

Use of Chemical Weapons in Asia

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Following is a statement by Mr. Richard Burt, Director of the Bureau of Politico-Military Affairs, before the Subcommittee on Arms Control, Oceans, International Operations, and Environment of the Senate Foreign Relations Committee, November 10, 1981.

I am pleased to appear before you today to discuss aspects of chemical/biological warfare in Asia and to bring you up to date on our latest findings. With me today are Amoretta Hoerber, Deputy Assistant Secretary of the Army for Research and Development; Dr. Sharon Watson, from the Army Surgeon General's Office; Mr. Gary Crocker from the State Department's Intelligence Bureau; and Dr. Robert Mikulak of the Arms Control and Disarmament Agency.

Witnesses appear before the Congress on a whole host of subjects. But there is no subject of greater urgency than that we are here to discuss today. Over the past 5 years and perhaps longer, weapons outlawed by mankind, weapons successfully banned from the battlefields of the industrialized world for over five decades, have been used against unsophisticated and defenseless people in campaigns of mounting extermination which are being conducted in Laos, Kampuchea, and more recently in Afghanistan.

Reports of the use of lethal chemical weapons in Southeast Asia began to appear in 1976, although the initial attacks may, in fact, predate that by several years. The sites of these first attacks were in remote highlands of Laos, 6

weeks by jungle track from the nearest neutral territory. The targets were the villages of the highland tribes, such as the Hmong, traditionally resistant to the lowland Pathet Lao. The victims were the inhabitants of these villages—men, women, and children, particularly the children, who proved least able to resist the lethal effects of the poisons being employed against them.

In succeeding years the attacks multiplied and spread, first to Kampuchea and then to Afghanistan. Reports were necessarily fragmentary, incomplete, and episodic. The sources were the victims themselves or the refugee workers, doctors, nurses, and journalists who had spoken with those who survived the long trek from the deserted villages, the poisoned wells, and the deadly fruit of their homeland to safe havens in Thailand.

As information accumulated, it was clear to the U.S. Government that something important and sinister was occurring, but it was not clear precisely what. Repeated stories from rural peoples in widely separated regions, in different countries, all correlated with each other. This made it impossible to discount these reports as self-serving inventions by dissident elements in conflict with the local regime. Yet while, over time, we felt compelled to credit these reports as true, we remained puzzled by them for two reasons.

First, because analysis of samples taken from the areas of attack—samples of vegetation, clothing, and human tissue—had shown no detectable traces of any known chemical agent;

Second, because the extent and sequence of the signs and symptoms reported were also inconsistent with the effects of any known chemical agent or combination of such agents.

In 1979, despite these remaining gaps in our evidence, the State Department, with the support of other agencies, began to take several important steps.

- We set up an interagency committee to coordinate the government's work on chemical weapons use and worked with the intelligence community to devote greater resources to the development and analysis of information on the subject.

- We began to brief other governments on this issue and to encourage them to develop and share with us their own information on these attacks.

- We began to express our concerns publicly and to seek wider international action.

As a result of these steps, we succeeded last fall in securing a favorable vote in the U.N. General Assembly—over the vehement opposition of the U.S.S.R., Vietnam, and their allies—mandating a U.N. investigation of reports of chemical weapons use.

A second result of these steps was the decision, by a group of U.S. Government scientists and experts on the U.S. interagency committee on chemical weapons use, to take a fresh look at reporting on chemical weapons use from the beginning and, in particular, to re-examine the pattern of the attacks and the resultant symptoms.

Pattern of Attacks and Symptoms

Many of the reported attacks, particularly in Laos, did follow a pattern—not an invariable pattern but one with consistent elements from report to report. These attacks were conducted by low, slow-flying aircraft, sometimes identified as an AN-2—a Soviet biplane used as a crop duster in the U.S.S.R. The plane would release a cloud, often described as yellow, sometimes orange, red, or other tints. The cloud would descend upon a village or upon people in the neighboring rice paddies. The cloud seemed to be made up of small particles which would make sounds, when falling on rooftops or vegetation, similar to that made by rain. It came to be called, by its victims, the "yellow rain."

