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CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS

Letter dated 30 April 1982 from the Permanent Representative of the Union of Soviet Socialist Republics to the United Nations addressed to the Secretary-General

I have the honour to transmit to you the verbatim record of a press conference for Soviet and foreign journalists on questions relating to the decision of the United States of America to manufacture new types of chemical weapons, held at the press centre of the Ministry of Foreign Affairs of the Union of Soviet Socialist Republics on 11 March 1982.

I request you, Sir, to circulate this verbatim record as an official General Assembly document under item 54.

(Signed) O. TROYANOVSKY

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ANNEX

VERBATIM RECORD

of a press conference for Soviet and foreign journalists on questions relating to the decision of the United States of America to manufacture new types of chemical weapons, held at the press centre of the Ministry of Foreign Affairs of the Union of Soviet Socialist Republics

on 11 March 1982

Participants in the press conference included: Y. N. Chernyakov, Chief of the Press Section of the USSR Ministry of Foreign Affairs; Academician A. V. Fokin, Deputy Chief Scientific Secretary of the Presidium of the USSR Academy of Sciences; S. N. Golikov, Chairman of the All-Union Scientific Society of Toxicologists and academician of the USSR Academy of Medical Sciences; Major-General A. D. Kuntsevich, an expert at the USSR Ministry of Defence and a corresponding member of the USSR Academy of Sciences; Professor N. S. Antonov, a representative of the USSR Ministry of Health; and, V. B. Tulinov, a counsellor at the USSR Ministry of Foreign Affairs.

Statement by Academician A. V. Fokin

at the press conference on questions relating to the decision of the United States of America to manufacture new types of chemical weapons,

held on 11 March 1982

Of late the international climate has deteriorated appreciably, tension has increased and the threat of war has grown. Never since the Second World War has the situation been so serious. All of this results directly from the actions of the United States Government and the NATO bloc to undermine détente and the peaceful coexistence of States and from the policy of confrontation and intensification of the arms race.

On 8 February 1982, President R. Reagan announced his decision to begin the large-scale manufacture of toxic chemical substances. What had been prepared in secret by the Pentagon and the research centres and military-industrial corporations connected with it as early as the mid-1970s came out into the open. In the frenzied atmosphere of militarism currently prevailing in Washington, the United States is challenging all mankind, attempting to make chemical warfare respectable again and introducing the most sophisticated chemical-warfare agents into its military machine. It has also become clear why the United States used every possible means to delay the negotiations on the prohibition and elimination of chemical weapons and why, in 1980, it actually broke off the bilateral Soviet-United States efforts to prepare an international treaty on the subject. We can now see what was really behind the obstructionist position of the United States at the thirty-sixth session of the United Nations General Assembly when the resolution on the prohibition of chemical weapons was considered and voted upon.

The programme of chemical rearmament approved by the United States Administration is designed to cover a number of years. It is to cost up to \$10 billion. The programme includes inter alia the large-scale manufacture of binary chemical charges, the testing of new ways of using chemical weapons, and the building of bases to store chemical-werfare agents outside the United States. Practically the entire United States chemical arsenal is to be modernized and expanded, even though, according to American sources, the current stocks at the disposal of the United States armed forces are more than sufficient to annihilate most of the earth's population.

The United States decision on chemical rearmament fits into the same pattern as the expanded production of neutron weapons, the plans to deploy new United States nuclear missiles in Western Europe and the general decisions of the NATO bloc to broaden military preparations and achieve military supremacy, especially in Europe. The newest military doctrines of the United States also regard Europe as a likely setting for the use of chemical weapons.

As far back as June 1980, the supreme commander of NATO forces in Europe, General Rogers of the United States, called for "a build-up of chemical-warfare agents on the continent". In a speech to Congress on 15 September 1981, a high-ranking representative of the Pentagon openly declared that it was essential "to have the capability for carrying on large-scale chemical warfare in Europe against the Warsaw Pact countries". In other words, they would like to turn Europe into an enormous gas chamber. To that end, they intend to bring several million binary missiles, bombs and mines to Europe for use as part of the advance-based weaponry of the United States.

American specialized literature endlessly praises the "quality" and "advantages" of chemical weapons. Some writers go so far as to say that they are the most humane of all weapons, since they make a person's passage into oblivion "imperceptible" and "almost painless".

