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CAST Director & Publisher
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Advisory Editors
Konstantin Makienko
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Researchers
Ruslan Aliev
Sergey Denisentsev
Polina Temerina
Dmitry Vasiliev

Editorial Office
3 Tverskaya-Yamskaya, 24, office 5,
Moscow, Russia 125047
phone: +7 495 251 9069
fax: +7 495 775 0418
http://www.mdb.cast.ru/

To subscribe contact
phone: +7 495 251 9069
or e-mail: mdb@cast.ru

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Cover Photo: Russian Defense Minister Anatoly Serdyukov during his trip to the 201st Motorized Rifle Division in Dushanbe, Tajikistan. Summer 2007
Photo by: Leonid Yakutin

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Ukraine, NATO and Russia

Mikhail Barabanov

Ukraine's ambition to join NATO is fast becoming the most important challenge to Russia's foreign policy, in terms of its relations with other former Soviet republics as well as its relations with the West. Moreover, the Budapest declaration that Ukraine (and Georgia) "will become members of NATO" should finally compel Russia's political leadership to articulate a clear policy towards Ukraine and NATO alike.

What Does Ukraine See in NATO?

A deep-seated hostility towards Moscow is clearly the decisive factor motivating that part of the Ukrainian political elite currently in power to seek NATO membership. This faction sees Russia as a "historical enemy" and seeks to distance Ukraine from Russia as much as possible. These militant Russophobes are making their presence felt on all debates over the domestic and foreign policy of Ukraine.

Leaked documents from the Ministry of Foreign Affairs describe Ukraine's entrance into NATO as "the final escape of Ukraine from Russian influence and the prevention of its potential restoration in the future." NATO is viewed as a means of protecting Ukraine from Russia, and it is precisely the anti-Russian orientation of NATO that makes the organization attractive to the pro-Western leaders of Ukraine. If NATO were not an anti-Russian alliance, the question joining NATO would never have come up.

All this goes to show that Kiev, despite public assurances of friendship and partnership, actually sees Moscow as "enemy number one" and the main threat to Ukraine. And this is why Ukraine supports every anti-Russian movement and operation in the post-Soviet space – from providing support and arms for the Saakashvili regime to the establishment of the notorious GUAM alliance. Kiev's intention to bring Ukraine into NATO finally discloses the truth about current Russian-Ukrainian relations. Ukrainian plans to join NATO are nothing less than the open manifestation of an anti-Russian policy.

The implications of this fact must be stated clearly. Since the leadership of Ukraine is conducting an openly anti-Russian policy, is it not past time for Moscow to face reality, and formulate a policy towards Ukraine that is adequate to the threat?

First, we must recognize that Ukrainian membership in NATO would represent a direct and fundamental threat to the Russian Federation as a state and to the Russian people as a nation. The scale of this threat exceeds all other challenges that Russia has faced since the collapse of the USSR, including Chechen terrorism.

In geopolitical and cultural terms, NATO membership would transform Ukraine's border with Russia into a line of confrontation between the West and the East. It would sever the close, centuries-old ties that have joined communities on either side of this border together and consolidate the artificial distinction of Ukrainians as a people entirely separate from Russians. The cultural identity of Russian speakers in Ukraine and all forms of Russian influence would be suppressed by official policies of Ukrainification – even in the historically Russian territories of eastern Ukraine, Novorossiya and the Crimea.

Politically, Ukraine in NATO would mark the ultimate stage of the disintegration of the USSR and signal the readiness of the West to proceed with the containment and isolation of Russia. Ukraine would become the cornerstone of a new anti-Russian "sanitary cordon" and the West's bridgehead for stepping up pressure on Russia. Since the ultimate goal of the West is to undermine Russia's status as a great power and to "throw the Russian barbarians back to the wild eastern steppes," it is a natural ally for Ukrainian nationalists who see the suppression of Russia as the guarantee of Ukraine's independence.

In military and strategic terms, the expansion of NATO to the territory of Ukraine would be a catastrophe for the military security of Russia. The forces of the most powerful military alliance in history would reach up to the borders of the most developed and densely populated regions of European Russia. Our strategic forward defensive position will be thrown back to what it was 500 years ago. Moscow would become a frontline city near the border, within range of tactical aviation or missiles deployed in Ukraine. Russia would be threatened by the rise of an extensive and continuous ground front.

Of course, President Yushchenko has offered demagogic assurances that no foreign bases will be deployed on Ukrainian territory (incidentally, this would also apply to the Black Sea Fleet in Sevastopol). But these assurances are meaningless, since the modern armed forces of the United States and NATO are sufficiently mobile to deploy rapidly to Ukrainian territory in case of necessity. It would be senseless for Moscow to pay attention to any such "assurances" made by ephemeral political leaders in Kiev who are not in a position to assume responsibility for their words, especially with regard to issues of such vital importance to the Russian people.

NATO and Russia

It is time to take a clear, unambiguous look at the current role of NATO. The North Atlantic pact was created as a military coalition directed exclusively against the USSR. In the words spoken the first Secretary General of NATO Lord Ismay, spoken in 1956, the mission of the Alliance is "to keep the Russians out of Europe." Today, regardless of all the geopolitical shifts in Europe and the world, NATO remains an anti-Russian alliance. By bringing Ukraine into NATO, the West is in essence replicating the old division of Central Europe, most starkly manifest in the division of Germany and of Berlin. Only now, the borders of the "Western Zone" are being pushed up to Smolensk and Kursk.

It is well past time for Russia to make a clear and direct statement, without any equivocal references to "partnership," on its view of the anti-Russian policy of NATO; to make it clear that any further expansion of NATO presents a direct threat to our national security, and that any former Soviet republic that declares its intention to join NATO thereby automatically declares its hostility towards Russia. And it is time to make this position clear to the ruling elite and people of Ukraine.

The ambiguity of Russia's current stance towards the intention of Kiev to join NATO is disorienting for both Russian and Ukrainian policy. On the one hand, Moscow lets it be known that it is does not support Ukraine's membership into NATO. On the other hand, it also makes official statements to the effect that it is not opposed to membership and that the matter should be left to the "will of the Ukrainian people" – an amusing appeal on the part of the Kremlin to democratic principles, for which it shows no great respect at home. Moreover, Russia itself perpetuates its strange, comic partnership with NATO; a circumstance exploited by pro-NATO groups in Ukraine as the ultimate justification of their position.

In essence, Russia has shamefully avoided any discussion of this most dangerous challenge to its national security, and has all but given up the battle for public opinion on this issue in Ukraine. Moscow has thus undermined the position of the anti-NATO factions within Ukraine and in the West as a whole, of those who fear the consequences that the expansion of NATO holds for the security of Europe. This very same stance of appeasement was adopted by Moscow several years ago towards the admission of the Baltic States into NATO. Even then, it was clear that once the Baltic States joined NATO, the question of Ukraine's membership would soon arise.

What Russia Should Do

It is time for Russia to recognize that the enemy is at the gate, and for Moscow to engage in the decisive battle for Ukraine. Ukraine's ambition to join NATO must be challenged at every level of our bilateral relations, and the internal Ukrainian debate over NATO membership must be pushed to a conclusion. And on this issue Russia must make it clear that fundamental issues of principle are at stake, over which no compromise is possible: Russia will not accept anything short of the full rejection by Ukraine of NATO membership at any time.

It is essential to communicate to the elite and people of Ukraine that NATO membership would have dire and unforetold consequences for the security of Ukraine and its relations with Russia. Membership in NATO will not increase Ukraine's security, but rather place Ukraine under a critical threat against which NATO can offer no protection. All who advocate NATO membership will be viewed as an enemy of Russia and suffer the consequences. Meanwhile, generous, comprehensive assistance should be granted to anti-NATO politicians and social movements. There is no need to fear cries of interference in the internal affairs of Ukraine, especially when they come from the mouths of the Orange leaders. On the issue of NATO membership, Ukraine's "internal" affairs are Russia's affair as well.

Russia should also challenge the actions of pro-NATO factions in Ukraine against the terms of the Russian-Ukrainian Treaty on Friendship, Cooperation, and Partnership, signed in 1997. The meaning of this Treaty is clear: Russia recognized the borders of Ukraine as they existed in 1991 (i.e., as established in 1954) in exchange for assurances that Ukraine's policy would be friendly towards Russia and respect its security interests in the Crimea. The Treaty clearly states that the parties "shall base their relations on the principles of strategic partnership and shall refrain from participation in or support of any actions of whatever kind that may undermine the security of the other country."

Over the past few years, Kiev has repeatedly and systematically violated the spirit and letter of this treaty, especially with respect to the Crimea. It has created intolerable conditions for the basing and development of the Black Sea Fleet. It has irresponsibly provoked Crimean Tatar nationalists, and with its policy of Ukrainification, Kiev is impudently trampling upon the interests of the Russian-speaking population of the Crimea, and completely disregarding the autonomy of the Crimea.

Moscow has closed its eyes to these outrages in a perverse manifestation of political correctness. But in view of Ukraine's NATO ambitions, it is no longer acceptable for Moscow to hide its head in the sand. It is time to stake out Russian claims to the Crimea. Russia must declare its readiness to repudiate the Treaty of 1997 if Kiev continues its campaign to join NATO. Moscow must support pro-Russian movements in the Crimea. With Kosovo as a precedent, it is difficult to understand why we should leave "Khrushchev's gift to Ukraine" in the hands of a hostile regime.

