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# Russia Expands its Military R&D

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## PERSPECTIVE

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# Russia Expands its Military R&D

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Although allocations for Russia's defense ministry have been increasing annually by about two percentage points of the total government budget over the past several years, a separate item in that document has been classified at times and, thus, may be rarely known or taken into consideration. Called the state defense order (*gosudarstvennyi oboronnyi zakaz* or GOZ), it allocates expenditures toward research and development for new generations of weapons systems which will not begin to enter the armed forces' inventory until after the year 2005.

Just over two billion US dollars during 1994, the GOZ budget entry more than doubled during each of the following two years (see chart). (1) At this rate, R&D funding would have eclipsed the regular defense ministry budget for 1997. However, it increased only slightly in the current year, suggesting a shortage of money. Legislation on GOZ had been signed by President Boris Yel'tsin on 27 December 1995. It comprises a five-year program of "scientific research and experimental design, development of weapons, production facilities, mobilization preparedness of the economy, series production, and delivery of weapons systems." (2)

According to the (civilian) first deputy defense minister, Andrei A. Kokoshin, over the next few years funding will become available only to modernize arms that already have been produced. On the other hand, a number of plants in the military-industrial complex (*voenno-promyshlennyy kompleks* or VPK) will receive "guaranteed minimal state orders" for new weapons during that period. The 1997-2005 arms development program

should provide Russia with the capability to manufacture "weapons that have no equivalent in the world," as Kokoshin assured members of parliament. (3)

Major General V.I. Slipchenko, then research director at the General Staff, had claimed earlier in an interview that these new armaments would include

- directed energy weapons
- automated high-precision systems
- deep-penetration ammunition
- super high-speed data processing and electronic warfare equipment. (4)

Attainment of the last capability may be imminent, with the purchase of four super computers from Silicon Graphics in California that were shipped directly to the nuclear weapons laboratory at Cheliabinsk-70 in late 1996. An even more powerful machine, the IBM RS/6000 SP (capable of performing more than ten billion calculations per second), had been purchased for seven million US dollars from middlemen in Europe, a transaction of which the Russians have boasted. (5)

Cheliabinsk-70 is one of the closed cities, located at Snezhinsk in the south Urals. Its research institute of technology and physics designs experimental and prototype nuclear warheads. The atomic energy ministry, which purchased the American super computers, has jurisdiction over all so-called closed cities. (6) By means of reverse engineering, it should be possible to construct super computers by Russian scientists within a relatively short period of time.

These men and women at the Russian weapons laboratories continue to develop laser, incoherent light source, super high-frequency electronic and electromagnetic pulse weapons—all of which are labeled "non-lethal." Many of them should become perfected before the year 2005. A new mass plasma weapon already has been tested. When produced, it could ionize the atmosphere so that a missile or aircraft would be forced off its trajectory and "destroyed by enormous stress." (7)

More than 400 scientists, designers, engineers, and laboratory technicians from forty different organizations recently received prizes for their contributions during calendar year 1996 from the Russian government. Mentioned specifically were a director of the space scientific-production center, a principal designer at the Izhevsk weapons plant, a director of the biomedical institute, and a principal adviser on space medicine. Among these prize recipients, "a not insignificant number came from the military-industrial complex." (8)

VPK still includes more than five million employees who work at approximately 1,700 R&D centers and defense plants. Despite the alleged shortage of funds for the military, Moscow continues construction (9) on a mammoth command and control center for nuclear war at Mount Yaman-Tau, near the city of Beloretsk in the Urals. Production, albeit restricted, of advanced nuclear weapons systems includes the following:(10)

- the latest SS-25 modification (Topol M-2) intercontinental ballistic missile, ready for series production at the end of 1996;
- a new tactical nuclear weapons system, with a range of 400 kilometers, successfully tested at the end of 1995 and may be already in production;
- miniature nuclear warheads, weighing under 200 lbs. each, coming off the assembly line;
- the first of seven strategic Boreas-class submarines, named "Yuriy Dolgoruki" after the founder of Moscow, which will carry the new D-31 submarine-launched ballistic missiles.

Even more disturbing than the above checklist from Russian sources is the recent interview with Ivan P. Rybkin, secretary of the Security Council, who stated that "if any aggressor should precipitate a conflict with us and use conventional means, we may respond also with nuclear weapons." He further suggested that those who might engage in such "military adventures" should be forewarned of Russia's response. (11)

That, of course, represents an official admission of conventional weakness which had manifested itself during the war in Chechnya. The new Russian military doctrine will include the "first strike" proviso, as did an earlier version issued back in November 1993. Thus, decision-makers in the Kremlin would appear to have become prisoners of their own disinformation offensive against the West. They anticipate war and, therefore, are building a modernized nuclear arsenal that they hope may indeed frighten away future aggressors.

