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In the coming weeks the ratification of the Paris Chemical Weapons Convention is expected to be a major topic of debate in both the Russian State Duma and the US Senate.

The aim of the convention is clear—to save mankind forever from the danger of mass destruction by some of the world's most barbarous weapons. Few are familiar with the actual wording of the treaty, but it is natural to ask to what extent the convention will ensure that this goal is achieved, and how reliable this multilateral agreement will be. Indeed, is the implementation of the convention likely to lead to greater security and to a more peaceful and stable world?

In the past, the development and stockpiling of all kinds of weaponry—including chemical weapons—inevitably resulted in endangering the safety of humanity. Yet chemical weapons production was always justified by the stated intentions of the governments concerned, i.e., ensuring the security of the nation's population. Now the destruction of such weaponry has been placed on the international agenda.

After the defeat of Germany in 1945, the Allies carried out a thoroughgoing policy of destroying Germany's military potential. Over 130,000 tons of chemical weapons were disposed of by crude methods, i.e., by simply burning, burying, or drowning the stockpiles.
What were the results? In the first place, there are now two enormous marine burial sites at the bottom of the Baltic Sea which constitute a perpetual threat to the population of the neighboring countries. According to scientific estimates, a portion of these munitions will begin to leak in 5-10 years, giving off lethal toxins. Secondly, in both Russia and the West a chemical arms race gathered speed, using the latest German technology.

Initially, the Soviet Union was unsuccessful in achieving regular production of liquid fuels at the enormous German plants that had been shipped from Germany to the Soviet Union and set up in the cities of Angarsk, Salavat, and Novocheboksarsk. However, after a few years production of toxic chemicals began at relocated German facilities in Dzerzhinsk and Volgograd. The country was starving, but the communist regime was busily forging German chemical weapons at breakneck speed for use against its former allies. Unfortunately, these plants employed inadequate technology and the level of safety was extremely low. Moreover, the Volgograd plant was adjacent to a densely populated urban area; the waste effluents formed a lake in the immediate vicinity of apartment houses. The population did not suspect that it was being steadily poisoned.

In 1986, by virtue of my position as head of the division responsible for combating foreign technical espionage at the Soviet State Scientific Research Institute for Organic Chemistry and Technology (GSNIIOKhT), I directed the development of methods for preventing any information leaks from chemical weapon plants. After studying the situation at the Volgograd Scientific Production Association (Khimprom), I started to employ my own methods of gas chromatographic determination of trace amounts of (the nerve gas) soman in emissions of ventilating air and effluent water. (Previously, biochemical methods of analysis had been employed.)

The first results of these analyses were shattering. The concentrations in the atmosphere as a result of air emissions exceeded the maximum permissible amounts 80-150 times. Systematic research subsequently established that there were no errors
in these calculations. Moreover, similar analyses were carried out three months later during a temporary halt in production. (The plant followed a cyclical production schedule.) The results were equally appalling. This meant that in the course of production the facility's brick chimney absorbed such large quantities of soman that the gases emitted contained enough of the agent to poison the surrounding air indefinitely.

Once one is aware of these facts, it becomes imperative to warn those who are so eager to convert former military plants to civilian production. The results of analyses of effluent water in Volgograd were even more devastating. In this case, the maximum permitted concentration was exceeded up to 1,000 times! For decades, the plant had been not so much forging weapons against the imperialists as ruin ing the health of the people of its own country.

As far as I am concerned, the technical cause of this barbarity is clear: The technology for degasification developed by GSNIIOKhT was fundamentally defective. Subsequently, my research on the degree of degasification of the infamous new agent A-230, which is 5-8 times more effective than all previously developed toxic substances, demonstrated that this technology presented similar problems.

I gave a full report on all my findings to Viktor Petrunin, director of GSNIIOKhT, as well as to the USSR Ministry of Chemical Industry. In response, the director strongly criticized me for my "discovery" and warned of the possible consequences it might have for my career as well as for his own, since the resulting scandal might disturb some highly placed personages. I became fully convinced that he meant what he said after I gave an official report at a meeting of top officials of the Ministry in the fall of 1987. Without any investigation, Deputy Minister Sergei Golubkov (former Chief Engineer of the Volgograd plant) simply "cancelled" my results. Then I finally understood that my bosses did not want any accurate information--in fact, just the opposite. The only issue that concerned each was his own career.
For this reason I was forbidden to visit Novocheboksarsk, where the plant for the production of agent 33 was located--according to the official version, 33 is still supposed to be the gas YX. However, even without being able to visit the plant in person, I am aware of its major technological deficiencies, which inevitably have resulted in just as high a degree of environmental pollution as in Volgograd. This is just an example of the way in which the potential contribution of scientists is totally wasted, since the people at the top are interested only in getting the required production figures at any cost, without the slightest consideration for human welfare.