Russia should support openly and extensively all Russian-speaking people and autonomous movements

elsewhere on the territory of Ukraine, especially in the eastern territories and Novorossiya. The nationalists in Kiev must be given an unambiguous warning that Russia has no obligation to support the territorial integrity of Ukraine as a candidate for NATO membership. Russia should also work together with the more pragmatic elements of the "old" NATO and show them how Ukraine's membership would undermine their security. After all, there are very few Europeans who are prepared to "die for Danzig."

Finally, it is time to deploy "more convincing arguments" in support of our position against the increasingly hostile regime in Kiev. President Putin recent comments are pertinent in this regard. Russia should not shy away from stating its readiness to use all available means to prevent Ukraine's accession to NATO, to protect its interests in the Crimea and Sevastopol, and to support of the people of eastern Ukraine and Novorossiya.

Russia must strengthen its ground troops on the border with Ukraine to at least five "heavy" divisions at a state of permanent readiness. That would give a clear signal to the pro-NATO politicians in Kiev. It would let them know that we are not joking with them and that Moscow is ready to go very far. The presence of an effective grouping of forces at permanent readiness on the border with Ukraine will make it possible to react to any development and, acting jointly with the Airborne Troops, carry out effective intervention should the situation in the Russian-speaking regions of Ukraine suddenly deteriorate, or to support Russian interests in the Crimea.

If the Russophobes in Kiev force the creation of a "sanitary cordon" on the border of Russia and Ukraine, it would be absurd for Russia to reject out of hand the option of having that cordon established as far as possible to the West. We must base our actions exclusively on interests of national security and not on the false integrity of the political formation known as Ukraine; one which, moreover, is becoming increasingly hostile to Russia. Those who issue a fundamental challenge to the vital interests of the Russian people must be prepared to suffer the consequences.

Towards a Military Doctrine for Russia

Mikhail Barabanov

Just as the development of military capability is guided by the mission assigned to the armed forces, so should the formulation of military doctrine proceed from a consideration of the broader aims of the polity. In Russia, a strong national consensus is forming in support of the restoration of the state as a great power in terms of its economy, politics, military and, to the extent possible within the borders of the former USSR, territory.

The theme of restoration is thus the most appropriate framework for the debate over Russia's future military doctrine, and can assist in defining with precision the doctrine of force development, the mission of Russia's armed forces, as well as potential threats and adversaries.

It goes without saying that restoration goes against the grain of US and Western policy, which is aimed rather the economic, political and military enfeeblement of Russia, never mind its rebirth as a great power. The West is thus by definition hostile to Russia's national objectives, and would prefer Russia to be a chaotic, "failed state," with no pretensions to great power status and, in the best of cases, not to exist as a state at all. The US and the West are the main external obstacles to the restoration and modernization of Russia and can be confidently identified as its chief potential adversaries.

It is equally clear that virtually none of Russia's neighbours, including the majority of the republics of the former USSR, have any stake in Russia's rebirth. And this is what underlies their impetuous pro-Western orientation, ambitions to join NATO, and so on. The unstable and nationalistic temper of the post-Soviet polities, most notable in the Baltic states, Ukraine and Georgia, has grown into a direct challenge to Russia's security. China too has nothing to gain from a strong Russia, and so we must assess that Russia is encircled by potential adversaries.

At the same time, the republics of the former USSR clearly lie within the sphere of Russia's national interests. They are linked to the Russian Federation through a vast network of social, political and economic ties. A genuine rebirth of Russia as a great power is impossible without the restoration of Russian predominance in the former Soviet republics. The manner in which this predominance would be exercised deserves a separate discussion, but clearly it could not be implemented without first eliminating the anti-Russian tendencies manifest in the domestic and foreign policies of these republics, and without preventing the West from interfering in our sphere of interest.

Finally, the threat of terrorism and separatism remains a threat that is in part fed from abroad.

There are thus three principal military threats to Russia, listed below in order of probability.

- "Post-Soviet" conflicts: separatist insurrection and attempts to seize territory within Russia or similar conflicts with neighbouring post-Soviet republics, which see Russia as the main threat to their sovereignty and which seek to minimize Russian influence over their territory;
- The threat of conflict with the US and its Western allies. As the US seeks to maintain and increase its preponderance of power, Russia and China are inevitably seen as adversaries since they alone have the potential to challenge it. The elimination of Russia as an independent state is thus a natural objective of US policy.
- Potential conflicts with states outside of the Western bloc, first of all with China. This threat is currently minimal due to the relative absence of any conflicts of interest between Russia and these states, but this could change in the future.

While conflicts of the first type are the most likely, Russia has and will almost surely maintain for the foreseeable future complete military superiority over the other former Soviet republics. This ensures its strategic dominance over these territories, and so the chief threat to Russia's national interests in Eurasia comes from the potential for political and military interference in post-Soviet conflicts on the part of the West.

The immediate goals of Russia's force development are thus as follows:

- The application of military-political pressure on the domestic and foreign policies of the former Soviet republics and, should the need arise, the use of military force;
- The containment of the US and NATO to prevent interference in any possible conflict in the post-Soviet space or possible Russian operations towards former Soviet republics;
- The preservation of sufficient military capability to contain China should it ever become hostile to Russian interests;
- The suppression of internal acts of separatism and terrorism.

In order to achieve these goals, Russia should keep forces on constant alert deployed on its European territories during times of peace, capable of rapid intervention and offensive operations on neighbouring territories.

Russia's military planning should assume a clearly-

defined, offensive character. In case of a crisis in the post-Soviet space, only rapid and decisive offensive operations will prove effective. Any delay or postponement would give time for the military-political consolidation of Russia's adversaries and, most importantly, increase the risk of external interference on the part of the West. Thus, Russia should maintain military formations at constant battle readiness for offensive operations without the need for any preliminary mobilization or concentration of forces. The success of rapid offensive operations would prevent NATO from using former Soviet republics against Russia and would force the Western alliance, should it decide to engage Russia in armed conflict, to concentrate its forces on European territory proper, and under much less agreeable circumstances. The prevention of NATO deployment on post-Soviet territory is a categorical imperative for any Russian operation, which can rely on speed alone to ensure success.

In times of peace, the offensive posture of battle-ready formations would enable Russia to apply an effective deterrence against the post-Soviet borderlands, undermine their confidence in Western assistance and by the same token erode their pro-Western orientation.

In times of war, the same offensive posture would allow Russia through rapid strikes to upset the entire strategic balance on the territory of the former USSR to its advantage. This could prove decisive in any confrontation between Russia and external forces.

Any reliance on defensive operations is completely unacceptable, insofar as they give the initiative to the adversary. Given the current state of Russia's armed forces, this would be suicidal. A defensive posture can do nothing to advance Russian interests. Only offensive operations would allow Russia to assume effective control over the post-Soviet space and to prevent the concentration and deployment of the forces of a potential adversary. Only decisive and offensive action can compensate for the unfavourable balance of forces between Russia and the West.

Thus, Russia should establish offensive, interventional armed formations deployed during peacetime and prepared for decisive operations in the post-Soviet space. The specific configuration of these forces requires separate discussion.

As for the extent to which these forces are oriented against the West, we must assert that the current, unipolar world order, based on the military-political hegemony of the US and its allies, is not acceptable to Russia. Russia's aim is to create a multi-polar world order, and the development of its military capability should support this objective with the following measures:

- Ensure effective nuclear deterrence of the US and its allies;
- Maintain the means to limit most US strategic capabilities;
- Maintain the capability to prevent US forces from accessing former Soviet territory;
- Be able to counter the US and NATO in a limited non-nuclear military conflict.

Such formulas allow for a clear, concrete determination of the direction to be taken by Russia's force development. And in this process it is essential to avoid the temptation to compete with the US and NATO on quantitative measures. A new arms race is not only beyond Russia's power, but would lead to a criminal dissipation of resources.

It is more than clear that the US and its allies currently dominate the world, in part on account of their military superiority over Russia. Direct conflict with the West would be pointless. But having capable, effective and combat-ready forces would allow Russia to contain the West and compel it to take Russian interests into account.

The restoration and development of Russian military capability should contribute to the erosion of American hegemony, and should be adequate to the task of supporting Russia's great power ambitions, at least on the territory of the former USSR. Russia's long-term goal should be to attain integral superiority in Eurasia over all other players.

We should not entertain any illusions. The US was, is and will be the main external political adversary and the main source of military threats to Russia. And Russia's force development must take this into account. As for NATO, it is clearly an anti-Russian alliance and its main task is to protect Europe from Russia. If there was no Russia, there would be no NATO. Russia should thus clearly state that NATO represents a military threat, that any attempt on the part of a post-Soviet republic to join it will be interpreted as an anti-Russian act, and that the expansion of NATO into the territory of the former USSR is categorically unacceptable.

Russia's foreign and defense policies are destined to support its restoration as a great power. The recognition of this objective is essential to the clear formulation of how the development of Russia's armed forces should proceed, and should be explicitly defined at the core of Russia's military doctrine.

Serdyukov Cleans Up the Arbat

Ruslan Pukhov

Anatoly Serdyukov's surprise appointment in February 2007 as Minister of Defense came as a shock to the military, to politicians, and independent experts. The former furniture dealer's experience in government was limited to the tax departments, even if he rose quickly up the ranks to become Chief of the Federal Tax Service.

Surprise gave way to irony and skepticism that a man with his background could make any headway against the staunchly conservative defense establishment; but attitudes changed dramatically in short order, as Serdyukov's first year in office was marked by convulsions, the likes of which have not been seen on the Arbat in decades. Like a modern Hercules cleaning out the Augean stables, Serdyukov brought apparently unlimited energy to a thorough purge of the department.