The decision of the President of the United States is based on extensive experience in the use of chemical weapons in combat situations. During the years of American aggression against the peoples of Indo-China, specialists of the United States Chemical Corps sprayed more than 50 million litres of one toxic mixture, Agent Orange alone. The victims of this act of barbarity included 1.6 million Vietnamese as well as tens of thousands of United States service men. The same lethal mixture has been used by the United States in the area of the demilitarized zone in the Korean peninsula. Chemical shells marked "Made in USA" may be found among the weapons used by bands of Afghan mercenaries, a fact which has been admitted by United States officials. Airborne chemical bombs are being supplied by the United States to the Salvadorian junta and used in punitive actions against the freedom-fighters. These are the facts.

The plans to prepare the United States for chemical warfare are being justified by hackneyed, slanderous fabrications about a Soviet threat and by references to the alleged use of chemical weapons by the Soviet Union. In reply one can declare once again quite solemnly that the Soviet Union has never resorted to using chemical weapons anywhere. Our country was among the first to sign the

Geneva Protocol of 1925 for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare.

We advocate the outlawing and elimination of chemical weapons. There have been numerous initiatives of the Soviet Union aimed at achieving this goal, including the draft international convention on the subject it submitted to the Geneva Committee on Disarmament. The Soviet Union is always open to a practical solution of the problem. It is the United States, not the Soviet Union, that is preventing the prohibition and elimination of chemical weapons and placing obstacles in the way of achieving an agreement of vital concern to all peoples. Washington and its closest NATO allies bear the gravest responsibility for that.

There is no room on earth for chemical weapons, and the sooner they are eliminated, the more securely people will be protected from the dangers to which mankind is being subjected by the aggressive forces of imperialism.

Question (Pravda):

Is the United States programme of "catching up" in the area of chemical weapons a defensive one, or can it be regarded as a build-up of United States offensive potential in chemical weapons?

Answer (Major-General A. D. Kuntsevich):

In this case the concept of "catching up" because of some kind of United States lag in the field of chemical weapons makes no sense whatsoever in military terms, since the Americans themselves say that they have sufficient stockpiles of these weapons to engage in large-scale chemical warfare not only in Europe but in other theatres of military operations as well.

What they are doing is unquestionably arming for superiority and forcing chemical weapons on Europe. Why is this necessary? The major strategic goal of the United States at the present stage is to secure unilateral qualitative and quantitative military superiority over the Soviet Union with minimum risk of war damage to its own territory. The American pattern for war means fighting on somebody else's soil and, if possible, shedding somebody else's blood. Hence the plans for stationing medium-range nuclear missiles in Europe, as well as cruise missiles and neutron weapons, and finally, the long-planned deployment of chemical weapons there. Chemical weapons must supplement the whole arsenal of offensive weapons in Europe. Like neutron weapons, they are designed to destroy people while leaving property, industrial potential and technology intact. This plan was formulated a long time ago but is being implemented in stages. The following facts may be cited as proof. First of all, the recent decision was made after studying the experience of the Viet Nam war, which was in essence a large-scale on-location experiment in targeting attacks not only on large numbers of people but on dwellings as well. The American experts apparently drew optimistic conclusions about the effectiveness of using chemical weapons in third-world countries. It is interesting to recall in that connexion the words of General Pershing, which are frequently quoted nowadays: "Whether or not chemical weapons will ever be used is a matter for conjecture, but the impact of these weapons on unprotected personnel

is so effective that we shall never be able to remove this question from the agenda".

Secondly, the decision was undoubtedly facilitated by the conclusions reached by the Americans and the NATO forces as a result of many exercises carried out from 1964 to 1980 under various code names, including "Autumn 64", "Autumn 66", "Autumn 68", five "Winter" exercises - "Winter 71", and so on to 1979 - and, lastly, the "Autumn Forge" exercises in 1980 and 1981, testing the possible use of chemical weapons. Thirdly, the decision also found support in the United States naval doctrine that binary charges might be stationed directly on board naval vessels. Fourthly, since 1978 the United States and its NATO allies have been engaged in a major effort to strengthen their chemical corps. They are organizing new units as large as regiments. An intensive campaign is under way to train specialists in the use of chemical weapons. This training is being carried out in the United States, Canada, the Federal Republic of Germany, the United Kingdom and virtually all of the countries allied to the United States through NATO. Command personnel of the chemical warfare service of the United States Department of Defense have undergone intensive training at the Dugway Proving Ground. Thousands of reservists are now being retrained at various centres in the United States. Lastly, the United States and its NATO allies, developing methods and principles of offensive chemical warfare, improving the organizational structure of their chemical corps and strengthening their chemical-warfare potential, are equipping their forces on the European continent with new gas masks, skin-protection equipment to be worn at all times - I repeat, at all times - effective medicines, antidotes and detection and decontamination equipment. All of this shows that the NATO forces are at a high level of combat-readiness for waging chemical warfare, so that there can be no talk of a United States lag in this case. This is a clearly planned strategic operation aimed at expanding the arsenal of offensive chemical-warfare agents.