I am constantly reminded of such instances, now that the same top leadership is striving to carry out chemical disarmament in our long-suffering country--likewise at any cost, without taking into account the possible health consequences. I had more than enough occasions to study this breed of individual over the course of the 26 years I devoted to work in GSNIIIOKhT. Consequently I can state categorically that their psychology is incapable of change. Indeed, how could it change? I need cite only the following recent episodes. Large-scale testing of the new agent A-230 was carried out at a test site near the city of Nukus in Uzbekistan under dry summer conditions, when the winds blow sand and dust great distances--along with the chemical toxin being tested. The most intensive phase of this testing coincided with the period when the greatest advances were being made in negotiations between the USSR, the US, and other potential signatories on the proposed convention banning chemical weapons.

A further example: In northeast Kazakhstan, construction of a huge production facility for chemical weapons was started. At the same time as "accelerated" perestroika was underway in the country, a new binary weapon based on agent A-232 makes this entirely possible. For a full year, as part of an exhibit publicizing achievements in industrial conversion right across from the office of the GSNIIIOKhT director, even the chemical formula of an agricultural compound was on display, one that is produced from the same intermediary substance that is the basis for agent A-232.
No normal person can remain indifferent to such hypocrisy, which is related to the pathological nature of the thinking of Russia's top military leaders. At that time I really believed that a change in the country's government would help overcome the power of these people whose thought processes are so distorted. For this reason, I acted as one of the founders of the Democratic Russia movement at my institute, and participated actively in demonstrations supporting Boris Yeltsin. Finally, in May 1990, I was one of the first members of the institute to resign from the CPSU. I made my first attempt to draw public attention to the situation in the military chemical complex by publishing an article titled "Inversion" in the newspaper Kuranty (October 10, 1991). Unfortunately, this article attracted virtually no attention. However, the individuals to whom I referred in the article did respond to the best of their abilities -- on January 6, 1992, I was fired from the institute. Only a technicality spared me from immediate arrest: In November 19889 the USSR Committee for Constitutional Supervision declared all normative acts having the force of legislation to be invalid unless they were published within four months. In accordance with this, the unpublished decree on state secrets, the lists of classified material, and other ordinances turned out to lack any legal basis. However, the omission was soon remedied by the illegal presidential ukaz No. 20 of January 14, 1992, according to which all the invalidated ordinances were declared to be valid.

After I published a further article titled "Poisonous Policies" in Moskovskie novosti (September 16, 1992) and an interview appeared which I had given to the Baltimore Sun, I was arrested by the KGB (now operating under yet another new label -- MBR) and jailed in Lefortovo Prison. However, thanks to broad support from democratic public opinion I was released after 11 days, although the investigation was to go on much longer. During the time I was in prison, indeed even for a while after I had been released, I was deprived of access to my defense counsel, and then there was further delay before I was given the opportunity to see the text of the decree and the ordinances on the basis of which the investigation was being conducted. Despite the obvious absurdity of my "case," ultimately a corpus delicti was fabricated, confirmed in record time by the General Procuracy, and then delivered to a closed court.
The file on my "case" shows who instigated my arrest: Viktor Petrunin, director of GSNIIOKhT; Petrunin's deputy, KGB Colonel Aleksandr Martynov; and the so-called technical commission, among whose members are Yuri Skripkin, Boris Kuznet and Yuri Baranov. The last three were **all members of the Russian delegation in the Geneva negotiations**. Deputy Director Baranov has frequently been a welcome guest in the West. One cannot fail to be impressed by the intellectual breadth of some of our officials who participate in "honest" negotiations on an international convention and then throw an opponent in prison when he exposes their dishonest behavior...I should mention that during the course of the negotiations their "work" in fact was directed by the top leadership of the military-chemical complex.

The existence of major loopholes in the convention that was signed constitutes a great collective achievement on the part of the Russian delegation. Thus the convention does not prohibit or even control the production of such toxic agents as A-230 and A-232, as well as their precursors, nor does it ban binary chemical weapons based on agents A-232 and 33, or their components. The same considerations that led to these omissions in the convention are also reflected in Presidential Directive No. 508-RP of September 16, 1992 (which prohibits the export from Russia of toxic chemicals or products from which they can be manufactured). The gentlemen who served on the Russian delegation in Geneva helped ensure that this presidential directive similarly omitted from the ban any of the chemicals listed above. Consequently, they all can be freely exported.