Following the initial dismissal of Colonel General Anatoly Mazurkevich, Chief of the Main Directorate for International Affairs, and of General of the Army Aleksey Moskovsky, Deputy Minister and Chief of Armament, came the further dismissals in May of General of the Army Vladimir Mikhailov, Commander in Chief of the Air Force, ostensibly due to his advanced age, and Colonel General Boris Chelstov, Chief of the Air Force Supreme Headquarters. The same fate befell the Navy in September, as Commander in Chief Admiral Vladimir Masorin was forced to retire, and replaced by Admiral Vladimir Vysotsky.

In the fall, Colonel General Aleksandr Kolmakov was appointed Deputy Minister of Defense, while Lieutenant General Valery Evtukhovich took his place as Commander of the Airborne Troops. Former border guard and now nominal civilian Oleg Eskin was also appointed Deputy Minister. Colonel General Nikolai Resnik was dismissed as Chief of the Main Directorate for Morale and given a position as an adviser to the Minister. Finally, the "tamer of Chechnya" Lieutenant General Vladimir Shamanov was appointed Deputy Chief of the Main Directorate for Military Training and Service, which has resumed its former stature as one of the most important structures of the renewed defense department.

Even more changes to the top leadership were awaited throughout the year. Lyubov Kudelina, the chief financier of the MoD, and General of the Army Vladimir Isakov, who has been Chief of Logistics for the past eleven years, were widely expected to go. Rumors circulated constantly about the dismissal of Yury Baluyevsky, General of the Army and Chief of the General Staff, even though his term was formally extended to 2010. It seems that Kudelina's and Baluyevsky's backers are still fighting back-room battles in the Kremlin and White house.

Actually, these appointments, each of which was naturally followed by the migration of subordinates from one office to another, are just surface signs of the sea change that has taken place in the MoD under Serdyukov. One of the main accomplishments of his leadership has been to instill an atmosphere of "shock and awe" in the halls of the department.

Serdyukov made a point off not getting involved in the daily administration of troops and operational-strategic planning, leaving these matters to the professionals. Instead, he focused on organizational and budgetary issues, and in these spheres he insisted upon an unprecedented (at least for the MoD) level of precision and fastidiousness. He was thus able in short order to put the generals in their place and to instill a level of background fear that even the old-timers do not recall having seen before. As an officer in one of the central directorates of the MoD explained: "senior generals go to meetings of the Defense Board as to the scaffold."

Some interesting stories about Sedyukov's style are beginning to emerge from those who have seen him in action. According to one account:

"At meetings of the MoD Board, Igor Rodionov used to read prepared speeches from beginning to end. Sergey Ivanov would improvise and deviate from the text; moreover, he would offend sensibilities, breaking protocol and smoking during official meetings. Serdyukov comes prepared, having studied the reports, but he speaks without referring to any notes and throws out questions that are not always on the agenda but which always hit the mark, leaving many respondents grasping at straws."

Here, for example, are some questions he put to generals responsible for morale: "How many agreements were signed this year with civilian universities for the free education of officer's children?"

– "Actually, none, Comrade Minister!"

– "You might be able to pay for a private education for your children, but an officer from some far-off garrison, who makes from 10,000 to15,000 rubles per month, cannot. Why has this Ministry, which has influence over the civilian colleges, not seen fit to do anything about this? Report!"

And here is a question posed to the head of the housing department: "Why is the department building housing according to old blueprints that allow for the bare minimum of living space, while paying the same rate as for elite housing? Report!"

To the Deputy Minister of Defense: he asked: "How many testing ranges are owned by the MoD? How much land

do they cover?" Getting no response, Serdyukov continues: "Who permitted the construction of private cottages on the territory of these ranges, such as at Senezhsky? Report!"

Similar questions put to officers of Logistics, the Main Mobilization Directorate, the Main Armor Directorate, the Main Missile-Artillery Directorate and others carry the same message: no more stealing!

The new minister regularly initiates wide-ranging investigations that have led to significant operational changes to the ministry. Immediately upon his appointment, Serdyukov ordered an audit of the financial compliance and effectiveness of main and central directorates of the Ministry and General Staff, along with the chief commands and service headquarters. Moreover, these inspections were conducted by people who have never worked for the military and were brought to the ministry by Serdyukov, including many who worked with him in the tax departments, including former Deputy Chief of the Federal Tax Service Sergey Khursevich and several of his colleagues.

Serdyukov also invited former VP for finance of the oil company TNK-BP (and former Deputy Minister of Finance) Mikhail Motorin to the Ministry. As a MoD source lamented: "inspections are now being conducted by people who have neither slept on armor nor toasted to friendship with the people they are auditing."

Anti-corruption measures taken by Serdyukov have been met with open opposition and led to many dismissals – even one suicide. Nevertheless, the Minister's actions to bring corrupt networks to light and some order to the military's finances have had a palpable effect with positive resonance among the public.

The new Minister has also begun to address such acute and long-standing issues as the ineffectiveness of Russia's defense industrial and procurement policies. Why, with so much spending on defense, do the Armed Forces possess so little new equipment? Why does the design and testing of many new types of armament take decades to show results? Soon after his appointment, Serdyukov asked the Ministry of Defense Military-Technical Commission a number of pointed questions. The Minister wondered aloud why the Military-Technical Commission artificially delay the acceptance or refusal to accept advanced armament prototypes. Serdyukov did, however, take care to safeguard the deciding vote of the Ministry of Defense on the procurement of military equipment and not allow final decision making to pass to the recently-created Federal Agency for Armament, Military, Special Equipment and Material Resources Procurement.

Serdyukov has brought a new approach to many aspects the department's work. He initiated, for instance, modifications to the Russian military uniform, which has in many respects become outdated and uncomfortable. He has also addressed the issue of the physical condition of Russia's generals and senior officers. The entire service personnel of the General Staff, irrespective of rank, must now meet set physical standards upon threat of dismissal.

He also launched plans to reduce the personnel in the central administration by 30%, which would lead first of all to the liquidation of a significant number of positions filled by generals and colonels. Another important project would have many positions that do relate directly to combat readiness to be filled by civilians, such as accountants, lawyers, doctors, etc. A significant proportion of the department support services will also be contracted out to civilian firms.

Given the extraordinarily high prices for real-estate in Moscow, Serdyukov's move to sell off surplus land and buildings owned by the Ministry and to use these funds to construct housing for service personnel has proven timely and effective.

One further measure that deserves mention is the decision made May 8, 2007 on the one-time declassification of practically all Red Army archival documents of the WWII period, allowing researchers almost unrestricted access. Paradoxically, over the past 20 years of "democratic" rule none of the "democratic" rulers has done anything of the kind, not only in relation to archival documents of the Ministry of Defense but for any other archives.

As a result of one year's work by the new Minister, the central agencies are working at a quicker pace in a new, businesslike atmosphere. Many obvious problems are finally being resolved, issues that have been dismissed as secondary but which are actually extremely important. Serdyukov's metal broom is clearly working, and everyone involved with the military feels the winds of change. The MoD is working in an increasingly transparent manner and has demonstrated a new willingness to engage the public. Moreover, Serdyukov works without attracting undue attention or creating needless sensations with statements and promises on military-political or internal defense affairs. He generally avoids publicity and acts in a calm, methodical, and consistent manner.

However, Serdyukov was appointed not just to clean a rusty military machine, eliminate obvious abuses and whip the over-fed corps of generals back into shape both literally and figuratively. His mission is broader and of greater significance, and he has shown himself to be the most able and effective manager to assume the helm of the Russian military since the time of Stalin's commissars.

Indeed, it has been precisely bad management that has emerged as the Achilles heel of the Russian military today; the source of the of the military's chief deficiencies in planning, organization and expenditures. It is precisely the superior management of the West's political-military machinery, and not greater spending levels, that allow it to maintain its dominant position in the world.

This has become especially apparent in the last two years, as ever-larger tranches of funding have been allocated to the MoD. They have obviously not yet had a transformative

effect on the degraded condition of our Armed Forces. And it is precisely the astonishment that lies behind the question: "where is all of the money going?" that is being asked first of all in the Kremlin, that has propelled Anatoly Serdyukov to his appointment. He has been charged with the introduction of an effective, modern system of management to the Russian military.

Over the past year, Serdyukov has shown his grasp of the big picture. Indeed, as "CEO of the MoD," Serdyukov could be described as one of Putin's most effective appointments. But it is still far too early to give a conclusive evaluation of his performance. Given the monumental scale of the problems facing Russia's military, Serdyukov's biggest challenges almost certainly lie ahead.

Reform of Military Education in Russia

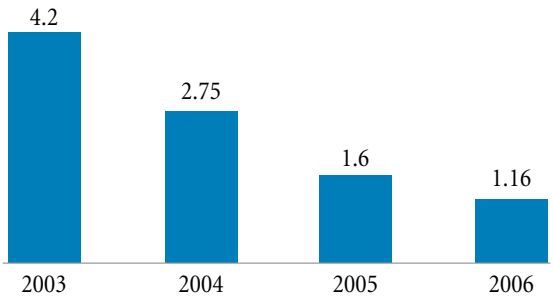
Nikolai Pankov, Deputy Minister of Defense, Russian Federation

Surplus Institutes a Major Problem

The Soviet Army endowed Russia with one of the best systems for officer training in the world. Soviet military education was allocated significant resources: 166 service academies each year turned out over 60 thousand well educated and professionally trained officers for an army of over four million. Officers from 32 countries came to the Soviet Union for their training.