Question (Hungarian Radio):

What are the biological effects of the possible use of binary weapons on man and on the environment, and can they be compared with those of neutron weapons?

Answer (Academician S. N. Golikov):

From the toxicological point of view there is no basic difference between binary weapons and other types of chemical weapons. We must therefore look at binary weapons within the context of the use of toxic agents, which include certain substances of the neuro-paralytic toxin group and others. Accordingly, the effects of the possible use of binary weapons as the effects of the use of the toxic substance which is formed as a result of the use of the binary weapon and which strikes the target.

What do we know from published materials about the effects of the possible use of chemical weapons? These effects evidently may be either immediate or delayed or, as in the case of any other toxic substances with which peace-time medicine sometimes must deal. The immediate effect is the large-scale poisoning of people. In the case of neuro-paralytic toxins the effects may be very severe and include many fatalities. They constitute a grave danger to unprotected people in towns and

major population centres. As to delayed effects, clinical toxicology, a long-established science, suggests that such phenomena may occur whenever there is poisoning by a highly toxic compound. To recall the experience of the First World War, we know how many men were crippled by chlorine, phosgene and mustard gas. It should be understood that delayed effects may be caused by virtually any toxic substance. If this substance has a neuro-paralytic action, the result may be nervous disorders, as reported, for example, in the journal Neurotoxicology in 1980 on the basis of observations of workers who had come into contact with sarin. The effects may be psychological, particularly if the victim has been poisoned by so-called psychochemical (psychotomimetic) substances. They may also affect the upper respiratory system and the lungs if the poisoning has been by toxic irritants of the CS type. These are the medical aspects of the problem.

We as doctors are particularly on the look-out for data on the possible genetic effects of poisoning. There are grounds for discussing this in the light of currently available materials relating to the use of toxic substances during the United States aggression against the peoples of Indo-China. There are detailed descriptions of the effects which are visible in succeeding generations, especially deformities, cases of cancer, and the like.

In terms of genetic effects, chemical weapons apparently have some similarity to neutron weapons to neutron radiation, which also produces changes in the chromosome apparatus both of genetic and of somatic cells. With regard to the environment, the possibility of ecological consequences is frightening. Even if man himself is not affected, his life in the environment is disrupted and sometimes made impossible.

Returning to the comparison of chemical weapons (of any kind) with neutron weapons, the major similarity, it seems to me, is that both are means for mass attacks on people. While preserving things of material value, such weapons destroy those who create that value, that is to say, human beings. Therefore such weapons, and any weapons for the mass annihilation of people, should be prohibited.

Question (Soviet Radio):

In their analyses, American specialists particularly stress the relative safety of handling of binary weapons as one of their virtues. Since this is apparently true, could you explain why the Soviet Union is so categorically opposed to binary chemical weapons?

Answer (Major-General A. D. Kuntsevich):

The theory of the relative safety of binary weapons is often exploited in the West; I would therefore like to discuss several aspects of this so-called relative safety, about which the public at large is generally uninformed. There are, in fact, different degrees of danger at different stages of the production of binary weapons. The production of binary components and their transport to the charging site is the least dangerous stage of the work, but according to the plans of the developers of binary weapons, these activities will be carried out in the United

States itself. The dangerous stage of the work is the charging of weapons with the binary components, their transport to and storage at army depots, and especially their storage at combat stations because careless handling or an accident could result in the formation of actual toxic substances of the type used in combat, the leakage of which would inevitably pose great danger to people. But as you have all noticed, the United States has averted that danger from itself by shifting it to Europe. This is a very important point which I would like you to keep in mind. As regards the allegedly low toxicity of the components of binary formulas, I must state that those components are far from safe. For example, methylphosphonic difluoride, one of the components of binary sarin, is the same poison as strychnine, and a component of binary VX has the same level of toxicity. Thus, statements about the relative safety of binary weapons are false and dangerous in the sense that they are aimed at lulling the vigilance of the European peoples which are struggling against the deployment of chemical weapons on the European continent.

Y. N. Chernyakov:

There are a number of questions relating to the current status of the negotiations on chemical disarmament, and in particular to the bilateral negotiations between the Soviet Union and the United States. These questions have been submitted by correspondents from the newspapers Rudé Právo and Komsomolskaya Pravda, the EFE agency and others.

