

4. The symposium reserved most of its time for the evaluation of the long-term effect of chemical warfare in Vietnam. Scientists attending the symposium highly valued the contribution made by Vietnamese scientists who, despite the limited facilities and other difficulties during and after the war, were able to overcome these problems and made valuable research contributions. The reports and suggestions made by Vietnamese scientists at the symposium provided a crucial basis for discussions in the working groups and at the plenary session. Large-scale field studies done by Vietnamese scientists in localities in Southern Vietnam as well as Northern Vietnam have provided many materials of scientific value not previously demonstrated in other countries.

5. Nature in Vietnam has been substantially damaged. This destruction is due to a complexity of reasons. The delegates agreed that the main and most important cause of this extensive damage to nature is the use of herbicides and defoliants on a large scale.

Immediately after the spraying the toxic substances exerted their direct destructive effects on the vegetation and to some extent on animals living in inland or mangrove forests, and on saline water or fresh water animals. The direct and indirect repercussions of these immediate effects have lasted until today. Time has only slowly helped to eliminate these effects, they are not yet complete, the restoration can only be slow and occurs most readily on very small areas. Photographs taken from the air or space have reflected the real state of the restoration of tropical forests sprayed with defoliants.

6. Toxic chemicals sprayed on a large scale, with a high concentration and in a large amount, have changed the composition of some soils, destroyed useful micro-organisms, and in some areas made the soil to lose fertility and to deteriorate in other ways. Many areas which had been covered with trees and other woody plants throughout the year have become savannas of low productivity with only wild grasses or a number of secondary successional plant species having little economic value, and with rodents, which are disease-carriers. Evidence from aerial photography and elsewhere indicates that some of these savannas are continuing to expand in size. Some species of precious tropical wood are facing the danger of extermination, as are some precious terrestrial or aquatic animals and algae, etc. Transforming these savannas and building them into economic zones, areas for agricultural cultivation and reforestation, are difficult problems, the solution of which is far beyond the present abilities of the Vietnamese people. Moreover, the various impacts on nature undermined the whole human life support system.

7. Toxic chemicals sprayed on the land were washed away to lowland areas, far from the sprayed areas and decomposed in time. The most dangerous among them was agent orange, which was widely used from 1961-1970. Agent orange contains an impurity, 2,3,7,8-tetrachlorodibenzo-para-dioxin (TCDD) generally known as dioxin, a very toxic and resistant substance which exists for a long time in nature. What was the amount of toxic chemicals sprayed? According to published data, more than 90,000 tons of herbicides were sprayed including more than 57,000 tons of agent orange, containing the toxic substance dioxin. The most important thing one should know is whether there still exists dioxin in nature in Vietnam. In 1981 analysis was made of seven soil samples taken in a rural area of Ho Chi Minh City, at different depth levels. On a sample taken at a depth of 1 metre there was a trace of dioxin, with a concentration below 5PPT of soil. On wet sample on the soil surface the concentration was 15PPT of soil.