Over last 20 years, however, the service personnel of the Armed Forces has decreased by 3.6 times (see figure 1), and the demand for trained officers has decreased proportionately: from 60 thousand to 15-17 thousand. However, the number of service academies has decreased by only 2.1 times: from 166 to 78.

Figure 1. Active Service Personnel, 1990–2005 (mln)



Source: Ministry of Defense, Russian Federation

For the service academies, this means two things:

- Low student numbers. There are thirty service academies with as few as 400-1000 students, and 25% of their study period is spent on drills, exercises and upkeep routines. These academies have as few as 8 – 10 instructors, which makes it impossible to conduct teaching and research in an adequate manner. This has contributed to the degradation of training.
- Surplus facilities. Maintenance and repair of educational facilities and infrastructure account for up to 46% of the funds allocated to military education (see figure 2). In absolute terms this amounts to 14–15 billion rubles per year. Considering that the facilities are only used at 60-70% capacity, we are wasting about one third of this, that is, about 5 billion rubles. Moreover, many of the facilities are completely obsolete and any funds spent to modernize their infrastructure would be simply wasted.

These mounting problems are best illustrated with concrete examples. Take for example the number of officers trained for the missile forces and artillery. The assigned strength is 10.6 thousand personnel. The training quota for this specialization is just 530 officers per year, but we maintain four institutions of higher learning with the capacity to train 7.2 thousand officers: the Mikhailov Artillery Academy and the Yekaterinburg, Kolomna, and Kazan higher schools of artillery command.

Automotive engineers provide another good example. The quota for newly trained officers is 330 per year. Until recently, training was conducted at three academies with a top capacity of seven thousand students. After the closure of the Far Eastern college of automotive engineering only two academies remain in Chelyabinsk and Ryazan, with a capacity of 5.2 thousand persons per year.

As for the training of signalers, we have an annual quota of 1100 officers that was met until recently by six military academies capable of training about 10 thousand per year. A decision has been taken to close two of them: the Ulyanovsk and Kemerovo signals academies, leaving the Military Signals Academy, the Stavropol Military Signals Institute, and the Novocherkassk and Kemerovo higher military command signals schools with a capacity of 6.7 thousand cadets.

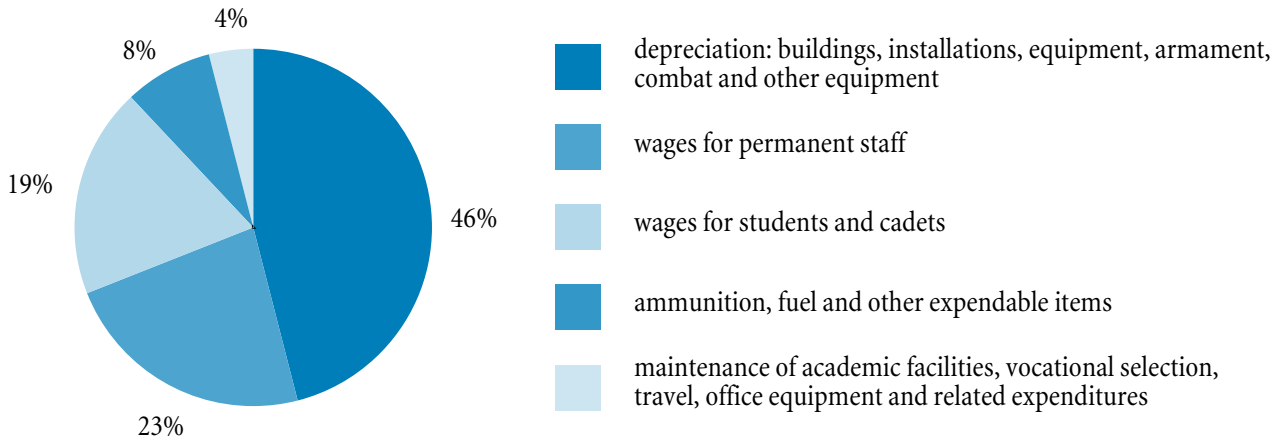
The annual quota for armor officer training is 179. This number is too low to keep even one specialized academy in operation, but just one year ago we were training officers at two: in Chelyabinsk and Kazan, and it has since been decided to close the first.

There are positive examples as well, such as the training of chemical, biological and radiation defense troops. In 2000 these forces had three small academies in Tambov, Kostroma and the Military University for CBR Defense in Moscow RkhBZ. The latter had 130 students and 200 cadets, that is, 330 people. We also had to maintain two camps and a significant number of buildings and barracks. Today, the CBR defense troops have a single, integrated academy that fully meets modern standards.

Achievements of the First Federal Program

In order to deal with these problems in a comprehensive manner, the government adopted a federal program to reform the system of military education to 2010. Its twin aim is to

Figure 2. Expenditures on Officer Training at Service Academies



Source: Ministry of Defense, Russian Federation

eliminate factors that hamper the functioning of the system of military education and to support its development with increased funding.

The first stage of the program, which concluded in 2005, allocated 350 million rubles for educational materials, and this had a positive effect. Educational information systems were enhanced with the purchase of over 5000 computers and multimedia projectors, and over 700 thousand training manuals. This doubled or tripled the availability of computers at the institutes. All military educational institutes got access to the internet and completed procedures for state attestation and accreditation. During this first phase, state educational standards were established for a number of military specializations, which helped to focus officer training, especially for multi-service training.

The second stage of the program, which concluded in 2006, had even more impressive results. The main goal of the second stage was to optimize the facilities and provide more educational materials to those institutes that were targeted by the reform program for expansion. These institutions received 205 modern typographies, 33 linguistic booths, 40 exercise simulation classrooms, and 400 multimedia projectors. For the first time, an automated library information system providing the leading institutes with access to educational materials was established. If the institutes each had an average of two multimedia projectors in 2003, this indicator increased by 14 times by 2007, and the number of modern computers increased by a factor of three.

In addition to these improvements to facilities and materials, the institutes increased construction of student housing. At some academies, such as the RkhBZ, the problem of housing full time students has been completely resolved, and financing has been allocated to make this a reality for all institutes within the next year or two (see figure 3).

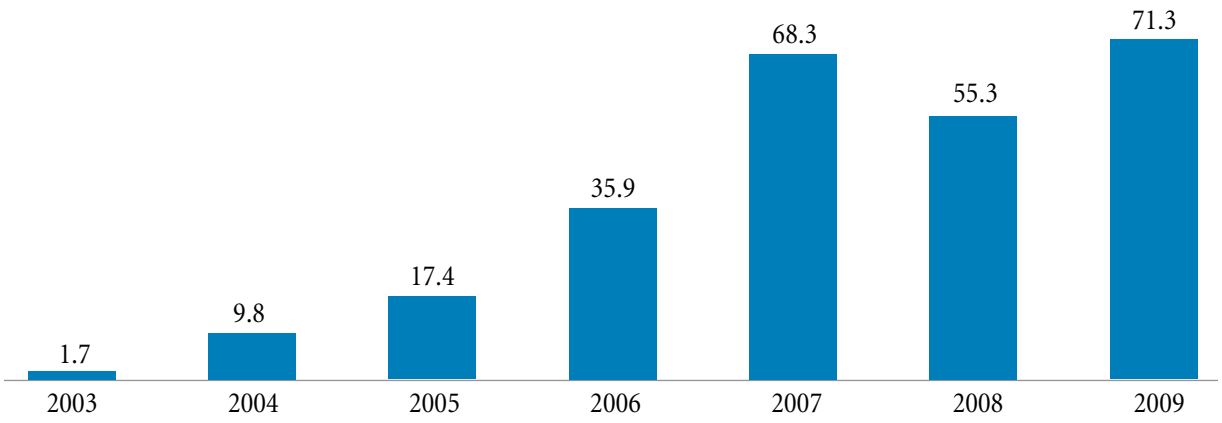
Further Improvements to Defense Institutes

An examination of the results of reform over the past few years leads to the following conclusions:

- The direction of reform that has been adopted has already produced concrete results relating to qualitative and quantitative improvements to military education and the quality of life of students.
- The funds allocated through the federal programs for educational materials and facilities has addressed some major problems that have been ignored for many years.
- Work on the reform of military education should continue, in order to establish large integrated military academies capable of training officers in a wide range of specializations.

These positive results should not blind us to the problems that we are confronting. There remains a certain lack of understanding of the aims and mission of the ongoing reforms, both within the Armed forces, and in social organizations and the veterans movement. Every decision to reorganize an institute provokes a storm of indignation. The President, White House, State Duma and Federation Council each receive dozens of angry letters attesting to the uniqueness of a given school or academy and how its closure will undermine national security or destroy the system of military education. However, practice has shown these concerns to be unfounded. Not a single

Figure 3. Growth of Funding for Institutes, million USD



Source: Ministry of Defense, Russian Federation

training specialization has seen a decrease in performance indicators over the past several years of reform. Nor will this happen in the future, in view of the great attention that is now being accorded to the training and education of officers.

These views are understandable, and respect must be shown to those who have dedicated their lives to the service of the fatherland. But we cannot base our decisions on emotion. The optimization of the academy system is a difficult, but inevitable process. And if we do not push forward today, we shall witness a slow degradation of the system of military education, the loss of traditions and of continuity in the training and education of officers.