What can be said about the situation today? Negotiations aimed at the prohibition of chemical weapons have been going on in the Geneva Committee on Disarmament for a long time. In 1972, the Soviet Union introduced a draft convention on the prohibition of chemical weapons and on their destruction, which helped to bring some progress in the negotiations. The main reason for the slow pace of that progress is the reluctance of the United States to work for the prohibition of chemical weapons. It masks its obstructionist position with exorbitant demands for the monitoring of compliance with the future convention.

For four years, beginning in 1976, bilateral negotiations between the Soviet Union and the United States were held with a view to submitting to the Committee on Disarmament a joint proposal on the prohibition of chemical weapons. In 1980, however, the United States unilaterally broke off those negotiations, and it refuses to resume them. The Soviet Union, for its part, considers it even more essential today to develop a convention on the prohibition and destruction of chemical weapons and to resume the bilateral Soviet-United States negotiations.

Question (Novosti press agency):

In the United States, chemical warfare is regarded as a form of military action using conventional weapons. On that basis it is asserted that the United States must have the potential for a retaliatory strike with the use of chemical weapons. What can you say about that?

Answer (Major-General A. D. Kuntsevich):

The Soviet Union has never used chemical weapons. History makes it clear that

the United States of America is the sole leader in the production and stockpiling of chemical weapons. Not bound by the Geneva Protocol of 1925, and having seized Germany's scientific and technological documentation and its leading scientists, the United States hurriedly began immediately after the Second World War to create a huge arsenal of chemical weapons. As early as 1945-1947, a decision was taken to construct a factory to produce sarin, which, as is well known, was synthesized by Fascist Germany, where the technology for its production was tested, to be transferred later to the United States. Within a short time the United States had produced large amounts of that toxic substance and created a major stockpile of weapons for its use. Together with nuclear and biological weapons, chemical weapons increased the already quite large military potential of the United States. In the late 1950s and early 1960s, the United States added to its arsenal the agent VX, the most powerful toxic substance of the class of organophophorus agents. This substance has extraordinarily high toxicity, attacking people not only through the respiratory tract but also through the skin, thus by-passing anti-gas devices designed to protect the respiratory tract. One kilogram of this toxic substance can annihilate about 4 million people. By including VX in its armaments, the United States acquired a significant capacity for large-scale chemical warfare. But the increase in its potential did not end there. The United States opened the way to the development of new types of toxic substances. It was the first to synthesize psychochemical toxic agents of the BZ type and include them in its armaments. Vigorous efforts are being made to create new toxic substances which affect the psychology of humans and control their behaviour. The Americans have adapted the toxin which causes botulism for use as a weapon and are doing intensive research on the characteristics of animal and plant toxins of the palytoxin and ricin types, with the sole purpose of discovering a poisonous substance of extraordinary high toxicity against whose effects there would be no protection or cure. All of the research is at a high scientific and technological level, using the most modern physicochemical, chemical, biochemical and toxicological methods. In the course of a year, tens of thousands of new chemical compounds are synthesized. The action of toxic substances is tested on laboratory animals and, as the press has frequently reported, even on people. As new types of toxic substances are created, intensive work is simulataneously done to create new types of weapons to carry them. Several hundred new weapon designs are tried out every year at the testing grounds of the United States, including tests under tropical and arctic conditions. As a result, the current stockpile of United States chemical weapons comprises about 100 different weapon designs. Another essential fact is that the Soviet Union was one of the first to ratify the Geneva Protocol, whereas the United States debated for 50 years whether to ratify it or The Soviet Union frequently proposed to the United States that they should hold negotiations on the prohibition of chemical weapons, but these negotiations were broken off by the United States. What does the decision to break off negotiations conceal? Everyone understands that it is not good intentions but evil and aggressive ones. That is demonstrated by the fact that the United States was the only country to vote against the General Assembly resolution calling upon all States to refrain from production of new types of chemical weapons and from stationing them in those States where there are no such weapons at present. may therefore conclude that the United States does not wish to restrict itself by any international treaty obligations and that it seeks to retain the freedom to use chemical weapons at any time. This is also borne out by the frequent statements of officials of the United States administration which lead one to conclude that to

achieve decisive military superiority, the United States will be the first to use any type of weapons. The world knows that the Americans were the first to test nuclear weapons on people, in Japan, that they tested biological weapons in Korea and finally, that they tested chemical weapons in Viet Nam. There are no grounds for guaranteeing that the United States will not unleash a chemical war; the potential which is now being intensively developed and Reagan's recent decision to produce binary weapons and expand the stockpiles of chemical weapons are aimed at achieving that goal.