For those directly exposed to this yellow rain, its effect was quick and dramatic. They would experience an early onset of violent itching, vomiting, dizziness, and distorted vision. Within a short time they would vomit blood-tinged material, then large quantities of bright red blood. Within an hour they would die, apparently of shock and the massive loss of blood from the stomach.

Those on the periphery of the attack, or under shelter, or those who returned to the village after an attack and ate contaminated food, would experience similar symptoms over a longer period, accompanied by bloody diarrhea. These people, too, would often die—after a week or two of agony—of dehydration.

These symptoms in this order cannot be explained by positing the use of any known chemical agent, either of the blistering type, such as the mustard gas of World War I, or of the more modern nerve agents. Similar symptoms, however, have been reported in natural outbreaks of toxin poisoning of a certain type, specifically trichothecene toxins. Toxins are biologically produced chemical substances, poisons which appear in nature, on grain for instance. In some locales these pose serious hazards to public health.

The U.S. Government scientists and experts on the chemicals weapons use committee combined their hypothesis of trichothecene poisoning based upon the symptomatology of reported chemical weapons attacks with a review of the literature which revealed that the Soviet Union had a long experience in the field of trichothecene toxicology, and had done much research, including research into the massive production of trichothecene toxins. Some such research had, in fact, been done in Soviet institutes under military control and with connections to the Soviet chemical weapons program. We concluded, therefore, that we should begin to look for evidence of possible toxin use. As a first step in this direction, we started to reanalyze samples already tested for other chemical agents for the presence of toxins.

So far I have been citing evidence mainly from Southeast Asia and particularly Laos, where the yellow rain attacks were first reported and where they have been conducted most systematically. In Kampuchea growing reports in recent years suggest that a wide range of chemical warfare agents are in use, including "yellow rain." Cyanide, for instance, has been discovered in wells. Vietnamese soldiers have been captured poisoning the wells of refugee camps on the Thai border.

In Afghanistan, too, the evidence of chemical weapons use has been rising. We are today in much the same position—in terms of our ability to establish a pattern of such use and to identify specific agents being employed in Afghanistan—as we were in 1979 regarding Southeast Asia. We have numerous eyewitness reports—of victims, of journalists—we have sensitive intelligence of technical and human origin, and we have testimony of those who have fought on the Soviet side. Based upon this information, we are certain that chemical weapons are being used in Afghanistan. These include irritants, new and as yet unidentified incapacitants, and familiar lethal agents, including nerve gas. A number of former Afghan military officers, trained in the Soviet Union in chemical warfare, have identified lethal agents brought into Afghanistan, have pinpointed the sites where these are stored, and have specified when they have been used. These reports are corroborated by reports from refugees and victims of these same attacks.

Physical Evidence in Southeast Asia

We do not, as yet, have physical evidence of chemical warfare in Afghanistan; in Southeast Asia we do. The first set of samples we subjected to test for trichothecene toxins was taken from a village in Kampuchea. It was collected within a day of an attack on the village which killed people in the same brutal manner I have described. The results of that analysis, as you are already aware, showed that:

- The leaf and stem in question contained levels of trichothecene mycotoxins 20 times higher than that found in natural outbreaks;

- The trichothecene mycotoxins found do not occur naturally in the combination identified in Southeast Asia;

- In parts of the world where these mycotoxins do appear naturally, they do so in combination with certain other toxins which were not present in this sample;

- The effect of these trichothecene mycotoxins on man and animals is the symptomatology I have described. These toxins produce all the symptoms I have mentioned, and they are not known to produce any symptoms not reported. The fit, in other words, was perfect.

Others here are better qualified to discuss the technical process of analysis and to interpret the results for you. The significance of this discovery, however, can be simply stated. We had solved the mystery. We had fitted together the jigsaw puzzle which had bedeviled us for 5 years. We now knew what was causing the bizarre and brutal deaths of Laotian and Kampuchean villagers. We had ascertained that a completely new class of weapons had been developed and was in use.