Apart from the new ICBM modification and the quieter Boreas-class submarine, the new tactical missiles should give rise to concern. They will replace the SS-20 intermediate-range ballistic missiles which were to have been eliminated under provisions of the INF Treaty. However, according to that agreement, only launchers for these IRBMs were to be destroyed and not their warheads. (12) The result is that the Russians who stored those warheads from their dismantled SS-20s can now attach them to the new tactical missiles which are being produced at the same plant for SS-20s in Votkinsk.

The above strategic approach has been corroborated by Yuri M. Baturin, secretary of the Defense Council, who recently stated that "we cannot talk seriously about repelling any kind of aggressor from the outside, by conventional means, for the next ten to twenty years." (13) He then went on to say that military reform would be completed around the year 2000, although that new deadline could be extended due to the government's inability to allocate the necessary funding.

Despite the evidence that Russia is pursuing a robust and aggressive military R&D program, especially in futuristic weapons as well as enhanced nuclear warheads, one wonders why these developments seemingly have been ignored by the White House. Instead, the US government has made proposals to its Russian counterpart for deeper reductions in ICBMs down to 2,000 or 2,500 under START III even before Moscow has ratified START II. An agreement in principle was reached at the 20-21 March 1997 summit in Helsinki. (14)

The Russians do not even claim that they are on schedule in destroying intercontinental missiles under START II. They have made comments that the deadline for doing so must be extended, complaining they have no money to finance this treaty obligation. The above-mentioned summit resulted in an understanding to postpone the earlier deadline by five years to the end of 2007. It also will result in a further infusion of dollars from the US Congress, World Bank (\$6.4 billion already), International Monetary Fund, and other organizations. Russia's new budget, approved by Yel'tsin on 26 February 1997, includes a \$19.3 billion deficit. (Defense comprises one-fifth of the budget and is the largest single item.) A considerable part of the deficit will be financed by the \$10.3 billion multi-year loan from the IMF. The White House has already asked Congress to increase aid to Russia from \$95 million to \$241.5 million for FY 1998 under the Freedom Support Act alone. Yel'tsin was promised four billion dollars in new US loan guarantees at Helsinki.

Washington furthermore is pouring \$11.5 billion into Moscow under a multi-year contract for the purchase of HEU or Highly Enriched Uranium (500 tons) from dismantled warheads, the fissile material from which should have been reprocessed by the US into diluted low-grade fuel for our nuclear power stations. This agreement has been violated from its inception, when the Russians began and have continued to deliver low-grade uranium. The latter may be coming from stockpiles in the closed cities of Krasnoyarsk-45, Sverdlovsk-44, and Tomsk-7, rather than from dismantled warheads. The fait accompli appears to have been accepted without much or any objection by Washington.

The United States last year had excess stocks of weapons-grade uranium and plutonium totaling 1,914 tons compared to Russia's 1,514 tons, according to the Stockholm International Peace Research Institute. (15) We also have a surplus of fuel for our nuclear power stations. What is the rationale for importing more, which only adds to our surplus, especially when the Russians are not living up to the original agreement?

One of the two new first deputy prime ministers, Anatoli B. Chubais (formerly presidential chief of staff and potential successor to Premier Chernomyrdin), was

interviewed earlier this year. He made a statement, suggestive of the paranoia prevalent in the Kremlin, as follows: (16)

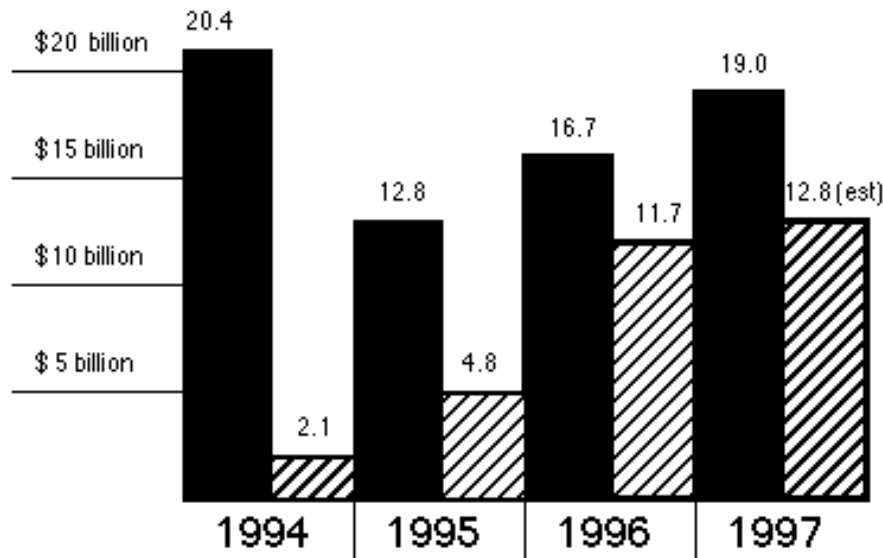
"It is known that plans exist for a kind of cordon sanitaire around Russia, beginning with Azerbaijan and ending at the Baltic, in such a way as to separate Russia from the civilized world and isolate it... We cannot accept such plans under any condition."