In conclusion, we note that once the federal program to reform military education draws to a close in 2010, this does not mean that our work in this area will be finished. We are already developing a profile of the armed forces to 2020 and defining the quantitative and qualitative parameters for officer training that we need to achieve it. This work will help to refine the network of military academies. The trend towards the creation of large, well-equipped research centers to provide quality training for military specialists for the 21st century will not change. Such are the requirements as articulated by the current and elected presidents of Russia; such are requirements of modern times. The MoD will do everything required to complete this mission.

Towards the Restoration of Russian Air Power

Ivan Konovalov

The resumption of long-range bomber flights in 2007 is in many ways symbolic of the current state of Russian air power. Still just a shadow of its Soviet past, Russia's Air Force has nonetheless preserved capabilities matched by no other power save the United States. A survey of the current status and development potential of the Russian Air Force shows that the restoration of Russian air power has gone well beyond the resumption of strategic bomber flights, but remains incomplete in many respects.

Current State

In early 2007, the Russian Air Force had 184,600 personnel and 2800 aircraft and helicopters, not counting those that have been decommissioned or which are in storage. In structural terms, the Air Force has the following combat arms:

- aviation (including bomber, fighter, air defense, ground attack, reconnaissance, transport, and special aviation);
- antiaircraft missile troops;
- specialized support troops;
- logistics.

Since May 2007, the commander in chief of the Air Force has been Colonel General Aleksandr Zelin. Lieutenant General Igor Khvorov has been the chief of the Air Force General Headquarters since 2007. Other key personnel include a first deputy commander in chief, three deputy commanders in chief (for air defense, armament and political issues), chief navigator and the chief of the antiaircraft missile troops.

The operational structure of the Air Force is formed along functional and territorial lines. It includes nine main formations, of which the Special Purpose Command (which includes an air force and an air defense army) as well as two air armies (consolidating long-range and transport forces) are directly subordinate to the commander in chief of the armed forces, and five joint air force and air defense armies that are under the operational command of their respective territorial military district.

- Special Purpose Command (until 2002 called the Moscow District Air Force and Air Defense) – the joint force s of the air force and air defense of the Moscow zone. The Special Purpose Command includes the 16th Air Army;
- 37th Air Army of the Supreme High Command (strategic bombers) – the major long-range aviation formation;
- 61st Air Army of the Supreme High Command (military-transport aviation);
- 4th Air Army – operationally subordinate to the North Caucasus Military District;
- 5th Air Army – operationally subordinate to the Volga-Urals Military District;
- 6th Air Army – operationally subordinate to the Leningrad Military District;
- 11th Air Army – operationally subordinate to the Far Eastern Military District;
- 14th Air Army – operationally subordinate to the Siberian Military District;

The armies are quite varied, depending on their mission, threat level and area of responsibility, and each has a fairly complex hierarchical structure made up of corps, divisions and separate regiments. The Air Defense Force is divided into corps and divisions that are similarly quite varied, consisting of a several fighter regiments, SAM regiments, and radar brigades and regiments. Other types of aviation are divided into divisions (from two to four aviation regiments) or directly subordinated to air army headquarters. There are, in total, four air defense regiment commands and 15 air force or air defense division commands. In this manner, the air armies function territorially, to bring together all combat and support aviation, SAM and radar units on the territory of a given military district.

The 8th Special Purpose Air Division (transport), the 2457th airborne early-warning aircraft (A-50) and command air base, three centers for military training and transition training (in Lipetsk, Torzhok and Egorovsk), the Air Force testing ground in Astrakhan, as well as other educational and research establishments are also subordinate to the Air Force Supreme High Command.

The regiment is the basic tactical unit of the Air Force. An air regiment now generally consists of a command and two air squadrons (normally with an assigned strength of 12 fixed or 24 rotary aircraft). An air defense regiment includes from two to four S-300P or S-400 SAMs (each division is made up of one SAM system). In addition, there are other aviation units, like air bases, aviation centers, separate aviation squadrons, and flying detachments. The Army's SAM brigades of S-300B and Buk systems are now being transferred to the Air Forces.

Table 1. The distribution and strength of Air Force combat regiments (not counting helicopters)

	Tu-160	Tu-22	Tu-95	MiG-31	Su-27	MiG-29	Su-24	Su-25	Su-24MP	Il-76	SAM
Special Purpose Command				1	1	2	1	1	1		18
4th Air Army					1	2	2	3	1		3
5th Air Army				1			1				3
6th Air Army				1	3		2		1		5
11th Air Army				1	2		3	2	1		3
14th Air Army				1		1	1	1	1		3
37th Air Army (Strategic)	1	4	3								
61st Air Army (Transport)										8	
Total	**1**	**4**	**3**	**5**	**7**	**5**	**10**	**7**	**5**	**8**	**35**

Source: Russian Press

The Air Force has a total of 90 regiments, including four heavy bomber regiments (one Tu-160 and three Tu-95MS), four long-range bomber (Tu-22M3), 10 front-line bomber (Su-24M), seven assault (Su-25), seven fighter (five MiG-29, five MiG-31, seven Su-27), five reconnaissance (Su-24MP, MiG-25PB and MiG-31), one refueling (Il-78), eleven transport (eight Il-76 and three special forces), three mixed (transport airplanes and helicopters), 13 helicopter, and 15 trainer regiments. The Air Defense Force had 35 regiments before the Army began to transfer its air defense brigades in early 2007. The radar forces count 14 brigades and nine regiments.

Beyond Russia's borders, the Air Force maintains two small mixed groups at bases in Armenia and Kyrgyzstan, including MiG-29 fighters, Su-35 assault planes, and helicopters. Air defense systems are also maintained in Armenia.

From time to time Air Force commanders raise the issue of absorbing naval aviation. While the Navy has been able to repulse these unwanted advances, it is likely that Navy's remaining Tu-22M3 will be transferred to the Air Force.

Insufficient funding for repairs and spare parts has contributed to dangerously low serviceability levels, exacerbated by wear and the old age of much of the equipment. In nominal terms, the percentage of battle-ready vehicles in aviation regiments varies from 40% to 60%, but the real level is in many cases much lower. At present it is not a lack of fuel, but rather the worn-out state of the equipment and lack of spare parts that accounts for the limited flying times of aviation personnel. Indeed, serviceability seems to be the main problem facing the Air Force at the present time, and this problem can only be solved with a significant increase of funding.

Potential for Development

Long-Range Aviation

Long-Range Aviation currently has 15 Tu-160 strategic bombers, 68 Tu-95MS strategic bombers, of which four are used for training, and 124 Tu-22M3 long-range bombers (including 8 trainers and a few that have been converted into Tu-22MP reconnaissance planes). The Tu-95MS and Tu-160 are armed primarily with X-55 (SA-15) strategic nuclear cruise missiles, while the Tu-22M3 is armed with the X-22 (AS-4).

Another two or three Tu-160 bombers, the construction of which began in the Soviet period, may be completed at the aviation factory in Kazan, and the modernization of existing Tu-160 is ongoing. The first modernized bomber was delivered to the Air Force in 2006. In total, the state armaments program for 2007-2015 projects the modernization of 159 long-range bombers. The X-555 non-nuclear cruise missile was taken into service, and tests are being finalized on the X-101 and X-102 next generation cruise missiles. Sometime in the future, probably not before 2020, work on a next-generation long-range bomber (a development of the Tu-160 line) will begin. A program to modernize the fleet of 25 airborne early warning planes has begun, with the first delivery made in 2006.

On the whole, it would seem that the current fleet and planned expansion of the long-range bomber fleet clearly exceeds Russia's economic capabilities, and calls for a more modest program are frequently made.

The lack of sufficient numbers of refueling planes (there are currently only 20 Il-78) is a serious deficiency. The purchase of up to 40 refueling planes based on the Il-96 liner was announced, but it is not clear how this will be financed.

Front-line Aviation

Front-line aviation in Russia is taken to include tactical fighting aircraft, frontline bombers, assault bombers, fighters and reconnaissance planes. Together with training, instruction and reconnaissance units, Russia's frontline aviation includes about 1400 aircraft: up to 300 Su-24M, up to 100 Su-24MP, about 200 Su-25, up to 300 Su-27, about 30 MiG-25RB, up to 270 MiG-29, and about 200 MiG-31. Another 900 aircraft are in storage, not counting obsolete models.

Programs to modernize the majority of these aircraft have already gotten underway, though financing has to date been insufficient. The state armament program for 2007–2015 projects the modernization of 408 frontline aircraft. As of today the Air Force has received about 36 modernized Su-27SM fighters, 11 Su-24M2 frontline bombers, 10 Su-25SM assault bombers, and two MiG-31 interceptor-fighters. The majority of these modernizations are limited and relatively inexpensive.

The state armaments program to 2015 projects the delivery of 116 generation-four-plus fighting planes, including 56 Su-34 frontline bombers (not counting the two delivered in 2006), and 60 Su-35 (Su-27BM) fighters. However, production of the Su-34 is facing delays and a Su-35 prototype is expected to make its first flight only in 2008. In any case, it is clear that even if the state plan is fulfilled to the end, only four of the existing 39 frontline regiments will receive new aircraft, and a maximum of 18 will see some modernization of their planes. We may thus expect to see further quantitative reductions to the operational strength of the Air Force before 2015.