It would be very optimistic to hope that the results of this conspiracy against the intended aims of the convention as a potential means of genuinely ending for all time the existence of chemical weapons. However, **before ratification** the deficiencies in the convention that preclude it from being effective should first be corrected. There is far too much at stake to do otherwise -- indeed nothing less than our common security.

Unfortunately, the situation is no better with regard to the destruction of chemical weaponry. What guarantee do we have that the persons who were responsible for the
inhumane methods with which the chemical arms race was waged are going to be concerned about safe procedures for the liquidation of these weapons? Even if there were any such concern on their part, would they be capable of developing appropriate methods? Not long ago the inhabitants of the city of Chapaevsk prevented the commissioning of a dangerous plant for the destruction of chemical weapons. As a result, they not only saved themselves, along with all of us, but they also saved GSNIIOKhT (which designed the plant) and the Russian top brass from an appalling disaster. The initial design and the technology adopted were known to be defective--indeed, the decision to build the plant can only be described as criminal--yet the officials responsible were fully prepared to start operating the facility. I write as one who participated in analyzing the residue after the types of chemical toxins in question were destroyed by means of this technology.

From time to time, articles appear in the Russian press praising successful new technological developments in chemical weaponry destruction. An example of this is the article by V. Litovkin entitled "Destruction of Chemical Weapons Can Enrich Russia" (Izvestia, September 27, 1992). In a letter to the editor I tried to show how far the real situation is from that advertised in the article and pointed out that it is the height of irrationality to propose impregnating railroad ties and other materials with the products of soman or agent 33 degasification. It is well known that, if the proposed technology is employed, the toxic content of the products of decomposition would exceed the permitted norm 1,000 times! At the same time, the technology that is proposed for the destruction of lewisite involves combining highly pure arsenic with ethylene--an explosive gas. The result is a lower, not higher, level of safety. Unfortunately, I was unable to deliver this letter because I was arrested. The original was voluntarily turned over to the Ministry of Security by my co-author, Lev Fedorov.

Time passed, and something curious occurred: On April 9, 1994 the same Litovkin published a second article in Izvestia in which he says not a word about how the destruction of chemical weaponry can enrich Russia. Far from it--instead he admits that
Russia today possesses neither the money nor the necessary technology for the destruction of chemical weaponry.

Even though I was under investigation at the time, I initiated and helped write President Yel'tsin's declaration of April 20, 1993 on issues relating to the destruction of chemical weaponry. This declaration emphasizes that the population's safety and health is the fundamental consideration in undertaking all work of this nature, and that the destruction of chemical weaponry will be carried out only after a thorough governmental investigation, in which scientists and specialists in the field as well as representatives of the public will take part.

However, with bitterness I must record that at the present time none of this is being observed. My "dialogue" with the powers that be remains entirely one-sided. The 2nd International Conference on the Destruction of Chemical Weaponry was recently held in Moscow. As with the first such conference, I was not invited. The Presidential Convention Committee, composed almost entirely of representatives of the military-chemical complex, still has no desire to talk to independent-minded specialists. Its members are not interested in discussing the problem professionally. They only want to create the semblance of a scientific discussion, and for this purpose they make use of Western chemists, who, it appears, still are not too choosy.

Meanwhile, it is my belief--and not only mine--that beyond any possible doubt Russia will be in no position to undertake the safe destruction of chemical weaponry either today or tomorrow. Money, technology, procedures for ecological monitoring, as well as the agreement of the population in regions where the destruction facilities would be located--all these are lacking. Without substantial US aid there is no real prospect of chemical weapons being destroyed safely.

Who in Russia is responsible for destroying such weaponry at the present time? Those in charge committed crimes against their own population in the course of pursuing a chemical arms race by the most barbaric methods, neglecting to observe the most
elementary safety precautions. They have deceived their partners in international negotiations. Finally, they "communicate" with their expert opponents with the aid of the KGB and the prison system.

Under such circumstances, what benefit can US aid be? I have no doubt that those in charge here know precisely what they are doing. They will succeed in saving funds at the expense of the population's safety in order to spend them on continuing the highly sophisticated secret chemical arms race and on developing the latest weaponry. The convention they helped to conclude permits them to do this.

(1) Professor Mirzayanov was arrested by the Security Ministry on October 22, 1992 for allegedly revealing state secrets, and incarcerated in Lefortovo Prison in Moscow. He was released, following an international outcry.

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