In the past few weeks we have completed analysis of further samples from both Kampuchea and Laos. The results have confirmed our earlier findings and reinforce the conclusions we have drawn from them. One of these new samples was of water, taken from the same Kampuchean village at the same time as the set of leaves and stems, which was first analyzed positively for trichothecenes. The other two samples are from sites of separate attacks in Laos, one of which was provided to us for analysis by Congressman Jim Leach [of Iowa].

All three of these samples reveal very high quantities of trichothecene mycotoxins, quantities even higher than in the first sample. Both of the samples of yellow powder from Laos were scraped from rocks, not naturally a medium for high levels of toxins. One of the Laos samples, for example, contained 150 parts per million of T_2 toxin. This is almost 50 times higher than the level of T_2 in the original sample from Kampuchea. The water sample from Kampuchea contained 66 parts per million of deoxynivalenol.

In addition to samples collected from sites of reported attacks, we have also obtained samples of background soil and vegetation of the same species as originally tested from near the same area in Kampuchea. These were tested by the same analytical technique and found to be free of any trichothecenes, thus further confirming the absence of natural occurrence of these toxins in that region.

Dr. Watson is prepared to discuss the detailed results of these latest tests, and their significance. Again, however, the basic conclusion is a straightforward one: We have confirmed the use of toxin weapons in Laos as well as Kampuchea.

Ever since the U.S. Government began to voice its concerns over reports of chemical weapons use, critics have demanded that we produce the smoking gun. The testimony of victims, of witnesses, or refugee military officers who had engaged in chemical warfare activities, and the technical intelligence

was not enough. Those who did not believe said they would not believe—unless we produced a smoking gun, physical proof.

We now have the smoking gun. We now have four separate pieces of physical evidence. We may soon have more as, I regret to say, chemical attacks have been reported in Laos and Kampuchea within the last month. We are taking every step to make this evidence widely available in order that others can form their own conclusions. There will always be those who will not believe. We are persuaded, however, that any person, any government, any journalist who approaches this issue with an open mind, who travels to the borders of conflict and seeks out victims and those who have treated them, that anyone who conducts his own inquiry, will come to the same conclusions we have.

Having answered one question which bedeviled us for 5 years, we have opened up a new set of unanswered questions. Toxins are one type of chemical weapons in use in Southeast Asia. But there are other chemical warfare agents in use there and in Afghanistan, which we have yet to identify. The trichothecene mycotoxins we have discovered are a highly lethal mixture. But we are not certain that this is the only type of toxins in use, and we are not certain precisely why this combination has been chosen or what other combinations we may yet discover.

We are also addressing ourselves to the question of why toxins have been developed and used as a weapon, when other lethal chemical warfare agents are available, off the shelf, so to speak.

There seem a variety of factors that make toxin weapons particularly effective against the rural, defenseless peoples of nations like Laos and Kampuchea. The violence of the death—with victims experiencing severe vomiting, diarrhea, extreme irritation of the eyes and skin and respiratory system, and often dying rapidly; the ease in which the powder can be carefully applied to a limited area; and the survival rate of those on the periphery, who can report what they have seen, all contribute to making this type of weapon suitable for driving people from their homes and villages and insuring that they stay away. The limited protection needed by those who must handle this material—gloves and a simple face mask, as opposed to a complete protective suit, and the simple method of delivery, such as crop-dusting aircraft—contributes to its

attractiveness as an effective weapon of terror. Finally, the difficulty in detecting and identifying the toxins contributes to its attractiveness. It has, after all, taken the U.S. Government, with all the technical resources at its disposal, 5 years and many thousands of man-hours to discover the true nature of "yellow rain."

Issue of Responsibility

I have so far addressed the question of chemical weapons use but not the issue of who is responsible for their use. The Soviet Union is, of course, directly involved in the fighting in Afghanistan and thus in the use of chemical weapons in that country. In Laos and Kampuchea, on the other hand, these weapons would seem to be employed by indigenous forces—the Vietnamese, Laotians, and Kampuchians. Nonetheless, the links to the Soviet Union are strong.