The most important Air Force program is still the creation of a fifth-generation fighter, led by Sukhoy with the T-50 (I-21) project. The first prototype with the Article-17 transitional engine is expected to take to the air in 2009, with the second stage of testing to begin in 2012. The launch of series production is optimistically scheduled for 2015, but is unlikely to begin before 2020. The production of the T-50, like the Su-35, will take place at Komsomolsk on the Amur.

Until then, it seems that production of Su-34 and Su-35 will continue. The Air Force is estimated to need between 200 and 300 Su-34, and it is possible that reconnaissance and electronic warfare versions will be developed.

The Russian Air Force lags far behind its Western counterparts in the deployment of guided weapons. Indeed, Russia conducted the first tests of its own satellite guided bombs just a short while ago. Russian fighters are not equipped with beyond-the-horizon air-to-air missiles with active radar homing heads, as the R-77 was not taken into service, and the RVV-AE is meant only for export. Nor are they equipped with high-precision operational-tactical non-nuclear aviation cruise missiles. At the same time, the Su-35 and fifth-generation programs include work on a wide range of new, guided munitions of various classes, including air-to-air missiles of all ranges. The state armaments program for 2007–2015 sets over 60 billion rubles aside for the development and series production of guided aviation weapons, but the introduction of next-generation weapons is likely only after 2010.

Air Defense Force

The 35 SAM regiments of the Russian Air Force (another two S-300P regiments are subordinated to the Navy) contain about 100 active S-300P divisions of the latest version, and two S-400 systems. Another 50 S-300P divisions (mostly old versions) are in storage. A program to modernize existing S-300P systems is underway.

Deliveries of the fourth-generation S-400 Triumph began in 2006, and the first regiment equipped with two S-400 divisions was put to active service near Moscow in the summer of 2007. The state armaments program for 2007–2015 projects the deployment of another 18 S-400 divisions in nine regiments. The S-400 systems have to date used standard, series 48N6 missiles from the S-300PM system, while delivery of the series 9M96 missile designed specifically for the S-400 will not take place before 2010. In addition, the Almaz-Antey concern has begun work on an advanced fifth-generation SAM system called the Samoderzhets, which will have anti-missile and anti-space defense capability, though the timeline for its development is not known.

The Air Force plans to purchase new Pantsir-S1 short-range air defense systems to protect S-300P and S-400 deployments, radar stations and airports. Demand for such units is estimated at about 400 systems.

The creation of a new unified air target acquisition radar station for the radio electronic warfare forces is meant to replace all old-style radars. Testing of the first model should begin in 2008.

Military-Transport Aviation

Having pulled out of the An-70 military-transport aircraft project, the Russian Air Force is relying on the preservation and development of its fleet of Il-76, which now stands at 210 vehicles. Series production of the modified

Il-76MF with the PS-90A engine is being established at Voronezh (instead of Tashkent) and a program to re-equip the existing Il-76MD with these engines has begun.

To develop an alternative to the An-70 as a replacement for the aging fleet of An-12, the Air Force is developing an advanced mid-range military-transport aircraft (MTA) jointly with India. Based on the Il-214 project, the prospects for the MTA are unclear, though the Air Force claims to need about 100 such vehicles. The Il-112V light military transport plane is being developed to replace the An-24 and An-26, with a first flight set for 2009.

All in all, the state armament program projects the purchase of four Il-76MF, 18 Il-112V and ten Tu-204/Tu-21, as well as the modernization with engine replacement of 14 Il-76MD.

Army Aviation

Even though army aviation remains something of a stepchild to the Air Force, important steps have been taken in recent years to get long-delayed (since the beginning of the 1980s) programs to develop a new generation of helicopters back on track.

Testing and development of the Mi-28N as the main combat helicopter began in 2003 and series production is underway at Rostov on the Don. Eight such helicopters were constructed by 2008, and the state armaments program to 2015 projects the purchase of another 67 vehicles (the Air Force estimates that it needs 300). In addition, three Ka-50 combat helicopters are to be built at Arsenev, and 12 two-seater Ka-52 combat helicopters will be built for the use of the special forces.

A program to modernize existing Mi-24P helicopters and equip them with night capability began in 2003. At the same time, the Air Force rejected plans to modernize the older Mi-24V for financial reasons. A limited modernization of Mi-8MTV transport helicopters (including to the night version Mi-8MTKO) has begun, and procurement of this family of vehicles is to be renewed. The state armaments program plans the delivery of 156 new and 372 modernized helicopters for army aviation. Given the current fleet of up to 500 helicopters (about 240 combat Mi-24, a few combat Ka-50 and Mi-28N, 25 transport Mi-26, with Mi-8 transport helicopters accounting for the rest), this would preserve the current make-up of Army Aviation.

In the more distant future, deliveries of light Ka-60 helicopters and Mi-38 transport helicopters are envisaged, as well as advanced heavy transport helicopters like the Mi-46 and new versions of the Mi-26, though the status of these programs is not clear.

Unmanned Aerial Vehicles

It is generally recognized that the Russian Armed Forces lag far behind global standards in the development of UAVs. Only two UAV regiments are equipped with old and bulky Tu-141, Tu-143 and Tu-243 UAVs, and no new generation systems have been deployed. Nevertheless, important steps have been taken to overcome this problem. A few design bureaus are developing a broad range of UAV's, including for reconnaissance, and have established contact with Israeli firms in this regard. MiG Corporation has been contracted by the Air Force to create the Skat stealth strike UAV, a model of which was demonstrated in 2007, with test flights expected for 2009.

Training

Over the past 10 years, the extensive network of aviation academies developed during the Soviet period was largely dismantled, with training concentrated at two institutes: the Krasnodar military aviation institute for airplane pilots, and the Syzransk military institute for helicopter pilots.

Another eight military institutes are used to train Air Force officers for various specializations. The principal institutions of higher learning remain the Gagarin Air Force Academy and the Zhukov Air Force Engineering Academy.

The average flight-time of a graduate of the Krasnoyarsk military aviation institute before admittance to a combat unit is now about 200 hours.

The Czechoslovakian-made L-39 is still the sole training aircraft for airplane pilots in the Russian Air Force, of which it possesses about 400, in varying states of repair. Plans to modernize the fleet were annulled and the plan is now to replace the L-39 with new Yak-130. Although the Yak-130 program has been delayed for economic and political reasons, it is now at the final stage of testing and the Air Force has already ordered 12. One could expect the first to be received by 2009. The state armaments program projects the purchase of 60 Yak-130 by 2015, and the Air Force intends to acquire at least 200.

The Air Force plans to acquire the Yak-54M and the Yak-152 for initial helicopter pilot training, and the Ansat helicopter developed in Kazan as a training helicopter.

Short Term Rearmament Prospects of Russia's Armored Forces

Vasiliy Fofanov

In the twilight years of the USSR, main battle tanks for the Soviet armored forces were manufactured at four factories. Uralvagonzavod (UVZ) in Nizhniy Tagil made the T-72B; the Kirov pilot factory in Leningrad (LKZ) made the T-80U; Omsktransmash the T-80U and T-80UK; and finally, the Kharkov Transportation Machine Building Plant made the T-80UD. The collapse of the Soviet Union left three factories on Russian territory, with the Kharkov plant in Ukraine. But even this reduced capacity was far in excess of Russian needs. Production of the T-80U at LKZ and Omsktransmash stopped dead, and the meager trickle of T-90 tanks that UVZ had switched to making had also dried out in the mid 1990s. As a result, Russia's armored forces have entered the 21st Century with a worn-out fleet of Soviet-made vehicles that were quickly reaching obsolescence. As of today, the armored forces are equipped with a large number of tanks of various kinds, but very few meet modern standards. The average Russian tank is over 20 years old, and a significant number are 40 years and older.

The almost complete absence of defense procurement had a profound effect on the tank plants. Omsktransmash is bankrupt and has been under external management since 2002. Politics played as much of a role as economics in the fate of the Omsk plant and its main product, the T-80U. In the context of fierce competition for meager state financing, the military-technical commission decided that Uralvagonzavod would supply the army with tanks when large-scale procurement resumed, and assigned development work on the future Russian tank to the Urals design bureau (UKBTM).

This victory over Omsktransmash initially yielded little benefit for UVZ as the Russian army completely stopped purchasing tanks in 1996. But thanks to its fairly large scale of civilian production, and support from the regional authorities, Uralvagonzavod was able to preserve the personnel and assembly lines required to resume the mass production of tanks. By 2001, this capacity was suddenly in demand as longstanding negotiations with India finally resulted in an order for 310 T-90 tanks (124 assembled vehicles and 186 kits). Although it was entirely export-oriented, this contract marked a turning point for Russian tank manufacturing, and its importance cannot be overestimated.

To begin with, paradoxically, by the time the contract was filled in 2004, India had become the owner of a larger number of modern Russian tanks than the Russian army itself. Indeed, the latter had no more than 150 T-90 at that time. Moreover, the Indian T-90S tank is in technical terms significantly superior to the first-batch T-90S – it is in some important respects practically a new tank. It has a new welded turret, a 1000 hp V-92S2 engine (compared to the 840 hp V-84MS engine on the old T-90), and the Essa night sight with a French-made Catherine-FC thermal camera. For the implementation of this contract, all engineering drawings were transferred to CAD software and the production process at UVZ was modernized significantly.