Question (TAS):

The State Department says that the United States has weighty evidence of the Soviet Union's participation in the use of mycotoxins of the trichothecene group in South-East Asia and that such use is continuing. What do you think of this State Department assertion?

Answer (Professor N. S. Antonov):

We expected this question to be raised, because in the past six months the United States Department of State has made a number of statements alleging that mycotoxins had been used in Kampuchea. There is a fairly large group of microscopic fungi in nature which people usually call mold. The vital activities of these fungi produce biologically active substances. Some of these substances are useful to humans: microscopic fungi have given us penicillin. Other fungi produce poisonous substances which are called mycotoxins or fungal toxins: example, the toxin produced by the fungus Fusarium is poisonous to humans. a soil fungus which lives as a parasite of various types of plants, particularly It is found in all parts of the world. There are many publications in the scientific literature on the effect of this fungus on wheat and maize in the United States, sorghum in India and rice in Japan, and it is also found in the Soviet Union. The long-term use of grain and baked goods prepared from that grain can lead to the poisoning of humans and animals. For that reason; scientists and specialists in the field of agricultural production and food toxicology are concerned with mycotoxins; until recently, generals and diplomats were not interested in them. It was not until September 1981 that United States Secretary of State Haig drew the attention of the public to these mycotoxins. What prompted his interest in them? After 1976, all sorts of reports concerning the alleged use of toxic substances, including neuro-paralytic agents, skin vesicants and psychochemical (psychotomimetic) agents, in Laos and Kampuchea and later in Afghanistan were widely disseminated by the United States. In the early 1980s after the publication of statements by representatives of the Soviet Union and Viet Nam and by serious Western scientists and journalists, it was made clear that these reports were wholly inconsistent with scientific, medical and technical data. absurdity and falsity of these allegations became quite obvious. And under those circumstances, there was nothing left for the State Department to do except essentially to repudiate its own fabrications and accusations. In a note verbale from its Permanent Representative to the United Nations addressed to the Secretary-General and dated 14 September 1981, the State Department had to state, word for word, the following: "United States experts have studied and evaluated

the symptoms described in these reports in an effort to form a judgement about what agent or agents might have caused such effects. The conclusion reached was that no known traditional chemical warfare agent alone or in combination with others could produce all of the symptoms described or cause death to occur as rapidly as has been reported. The case could have been closed there: the bubble had burst. But the State Department decided to continue its campaign.

For that purpose it needed new "facts and evidence". Then, on

13 September 1981, in West Berlin, the Secretary of State announced that he had obtained some weighty evidence of the use in South-East Asia not of toxic substances but of mycotoxins, that is to say, products of the vital activity of the microscopic fusarium fungus. What was the evidence? It was this: from some meagre plant samples obtained from Kampuchea, three mycotoxins, followed by a fourth, were isolated. They included the mycotoxin T-2. It was subsequently claimed that the Fusarium fungi and the mycotoxins produced by them do not exist in South-East Asia. The representative of the Department of State asserted that 3,000 publications studied by United States experts made no mention of such mycotoxins being found in South-East Asia. On the basis of this hurriedly concocted "evidence", the Department of State put out its version according to which the Soviet Union had supplied the mycotoxins to Viet Nam. The situation later reached the stage where accusations were made about breaches of the Geneva Protocol and of the Convention on the Prohibition of Bacteriological (Biological) Weapons.

When I was in Viet Nam in February this year, I asked Vietnamese scientists whether there were no scientific publications or other data about the distribution of the Fusarium fungus in Viet Nam. They showed me several scientific publications. I will cite one of them. In 1975, which was during the time of the Thieu puppet régime, the medical faculty of former Saigon University published a scientific work - a qualifying thesis by Nguyen Thuy Chan, carried out under the guidance of Professor Do Thi Ngoc Anh. According to this publication, throughout 1974 - in every month of the year - the existence of the Fusarium fungus was regularly detected in the atmosphere of Saigon, on the roof of the medical faculty building. Those interested can find similar scientific works, now in the United States Library of Congress. I have in front of me the twenty-third volume of the bibliographical catalogue of the Library of Congress. Here there is a reference to the scientific work by Francis Buqnicourt, published in Paris by Lechevalier in 1939. This scientific publication has the title Les Fusarium et cylindrocarpon de L'Indochine.