- The Soviets are providing extensive military assistance and advice in Laos, Kampuchea, and to the Vietnamese forces fighting there. The Soviets certainly know what is happening and are in a position to stop it if they chose.
- The Soviets are advising and controlling chemical warfare activity in Southeast Asia. Soviet chemical experts have inspected a number of chemical weapons storage facilities there. Both lethal and nonlethal chemicals are believed to be stored at these sites and are transported between storage facilities and ordnance camps or field use areas as needed.
- There exists, in so far as we are aware, no facilities in Southeast Asia capable of producing the mold and extracting the mycotoxins in the quantities in which they are being used.
- Such facilities do exist in the Soviet Union, including microbiological plants under military control and with heavy military guard.
- The Soviets have resisted every effort to mount an impartial investigation of chemical weapons use in Southeast Asia and Afghanistan.

For over 2 years we have sought, and failed to receive, from the Soviet Union an explanation of the anthrax outbreak at Sverdlovsk. We have also raised with the Soviet Union our concerns regarding chemical weapons use in Afghanistan and Southeast Asia. More recently, we have raised these issues again in the context of new information on the use of toxins. We have still not received a substantive response.

The use of toxins as warfare agents in Southeast Asia has grave implications for present and future arms control arrangements. As biologically produced chemical substances, toxins fall within the prohibitions of both the 1925 Geneva Protocol, forbidding the use of chemical weapons in warfare, and the 1972 Biological Weapons Convention, which forbids the production, stockpiling, or transfer of toxin weapons. These agreements, signed by both the Soviet Union and Vietnam, and the customary international law, which has developed out of the former, are being flagrantly violated.

A common feature of the Geneva Protocol and the Biological Weapons Convention is that neither contains any provisions for verification and neither contains adequate mechanisms for resolving issues of compliance. It is too early to determine the full consequences of the use of chemical and toxin warfare agents for future arms control arrangements. There should be no doubt, however, that the U.S. Government will insist that any future arms control agreements contain whatever provisions are needed to permit verification and to insure that questions of compliance are dealt with seriously. The day the United States signs unverifiable arms control agreements is over. Let us hope that the day when others urge us to do so in the cause of relaxed tensions or increased international goodwill is over as well. For nothing increases tension or poisons goodwill more than the lack of compliance with agreements concluded.

U.S. Steps

Let me next turn to the steps we have taken as a result of the new information on toxin use. As I have noted we have raised this issue again with the Soviet Union, to no effect. We have raised the issue with Vietnam and Laos, also without effect. We have made our evidence available to the United Nations and to all its member countries. We have sent our experts to a number of European capitals and to New York, where they met with the U.N. experts. We have indicated our hope that the U.N. experts continue their inquiry and travel at least to all of those countries neighboring the scenes of conflict—they have just visited Thailand, and Pakistan has offered an invitation as well—to interview refugees and other sources. We have also encouraged other nations and other private organizations, including journalists, to mount their own inquiries into what is going on in Southeast Asia and Afghanistan.

Our objective is to stop these attacks. We will keep this issue before the world community and on the international agenda as long as we need to do so. For the present, we believe priority should be given to the U.N. inquiry. A vote in the General Assembly on whether to extend the mandate for that investigation will be taken in the next 6 weeks. It is very important that this be done.

We are also reviewing other means to focus world opinion on this issue. If we are to succeed, we must make sure this is not simply perceived as a

U.S.-Soviet contest from which others can disengage. This means we must insure our evidence is made as widely available as possible, while avoiding any appearance of engaging in a propaganda campaign. For if our efforts are to have any utility, others must take this information as seriously as we.

There is reason they should. For over 50 years, as I have said, chemical weapons have been successfully banned from the battlefields of the industrialized world. This success is due, I expect, as much to the deterrent effect of possible retaliation as to respect for the sanctity of international law. What is going on today in Afghanistan and Southeast Asia is not an East-West issue. It is an issue of universal import with particular consequences for those countries least prepared to defend against the use of chemical and biological agents. It is our task to put our information at the disposal of the world community. It is the response of the world community—not just that of the U.S. Government, its friends, and allies—which will, in the end, determine whether these attacks continue and proliferate or are halted forever. ■

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