Building on this success, UVZ began deliveries of T-90A to the Russian army, which purchased a complete battalion of 31 vehicles over the course of 2004–2005, and another battalion for each of 2006 and 2007. From 2008 it plans on acquiring 2 battalions (i.e., 62 vehicles) per year, which means that the 2nd Guards Taman motor rifle division and the 4th Guards Kantemir tank division of the Moscow Military District will be fully re-equipped with these vehicles in just a few years. The main functional difference between these vehicles and those exported to India is that the Russian models are equipped with the Shtora electro-optical countermeasures suite (EOCMS), but there are a few other differences as well.

Thus, the Russian military has restarted the procurement of new equipment, but at a scale that is insignificant not only compared to Soviet times, but also in relation to the needs of the current tank fleet. Domestic orders are also small compared to UVZ's export book. In December 2007 India ordered another 347 T-90S kits; and since India plans to put another 1000 vehicles in service by 2020, even more orders are likely. Implementation of the contract with Algeria for the delivery of 185 T-90SA tanks has been underway since 2006. Other potential customers include Libya (for 45 T-90S tanks), Morocco and Saudi Arabia.

Moreover, because of design differences between the domestic and export versions, the small batches of tanks ordered for the Russian army are expensive to produce. For example, the price of a T-90 rose from 42 million rubles in 2006 to 58 million in 2007 – an increase of 38%. This level of inflation can hardly be matched by similar increases in defense budget allocations, so a massive armored forces capability increase is highly unlikely.

The same applies to upgrade programs of the T-72 and T-80 MBTs, which form the backbone of the Russian armored

forces, accounting for 70% of the equipment of all active formations and units. These tanks, based on the technologies of the of the early-mid 1980s, have certainly aged, but are capable of being upgraded to the level of the T-90. For example, UVZ has proposed to modernize the T-72B with a new Relikt modular ERA, a new engine, and a modern, Belarus-built Sosna-U integrated FCS with a thermal imagery channel and target tracking unit, and several other improvements that would make the T-72B equal to and in some respects superior to the T-90. Similar proposals have been made to upgrade the T-80BV. The state armaments program, however, is proceeding with more modest upgrades that amount to little more than depot overhaul and an engine upgrade. While this may restore the tanks into service, it does little to improve their fighting capabilities, which are rather modest by today's standards. One cannot but conclude that the re-equipping of the Russian tank troops to the level of the T-90 is not a priority of the MoD.

Admittedly, there is a certain logic to this reluctance. In spite of the fact that a T-90 or a deeply modernized T-72B represents a significant improvement over most tanks currently in the inventory, this rearmament will not provide any quantum leap over the current capability. It is quite likely that more mundane measures in support of the tank troops, such as better living conditions, improvements to technical education and the quality and intensity of practical and combat training would be a better investment for the future.

The situation is equally poor with respect to new advanced heavy amour designs. For example, the UVZ design bureau has developed a tank support fighting vehicle (BMPT) for series production. This is a new class of heavy armored fighting vehicles designed to work together with main battle tanks to destroy and suppress multiple targets against which the classic tank has proven to be vulnerable. In spite of the fact that the design of the BMPT was commissioned by the USSR Defense Ministry back in the mid 1980s, the organization of tank elements and combat tactics have not yet been adapted to their use, nor have any training materials and procedures been developed. The armament selected for the BMPT is also suboptimal, considering the targets it needs to engage. Based on what appears to be the final configuration of the BMPT, revealed in 2002, it is equipped with a twin 30mm 2A42 auto cannon mount with a coax 7.62mm PKTM MG, four Ataka-T guided missiles with HEAT and thermobaric warhead options, and two sponson-mounted individually aimed and stabilized AG-17D automatic grenade launchers. Although the BMPT formally passed into service in 2006, only about 10 vehicles made from T-72 chassis will be ready by 2008/2009.

Efforts to create an advanced Russian tank have also been drawn out for a long time. The first official mention of this tank, which the media have dubbed the T-95, was made by Defense Minister Igor Sergeyev in March 2000. According to published sources, work on "Item 195" began at the UVZ design bureau in the early 1990s. The tank is presumably a significant departure from the Soviet-era tanks currently in service. In particular, it is expected to have a new hydropneumatic suspension with adaptive features, and the entire crew will be placed in a sealed compartment inside the hull, isolated from other tank components. The tank will presumably be armed with a new main gun with a caliber of up to 152mm with a new multi-channel fire control system that works in optical, thermal, near IR, and radar spectrums, and is built on the principle of identical capabilities for both gunner and commander and fully supports the hunter-killer mode of operation, a unified command information system and tactical level automatic management system, and advanced active and passive defensive aids to protect the tank from various modern and future types of threat.

In spite of all the work that went into this tank, it would appear that its development is not yet complete; in part, because of the workload imposed by the T-90 export contracts on UVZ and the design bureau. Apparently, during negotiations over the first contract for deliveries of T-90S tanks to India, Indian experts expressed a strong interest in the future Russian tank that was already at a high level of preparedness at that time. If this is true, then considering the extremely positive influence that cooperation with India has had on the success of T-90 production in Russia, it is a pity that no agreement for joint work on "Item 195" was reached. This would surely have assisted the design bureau to develop a genuinely modern Russian tank, and provided it with an assured market.

In the end, all resources were concentrated in the production of the T-90; a tank that, in spite of its strong qualities, is burdened by design flaws typical of the Soviet tank and thus represents something of a dead end for Russian tank building. The production of an advanced Russian tank remains a project for the future, and whether Russia's defense industry is capable after fifteen years of near-paralysis of providing the Russian army with a high-technology product in the quantities it needs is an open question.

Finally, it bears repeating that military equipment with impressive tactical and technical specifications does not in itself guarantee the effective combat performance of the armed forces. Unfortunately, experts agree that the organization of the armored forces that congealed during Soviet times is far from ideal, and is on the whole inadequate to the task of assimilating and properly maintaining high technology weapons, or of using them to the greatest effect.

One could conclude that Russia's armored forces are not at present entirely ready for the modern tank, and we can only hope that the military leadership is fully aware of this fact. Only the reform and reorganization of the tank troops in line with modern international practices and advanced principles governing the operation of tank units on the modern battlefield will allow the Army to fully exploit the advantages afforded by modern armored vehicles.

Crisis: Algeria Refuses Delivery of MiG-29SMT Fighters

Konstantin Makienko

Facts

The contract for the delivery of 28 MiG-29SMT fighters and six MiG-29UBT trainers worth 1.27 billion USD to Algeria was signed in late January and entered into force in March of 2006, during the visit of President Putin. At that time, Russia agreed to write off 4.7 billion USD worth of Algerian debt in exchange for the purchase of an equivalent value of arms and military equipment. The MiG-29 contract was thus just one of a large package of agreements, which included the delivery of 28 multi-role Su-MKI(A) fighters for 1.5 billion USD, 16 Yak-130 fighter-trainers for 200 million USD (Algeria was the first to purchase these trainers), about eight S-300PMU-2 SAMs, 185 T-90S tanks, a Pantsir-S1 air defense system, and maintenance and upgrades of Algeria's armoured vehicles and ships.

This was the first time that of Russia's military-technical cooperation with foreign states involved a "trade-in," whereby MiG Corporation agreed to buy back a few dozen MiG-29 and perhaps MiG-23 at depreciated book value. It is perhaps for this reason that Russian media initially estimated the value of the contract at 1.8 billion USD. The total value of the package of contracts signed between December 2005 and January 2006 amounted to 7.5 billion USD.

Algeria received between two to four MiG-29UBT in December 2006, and by April 2007 MiG Corporation had transferred 15 MiG-29SMT/UBT. However, in April 2007 the Algerian military stopped making payments on the contract and made several claims regarding the quality of the transferred aircraft. Because the acceptance certificates had already been signed, the claims could not be formulated in a routine juridical manner. Moreover, the Algerian party soon began to insist on the removal of the fighters on the basis of "verbal agreements" without actually annulling the contract. Over the course of the summer, MiG Corporation made efforts to address the Algerian concerns so as to continue the implementation of the contract. However, every offer made by MiG, up to and including the replacement of the delivered fighters with different MiG-29, was refused, and Algeria continued to insist on the return of the fighters. All this time, the Algerian People Army was making intensive use of the fighters, which were deployed to the Laguat airbase 450 km south of Algiers. By some accounts, the fighters were flown between 80 to 100 hours.

By the end of 2007, the Federal Agency for Military-Technical Cooperation, Rosoboroneksport and MiG Corporation came to the conclusion that the best solution to the crisis was to agree to take back the fighters and attempt to replace the MiG-29SMT contract with other agreements (perhaps even for non-aviation deliveries). In February 2008 during the visit of Algerian President Abdeliaziz Buteflik to Russia, an agreement of sorts was reached to return the MiGs to Russia, although the legal status of this agreement is unclear. On February 25 a brigade from MiG Corporation flew to Algeria to disassemble the aircraft. It seems that all of the fighters are now in Russia.

Analysis

Neither Russia nor Algeria has commented on the situation, and so our description of the causes of the collapse of the deal remains speculative. Nonetheless, in our view the crisis has many dimensions, and its multiple causes can be grouped into three categories: (i) technical, (ii) relating to domestic Algerian politics, and (iii) external influence.

First, it seems that the serviceability status of the fighters was indeed less than optimal. Of course, they were not "previously used goods" as some media have speculated, but MiG Corporation did acknowledge that the fighter hulls were built back in 1996. This does not technically violate the terms of the agreement to supply fighters in "current production at the final stage of the technological cycle." However, it seems that the conditions under which these hulls were stored were such that the Algerian claims have some basis. It is also possible that the problem was not limited to the airframe, but extended to affect onboard equipment assemblies.

