of the Russian Federation, Moscow, Russia

National Research Nuclear University MEPHI, Moscow, Russia

Moscow State Institute of International Relations (MGIMO University) of the Ministry of Foreign Affairs of the Russian Federation, Moscow, Russia

Mueller Harald, Dr., Prof., Director, Peace Research Institute, Frankfurt-am-Main, Germany

Murogov Viktor, Dr., Professor, State Technical University of Nuclear Power, Obninsk, Russia

Nikitin Alexander, Dr., Prof., Director, Center for Political and International Studies, Moscow, Russia



Novikov Vladimir, Dr., Senior Research Officer, Russian Institute for Strategic Studies (RISI), Moscow, Russia

Parkhalina Tatyana, Dr., Deputy Director, Center for European Security Studies, Institute of Scientific Information on Social Sciences (INION), Moscow, Russia

Pikayev Alexander, Dr., Chief of the Department for Disarmament and Conflict Resolution, Institute of World Economy and International Relations (IMEMO), Moscow, Russia

Ponomarev-Stepnoi Nikolai, Dr, Prof., Acad., Honorary Vice President, Russian Research Center *Kurchatov* Institute, Moscow, Russia

Radchuk Alexander, Prof., Advisor to the Chief of General Staff, Russian Armed Forces, Moscow, Russia

Rybachenkov Vladimir, Dr., Advisor, Embassy of the Russian Federation to the United States, Washington, D.C., U.S.A

Satanovsky Yevgeny, Dr., Prof., President, Institute of Middle East Studies, Moscow, Russia

Savelyev Alexander, Dr., Head of Strategic Studies Department, International Security Center, Institute of World Economy and International Relations (IMEMO), Moscow, Russia

Semin Valery, Prof., Dr., Senior Counselor, Permanent Mission of the Russian Federation to the United Nations Office and other International Organizations in Geneva, Switzerland

Shlykov Vitaly, Chairman, Commission on Security Policy and Evaluation of Defense Legislation, the Public Board at the Ministry of Defense of the Russian Federation, Moscow, Russia

Sokov Nikolai, Dr., Senior Research Associate, James Martin Center for Nonproliferation Studies, Monterey Institute of International Studies, Monterey, U.S.A

Trenin Dmitry, Dr., Director, Carnegie Moscow Center, Moscow, Russia

Tuzmukhamedov Bakhtiyar, Dr., Prof., Counselor, Constitutional Court of the Russian Federation, Moscow, Russia

Ubeev Alexey, Dr., Deputy Director, the Department of International Cooperation, the *Rosatom* State Corporation for Atomic Energy of the Russian Federation, Moscow, Russia

Yesin Viktor, Dr., Prof., Col.-Gen. (ret.), Advisor to the Commander-in-Chief, Strategic Missile Forces, Ministry of Defense, Moscow, Russia

Zababakhin **All-Russian Scientific Research Institute of Technical Physics** (VNIITF), Federal Nuclear Center, Snezhinsk, Russia

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