Finally, I have before me a monograph published in 1979 in the United States concerning food infection and poisoning, as well as a monograph entitled Genus Fusarium, published in England. According to these publication, the Fusarium fungus, which is common in South-East Asia, is capable, in a natural environment without any human intervention, of producing, isolating or forming all those very mycotoxins which the United States teams found in Kampuchea. Was there any point after that in the State Department's sending teams? Consequently, the United States assertion that these fungi do not occur in a natural environment in South-East Asia, and that if they do occur, they do not produce mycotoxins, is scientifically quite untenable. This is scientific disinformation. As for the

military aspect of the use of mycotoxins, the United States has not even tried to find and produce any evidence: it cannot be found, because it does not exist in nature. It should be said that mycotoxins, compared to modern toxic substances, have a lower toxicity by a factor of hundreds or thousands, and they even have a lower toxicity than the toxic substances used in the First World War.

I must state that in the Soviet Union there never has been, nor is there now, any production of mycotoxins. What makes the State Department turn its attention to these mycotoxins? What prompts it to do so? I have the impression that there are several reasons for this, but I will give just two. The United States has to distract attention from the truly catastrophic, anti-human criminal acts of its militarists during the period of chemical warfare in Viet Nam. I have just been there, and was convinced: I saw the ghastly consequences with my own eyes. Sooner or later the initiators and instigators of that war will have to answer for it. Secondly, the United States is disseminating slanderous information and statements to the effect that the Soviet Union is not implementing the 1925 Geneva Protocol and the 1972 Convention on the Prohibition of Bacteriological (Biological) Weapons. It is thereby seeking to wreck these unique international agreements and deprive them of all force, agreements which were the first to ban such barbarous means of waging war; it is striving to undermine a belief in them. The United States wants to keep itself free to pursue its policy of developing, producing and building up new types of weapons.

Academician A. V. Fokin: I have several questions, which may be combined.

Question (newspaper Izvestia, Gosteleradio):

The study of the consequences of the use of chemical weapons by the United States Army in Viet Nam has been going on for some years, and apparently it will continue further. What is known of the conclusions already arrived at by the Vietnamese scientists and the scientists of other countries while studying this question?

Question (newspaper Krasnaya Zvezda):

What were the effects of the war in Viet Nam on those who took part in it, particularly on the United States side?

Question (Vietnamese Information Agency):

A delegation from the Academy of Sciences of the USSR recently visited Viet Nam and concluded an agreement with the Vietnamese on Soviet-Vietnamese co-operation in investigating and remedying the consequences of United States chemical warfare in Viet Nam. What can you tell us about this?

Answer (Academician A. V. Fokin):

I did indeed recently return from Viet Nam, where I met a group of scientists from the Academy of Sciences of Viet Nam and became acquainted with the research

work done by Vietnamese scientists on the consequences of chemical warfare in Viet Nam. They have already done much in this area, but much still remains to be done, since it is a complex subject requiring very serious study. We are proposing to organize co-operation between scientists and institutes of the Academy of Sciences of the USSR and Vietnamese scientists to help them in this work. As for the conclusions which can already be drawn today concerning the consequences of the Viet Nam war, one may briefly say the following. The large-scale use of chemical weapons by the United States Army against Viet Nam in the period 1961-1971 caused profound changes in Viet Nam's ecology, resulted in serious economic losses and did irreparable damage to the health of the population. More than 100,000 tons of various chemical and toxic substances, including 96,000 tons of phytotoxic agents and more than 7,000 tons of poisonous substances was used against the people of Viet Nam. Forty-four per cent of the tropical forests and jungles and 40 per cent of the area under cultivation in South Viet Nam were chemically treated with toxic substances. In attacks on large areas of forest and cultivated land, chemical substances were used by the United States Army in enormous doses of 10 to 100 kilograms per hectare. This usually was not limited to defoliation but resulted in the total destruction of plant and animal life in the affected areas. Today, besides the many thousands afflicted by chemical weapons during the war, there are also those suffering from so-called delayed effects, including nervous disorders, skin diseases and more serious diseases such as liver cancer. There are women in Viet Nam giving birth to deformed children; there are also abnormal pregnancies, miscarriages and many other abnormalities.

We were also shown children who were living monsters; they will be seen in a film to be presented after the press conference. It is horrifying to look at a child who has two heads and four arms. This child will soon be one and a half years old - he is alive. And when you look at these terrible consequences of the war, you cannot help remembering who is to blame for such things. Medical findings indicate that over 500,000 South Vietnamese women are sterile.

Nature also suffered very heavily: the damaged forests and plantations are not recovering by themselves and must be restored by artificial means. In these forests the number of animals has declined and the number of species of flora has dropped sharply. The widespread use of the mixture known as Agent Orange, which contains a highly toxic substance, was particularly harmful. This did not become known until several years after the mixture had first been used. Agent Orange contained a highly toxic substance called dioxin, which is still present in detectable quantities in both surface and subsurface strata of the soil of Viet Nam. Very small doses of this substance are toxic to foetuses, cause mutations and have carcinogenic effects; in other words, it is the principal cause of many delayed consequences of chemical warfare.