This in turn led Defense Minister Igor N. Rodionov to warn East Central European countries that their capital cities would be targeted by Russian tactical nuclear missiles if they joined NATO. Since the former army general did not receive any reprimand, it would appear that his sentiments are shared by the small leadership group in the Kremlin.

Unfortunately, those individuals are taking for granted the assumption that the West will continue its support regardless of what they say or do. The 17-member Coordinating Committee for Multilateral Export Control (CoCom), which had maintained an embargo on high technology transfer to the Soviet military-industrial complex, no longer exists. It has deteriorated into an "honor" system that failed with the recent sale of super computers to Moscow.

Russians have broken arms reduction/control agreements with impunity and continue to do so. After they violated the Conventional Forces in Europe (CFE) treaty, the West agreed to renegotiate that agreement, an activity which is taking place currently in Vienna. The extent of concessions made by Clinton at Helsinki inevitably will become known, although such behavior cannot reform the Yel'tsin crowd.

**Defense Ministry Budget** ■  
**(plus) High technology R&D** ▨  
**listed as "State Defense Order"**



[Exchange rates for \$1US amounted to R1,989 (1994); R4,554 (1995); R5,200(1996); and R5,500(1997). In budget documents, the State Defense Order may come under the acronym NIOKR (Nauchno-issledovatel'skie i opytно-konstrukorskie raboty) or Scientific and Experimental Design Work. See item 3 in "O federal'nom biudzhete na 1997 god," *Rossiiskaya gazeta*, 4 March 1997, p. 3.]

Notes:

1 ITAR-TASS, "VPK na meli ne ostanetsia?" *Izvestiya*, 3 February 1997, p. 1, states that GOZ funds increased from R7 trillion in 1995 to between R50 and 54 trillion during 1996.

2 "O gosudarstvennom oboronnom zakaze," *Rossiiskaya gazeta*, 4 January 1996, p. 5.

3 Kokoshin testimony quoted by Vitali B. Shlykov, "Tainy voennogo biudzeta," *Nezavisimoe voennoe obozrenie*, 16 May 1996, p. 3.

- 4 Interview with Mary C. FitzGerald, "The Russian Image of Future War," *Comparative Strategy*, vol. XIII, no. 2 1994, p. 168.
- 5 Cited by John J. Fialka, "U.S. Investigates Silicon Graphics's Sale...," *The Wall Street Journal*, 18 February, 1997, p. A-6.
- 6 Richard F. Staar, *The New Military in Russia* (Annapolis, MD: Naval Institute Press, 1996), Table 4, p. 78.
- 7 FitzGerald, op. cit., pp. 171-173, 176. See also Mikhail Rebrov, "Plazmer oruzhie...," *Krasnaya zvezda*, 18 May 1996, p 6. In effect this could be an ABM weapon—precisely what Russia wants the US to forego.—Ed.
- 8 Vladimir Dernovoi, "Eshche ne oskudela Rossiya talantami!" *Krasnaya zvezda*, 27 February 1997, p. 1.
- 9 Pavel Fel'gengauer, "Russkaya 'mertvaya ruka'...", *Segodnya*, 17 April 1996, p. 1.
- 10 Aleksandr Dolinin, "Raketchiki zabotiatsia o 'Topoliakh'," *Krasnaya zvezda*, 6 December 1996, p. 2; Sergei Novikov, "My snova delaem rakety," *Segodnya*, 21 December 1995, p. 9; Vladimir Gundarov, "Yuriyu Dolgorukomu plyt' v XXI vek," *Krasnaya zvezda*, 5 November 1996, p. 1.
- 11 Interview by Boris Iamshanov, "Sto dnei uzh minulo," *Rossiiskaya gazeta*, 11 February 1997, p.2.
- 12 Article 5, "Intermediate-Range Nuclear Forces Treaty," *Arms Control and Disarmament Agreements* (Washington, D.C.: ACDA, 1996), p. 257.
- 13 Yuri Baturin, "Razvitie voennoi reformy..." *Orientir*, no. 2, February 1997, p. 1.
- 14 Steven Erlanger, "A Clinton-Yeltsin Sidelight: Progress in Arms Control," *The New York Times*, 24 March 1997, p. A-4.
- 15 Cited by Bernard Gray, *Financial Times*(London), 14 March 1997, p. 7.
- 16 Anatoli B. Chubais, "Vlast' ne dolzhna byt' bespomoshchnoi," *Trud*, 21 January 1997, p. 2.

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