It is worth noting that the Algerian military proved itself in the 1990s to be a demanding and proud customer. For example, they once refused to accept overhauled patrol ships from the Kronstadt shipyard for much the same reasons. Algeria also repudiated contracts for deliveries of arms and military equipment from China. So it is likely that MiG Corporation's efforts to remedy the situation came too late, insofar as the political decision to stop work on the contract had already been taken.

Nevertheless, there are signs that technical issues were not the only, or even the main cause of the crisis. The Algerian

military surely understood when it signed the agreement that the equipment it was purchasing was not "new" but "current" production. Given the bargain price at which the fighters were sold (just over 20 million USD per vehicle), together with the trade-in provisions, the Algerians should not have had the highest of expectations. Incidentally, the old MiG-23 that Algeria began to send to Russia were in much worse condition than specified in the trade-in contract.

Moreover, in the summer of 2006, that is, before the first MiG-29UBT were delivered, the Algerian Air Force began to scout the market for 30 new series III RD-33 engines, and 15 KSA-15 boxes of aircraft accessories, for the MiG-29 that were to be delivered to Russia in just a few months under the trade-in agreement. MiG Corporation greeted this news with disbelief at first, and then growing anxiety, since it was a clear sign that the Algerians did not intend to fulfill the terms of the contract as agreed.

Second, the MiG-29 deal may have fallen hostage to internecine conflict among the Algerian elite. During his second term in office, President Abdelaziz Bouteflika moved to reduce the influence of the "generals" who have in practice ruled the country since the suspension in 1992 of elections won by the Islamic Salvation Front. Mohammed "Tufik" Medienne, head of the Algerian Secret Services (DNR), is the unofficial leader of this group, and he is thought to have used the real or perceived faults of the MiG to intrigue against the People's National Army's chief of staff Ahmed Gaid Salah, an ally of the President. As an ethnic Kabyle, Medienne used his clan connections with leading Kabyle figures in the Algerian Air Force, including the commander in chief, the fighter aviation commander and other highly placed officers, to precipitate the annulment of the contract.

Finally, the influence of external actors on the Algerian leadership cannot be discounted. The USA and France were clearly worried by the sudden acceleration of Russian-Algerian cooperation on military-technical and energy matters. France and the US are the biggest markets for Algeria's gas – the country's main export. Moreover, according to members of the Algerian opposition, most of the military and security service leaders have business interests in France, the US and South Africa. So the Algerian leadership is clearly sensitive to the influence of Western countries.

Consequences

It is too early to make a conclusive assessment of the consequences of this crisis. For now, it seems that the refusal to accept the MiG-29SMT has been contained and has not tainted the rest of the package of agreements. According to the assessment of ARMS-TASS, Algeria was the fourth top importer of Russian arms in 2007, accounting for about 10% of Russian defense exports. The contract for the delivery of T-90S tanks is ongoing, and the transfer of Su-30MKI(A) fighters has begun. Moreover, Algeria has continued to place new orders with Russia; for example, for the delivery of submarines. That said, before we can assert that Russian-Algerian military-technical relations are back on track, we will have to wait until the deliveries of Su-30MKI(A) and S-300PMU-2 SAM are completed, that is, contracts under the control of the Algerian Air Force.

Export Deliveries of Armoured Vehicles from Russian Plants 1992–2007

Armoured Vehicles	Country	Quantity	Year of deliverie	Cost, mln USD
BMP-2	Finland	84	1992	50*
	Iran	82	1993, 1996	50
BMP-3	UAE	815	1992–2000	1000
	Kuwait	142	1994–1997, 2001	120
	South Korea	70	1996–1997, 2005	100*
	Cyprus	45	1995–1996	40
BTR-80	Hungary	527	1996–2000	320 (including BTR-80A)*
	Turkey	239	1993–1995	50
	Uzbekistan	220	1992–1993, 1997, 2001–2002	50
	Bangladesh	206	1993–1994, 1998, 2002, 2006	50
	Algeria	150	1995	25
	Sri Lanka	30	1998	18
	Uganda	14	2006	4
	Djibouti	8	2002	2
	Colombia	1	2006	1
BTR-80A	Hungary	178	1996–2000	320 (including BTR-80)*
	Kazakhstan	72	2004–2007	36
	Sudan	60	2001–2002	30
	Indonesia	48	2002, 2006	25
	South Korea	33	1999–2000	10*
	North Korea	32	2000–2001	10
	Sri Lanka	19	2001	10
Vodnik	Uruguay	48	2006	8*
Total		**3212**		**~ 2000 (including ~ 500*)**

** – Contracts for compensation of Soviet & Russian Debts*
Sources: Russian press; CAST estimates

Contracts for Exports of Russian SAM Systems 1992–2007

System	Western designation	Country	Year of contract	Quantity	Cost, mln USD	Year of deliverie
S-300PMU-1	SA-20A	China	1996	8 battalions	~ 800	1997–1999
S-300PMU-1	SA-20A	China	2001	4 battalions	462*	2003–2004
S-300PMU-1	SA-20A	Cyprus	1997	2 battalions	230	1998 (deployed in Greece)
S-300PMU-1	SA-20A	Vietnam	2003	2 battalions	230	2005
S-300PMU-2	SA-20B	China	2004	8 battalions	980	2008–2009
S-300PMU-2	SA-20B	China	2006	8 battalions	1000	2010–2011
S-300PMU-2	SA-20B	Algeria	2006	8 battalions	1000	2008–2010
S-300V	SA-12	USA	1995	1 battalion	120	1995
Buk-M1	SA-11A	Finland	1995	3 battalions	~ 135*	1997
Buk-M1-2	SA-11B	Cyprus	2001	Unknown	~ 100 (?)	2006 (?)
Buk-M2E	SA-17	Syria	2007	Unknown	~ 1000	2008–2010 (?)
Pechora-2A	Upgraded SA-3B	Iran	2005	Unknown	~ 200	2006–2007 (?)
Tor-M1	SA-15	China	1996	14	~ 300	1997
Tor-M1	SA-15	China	1999	13	~ 300*	1999–2000
Tor-M1	SA-15	Greece	1998	21	560	1999–2000
Tor-M1	SA-15	Greece	2000	10	300	2001–2002
Tor-M1	SA-15	Iran	2005	29	700	2006
Tor-M1	SA-15	Egypt	2005	4	80	2006
Osa-AKM	SA-8B	Greece	1998	16	100	1999
Tunguska-M	SA-19	UK	1992	1	17	1992
Tunguska-M	SA-19	India	1992	24	200	1995–1999
Tunguska-M1	SA-19	India	2005	28	400	2007–2008
Tunguska-M1	SA-19	Morocco	2006	6	100	2007
Pantsyr-S1	SA-22	UAE	2000	50	800	2008–2010
Pantsyr-S1	SA-22	Syria	2006	36	800	2008–2010
Pantsyr-S1	SA-22	Algeria	2006	38	900	2009–2010

** – Contracts for compensation of Soviet & Russian Debts*
Sources: Russian press; CAST estimates

Our Authors

Mikhail Barabanov. Graduated from the Moscow State University of Culture, then worked for the Moscow city government. Editor-in-Chief of MDB since 2008. Expert on naval history and armaments.

Vasiliy Fofanov. Graduated from Moscow University's Computational Mathematics Department and holds a PhD in Computer Science. He has been researching modern armor design, development and deployment practices since 1997.

Ivan Konovalov. In 1994 graduated from Journalistic department at the Moscow State University named after Lomonosov. In 1994-2003 worked as a military journalist at Russian television. Author of numerous TV reports and analytical articles on military conflicts in the former USSR republics and far-abroad countries.

Konstantin Makienko. Graduated from the Oriental Department of the Moscow State Institute for International Relations in 1995 and the French-Russian Masters' School of Political Science and International Relations in 1996. Head of a project on conventional armaments at the Center for Policy Studies in Russia (PIR-Center), 1996–1997. Since September 1997, Deputy Director of CAST. Author of numerous articles on Russia's military-technical cooperation with other countries, advisor to the head of the Russian Federal Agency on Industry since 2007.

Nikolay Pankov. PhD (Law), General of the Army, State Secretary, Deputy Minister of Defense. In 1980 Mr. Pankov graduated from the KGB Higher School, where he stayed to continue his service. After completing a postgraduate course which earned him the degree of Candidate of Science (PhD), he began working as a teacher and a scientist. In 1994 he was appointed Academic Secretary at the FSB (National Security) Academy. From 1997 to 1998 he served as Chief of the Federal Frontier Guard Organizational Directorate. From 1998 to 2001 Mr. Pankov headed the Russian Security Council Secretariat. In April 2001 he was appointed Chief of the MoD Organizational Directorate, in July 2001 – became Chief of the General Personnel Directorate, and later, in June 2002 – Deputy Minister of Defense for Personnel. In September 2005 he assumed the position of the State Secretary, Deputy Minister of Defense.

Ruslan Pukhov. Director of the Centre for Analysis of Strategies and Technologies (CAST) since 1997. In 1996 he graduated from the School of International Information of MGIMO University under the Russian Foreign Ministry. In 1996–1997 – postgraduate student of the French-Russian Master d'Etudes Internationales Sciences Po – MGIMO. In 1996–1997 – researcher for the Conventional Arms Project of the Center for Policy Studies in Russia (PIR Center). Since 2007 Presidium Member of the Public Council for the Defense Ministry of Russia. Author of numerous of research articles on the conventional arms trade and the defense industries of Russia, France and India.

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