Most of the anomalies now being observed in the Vietnamese, especially in women of child-bearing age, are the result of dioxin-induced disturbances of the genetic apparatus. It should be noted that the nature of the change in the genetic apparatus of the Vietnamese who were exposed to the effects of Agent Orange resembles that of the changes observed in the chromosome apparatus of residents of Hiroshima and Nagasaki who endured the horrors of the atom bomb. We can thus

assert that there are today on this planet to biological populations with disturbances of the genetic apparatus: one in Japan and one in Viet Nam. The suffering of the members of these two populations and of their descendants was brought about by the unbridled efforts of the American military to win the war by any and every means.

These facts show that the chemical weapons used in Viet Nam served more than tactical and operational ends. Viet Nam was a testing ground for new types of weapons, for the latest achievements of man-killing technology and especially chemistry. This is the only possible interpretation of the chemical war waged by the United States Army from 1961 to 1971 in Viet Nam. There is another point. We have talked about the fatal consequences of chemical warfare for the people of Viet Nam. However, the consequences of this war were also felt by those fighting on the other side. The victims of the chemical warfare were the Americans themselves, as is now becoming increasingly apparent. It turned out that they had been deceived, since they had been unaware of the true extent of the harm which they had intended to inflict on the Vietnamese people. The delayed-action ecological bomb which the Americans planted in Viet Nam has turned into a boomerang and is striking the very Americans who participated in the crimes committed in Viet Nam. Those who waged the chemical attack are experiencing the same suffering as their former opponents and victims. A thousand veterans who are victims of chemical weapons are now registered in the United States.

An association of Viet Nam war veterans has prepared a critical review containing a full description of the chemical warfare waged in Viet Nam. It states which chemical substances were used, when, where, and in what areas. The authors have even calculated the amount of harmful dioxin which brought about changes in human chromosomes. In fact, it is a record of chemical warfare, and some of the information, although understated, constitutes the best possible evidence of what crimes were committed by the United States Army in Viet Nam. There are references to the literature on the subject, which is now extremely extensive.

I shall cite only one instance. Newsday of 5 May 1980 reports that Victor Coleman, a lawyer for the Viet Nam veterans, who had brought an action in a Federal court against the producers of pesticides, stated that the various illnesses from which they and their children were suffering had been caused by Agent Orange. He announced that the number of plaintiffs had increased to 40,000. If anyone is interested in these matters, I have some extracts from the American press concerning these people, and photographs of deformed children, and of their fathers, on whose faces are seen fear and outrage - outrage because they were betrayed by the United States Government, when they became involved in this pernicious affair. Veteran Dan Jordan considers that Agent Orange caused his son to be born with deformed arms. There is therefore already a third population: the Americans themselves, who turned out to be the victims of this chemical warfare.

Question (Hungarian radio):

In the case of every weapon, means of neutralizing its effects are developed. Does this possibility exist in relation to binary warheads?

Answer (Academician A. V. Fokin):

Whatever means are used to protect against, treat or neutralize chemical substances, heavy losses are unavoidable; all that can be done is to reduce such losses. A chemical attack against the countries of the third world would be especially destructive as, unfortunately, they have no means of chemical protection. As far as the substances that neutralize and decontaminate binary warheads and binary weapons are concerned, they appear to be the same as for all toxic substances.

Y. N. Chernyakov: You are asked to indicate the number of Viet Nam war veterans in the United States and how many of them were victims of chemical warfare.

Reply (Academician A. V. Fokin):

About 2,800,000 American service men took part in the war as a whole. According to data published in our press and in the American press, and according to the delegation of American Viet Nam war veterans which recently visited Viet Nam, the figure is now around 40,000, although, of course, this figure will grow.

Question (periodical Novoye vremya):

What is the Soviet Union's assessment of the chemical-warfare capability of other countries: Britain, France, the Federal Republic of Germany, Italy and Japan, and their aility to produce their own chemical weapons?

Reply (Major-General A. D. Kuntsevich):

Of course the principal danger to peace is the chemical-warfare capability of the United States, the needs of which are met by about 90 State and private chemical firms. At the present time, according to various assessments by American specialists, total supplies of chemical agents available for deployment amount to 150,000 to 300,000 tons, and the number of projectiles for their dissemination is about 3 million. The Pentagon is planning to raise that figure in the next few years to 5 million, at a cost of about \$10 billion. There is probably no need to comment on these figures, which indicate that the United States is capable of waging extensive, large-scale chemical warfare. As to the capability of the other countries, I should point out that Britain possesses a powerful scientific and technical potential for research on new toxic substances. The British were the first to synthesize the toxic substances VX and CS; they developed the technology and passed it on to the United States for production. Research on new highly toxic substances is continuing at the present time at Porton Down. The British chemical industry is able at short notice to develop the production of toxic substances and components for binary shells. France has its own chemical weapons and mobilizable reserves and is able to maintain these reserves at an adequate level. The Federal Republic of Germany has a developed chemical industry which is able in a short period to tool up for the production of both toxic substances and binary-weapon components. Japan, Italy and other United States allies have the same capabilities. In recent years the United States has been extensively involved in

international co-operation for the development of chemical weapons. Consider the following instances: the Stanford Center for Strategic Research in the United States, together with specialists from Britain, the Federal Republic of Germany and Israel, has made an assessment of the prospects for the development and use of chemical weapons in the 1980s and 1990s. Britain, the Federal Republic of Germany, France and the United States are now engaged in the intensive development of chemical munitions for rocket salvo-firing systems. These are convincing examples of the fact that the United States is firmly harnessing its allies to its war chariot and is building up its strike and offensive forces for the conduct of a war in Europe.

Y. N. Chernyakov:

A group of questions has been submitted by Reuters news agency, Swedish television and the Norwegian newspaper Aftenposten. One question is: "Will the Soviet Union develop its own chemical weapons in reply to the new United States programme for the development of binary weapons?"

Reply (Major-General A. D. Kuntsevich):

The Soviet armed forces will unquestionably have a counter-weight to any weapon, including binary weapons.

Y. N. Chernyakov:

The second question in this group is: "What are the purposes of the chemical personnel of the Soviet armed forces?"

Reply (Major-General A. D. Kuntsevich):

The chemical personnel of the Soviet armed forces have a protective mission; they are intended for conducting chemical reconnaissance to eliminate the after-effects of the use of chemical weapons, and this is their main purpose. At the present time the chemical troops, where carrying out tactical assignments, concern themselves with the elimination of the after-effects of the use of chemical weapons. Historically the training of armed forces in anti-chemical defence measures is justified. You may recall that Fascist Germany used chemical weapons during the Great Patriotic War in the region of Odessa and Kerch and Soviet troops were ready with protective measures.

Y. N. Chernyakov:

There is a question from United Press International.

Question:

"What is your reply to the United States assertion that the USSR used chemical weapons in Afghanistan and as a result at least 3,000 people died?"

Reply (Y. N. Chernyakov):

This is our reply: It is a lie from beginning to end. It is repeated frequently and on a wide scale, although there are not the slightest grounds for it. It doesn't cease to be a lie for that reason. It is especially cynical in the light of the fact that, in Afghanistan — and there is documentary evidence for this — chemical weapons were used: they were American grenades supplied to bandits who were directed against the Afghan people by the United States and certain other States.

Question (correspondent of Excelsior, Mexico):

"You speak about Europe, but cannot chemical weapons be used in Central America and the Caribbean basin?"

Reply (Y. N. Chernyakov):

I do not think that either Nicaragua or other countries in that region are preparing to use such weapons. You yourself understand where the real threat of their use comes from.

Question (newspaper Daily World):

Comrade L. I. Brezhnev, at the Twenty-sixth Congress of the Communist Party of the Soviet Union, proposed setting up a committee consisting of well-known scientists in order to tell people the truth about the terrors of nuclear warfare. Are the Soviet scientists thinking of turning to the scientists of the world, including United States scientists, with a view to setting up a committee which would concern itself with the threat of the use of chemical weapons?

Reply (Y. N. Chernyakov):

I don't think I can answer for all scientists, but they are undoubtedly interested in averting disasters and human suffering caused by any kind of weapon. Their mission is not confined to the subject of nuclear weapons.

Academician A. V. Fokin:

I had occasion to speak to the chairman of the committee of soviet doctors who, together with doctors of the United States and other countries, are dealing with issues relating to the struggle against the atomic threat. He and the President of the Academy of Medical Sciences of the USSR are having discussions with scientists of other countries with a view to setting up a committee of competent scientists. It could include scientists from socialist, capitalist and third-world countries. They will tell the truth about atomic war and about the consequences of the use of weapons of mass destruction, no doubt including chemical weapons. It is possible that they will also make constructive proposals acceptable to all Governments with a view to eliminating the atomic threat. Work is now going on to set up the committee.