



*Bamboo clusters destroyed by toxic chemicals
in Cu Chi district, in the suburbs of
Ho Chi Minh City.*

APPENDIX

MEMORANDUM

OF THE MINISTRY FOR FOREIGN AFFAIRS OF THE SOCIALIST REPUB- LIC OF VIETNAM ON THE US CRIMINAL USE OF TOXIC CHEMICALS IN VIETNAM, LAOS AND KAMPUCHEA

Public opinion in many countries, particularly the United States and Australia is demanding, with growing concern, further investigations into the consequences of US chemical warfare in Vietnam. A significant number of American servicemen who took part in the Vietnam war have sued the US Government and those chemical companies that manufactured defoliants for the damage done to themselves and their children by toxic chemicals. The US Congress has held hearings on the problem. In Australia, under the pressure of public opinion, the Australian Government declared

on 7 January 1980 that it would investigate the extent of damage caused by US toxic chemicals to the offspring of Australian Vietnam war veterans. Research by Vietnamese and American scientists has led to important conclusions on the subject. Yet the ruling circles in the US have been trying to cover up the truth and evade their responsibilities. In close coordination with China and its henchmen, the United States has come out with slanderous accusations against Vietnam of "using toxic chemicals in Laos and Kampuchea" in order to mislead public opinion.

The Ministry for Foreign Affairs of the Socialist Republic of Vietnam deems it necessary to point out the responsibility the US has to bear for the consequences of the chemical warfare it carried out in Vietnam and to expose the machinations and tricks of the US ruling circles who are trying to evade their responsibilities.

1. In its war of aggression against the peoples of Vietnam, Laos and Kampuchea, besides bombs, shells and various other weapons the United States made systematic, large-scale use of toxic chemicals and gases to kill civilians and destroy the environment in the three Indochinese countries

The United States sprayed more than 100,000 tons of toxic chemicals on almost all provinces of South Vietnam where 13,000 sq.km. (43%) of cultivated land and 25,000 sq.km. (44%) of forests were targets for one or several sprayings.

Seventy per cent of coconut orchards, 60% of rubber plantations, 110,000 acres of coastal pine forests and 150,000 acres of mangrove forests were sprayed with defoliants. Food sufficient to feed millions of people was destroyed as a result of this chemical warfare.

There were 2,000,000 victims of chemical warfare including 3,500 dead. According to figures released by the Foreign Affairs Division, Library of the US Congress, on 30 June 1971, toxic chemicals used by the United States in South Vietnam amounted to about 6 pounds for every South Vietnamese.

Scientists all over the world have stated that the spraying of toxic chemicals throughout South Vietnam by the United States was ecocide. Professor Arthur W. Galston, an American biologist, testifying before members of the US Congress and the public on 9 February 1977, said, "I believe that the resulting damage done to Vietnam and to the

environment on which all of that civilization depends, is still inadequately calculated."

US Senator Gaylord A. Nelson condemned this crime in August 1970: "The history of mankind has never known a case in which a country declared war against the environment of another nation; yet, the United States embarked on an ecological experiment which no nation else dared undertake".

2. The consequences of the use of 2,4-D and 2,4,5-T "herbicides" or "defoliants" are creating growing concern in Australia, and especially in the United States. These chemicals, used in South Vietnam from 1962 to 1971, have much greater toxicity than those used for agricultural purposes in the United States and Australia.

Since 1970, Vietnamese scientists have shown that herbicide 2,4,5-T contains dioxin, one of the most toxic substances known. Vietnamese scientists' researches as verified in Australia, Switzerland and the United States, indicate that a micro-amount of this agent can engender miscarriages, birth defects, stillbirths, change of chromosomes and cancer. Dioxin remains for a very long time in natural conditions, defoliating the trees, rendering agricultural land

uncultivable for decades and changing the environment of a country, causing floods and droughts.

In the United States, many Vietnam war veterans are suffering from effects of exposure to dioxin. A single, Chicago-based, organization known as CAVEAT is reported to represent 2,000 Vietnam war veterans carrying dioxin symptoms. Through their organizations, these veterans have filed lawsuits against the five large chemical companies that produced these toxic herbicides. The trust fund they have asked for could amount to as much as 40 billion US dollars. The chemical companies, who at first refused to acknowledge any responsibility, recently put the blame on the US Government for not advising the US servicemen of the long-term effects of these chemicals and demanded that the federal government bear the burden of the responsibility.

In Australia, research by an Australian doctor showed that the rate of congenital malformations was very high among babies born to Australian Vietnam war veterans. On average there was one malformation or miscarriage out of every four pregnancies.

According to US Air Force figures, which are gross underestimates, from 1962 to 1970

some 44 million pounds of 2,4,5-T were sprayed on South Vietnam. The chances of Vietnamese people coming into contact with dioxin herbicides were thus very high, since 60 per cent of the combat zone was sprayed.

Evidently, the US spraying of toxic chemicals left the people and environment of Vietnam with unmeasurably serious consequences.

3. Of late, in close collaboration with China and some of its reactionary supporters, the United States has circulated fabrications about what is called "Vietnam's use of toxic chemicals in Laos and Kampuchea".

In so doing, the United States is obviously trying to mislead public opinion and cover its own genocide in the Indochinese peninsula. It is trying to shirk its responsibilities towards the peoples of Vietnam, Laos and Kampuchea, and towards chemical warfare victims — the US servicemen and soldiers of US allies engaged in the war of aggression against Vietnam.

While concocting the issue of "Vietnam's use of toxic chemicals", the United States has deliberately concealed the war crimes against the Vietnamese people in February 1979 by Chinese troops including the use of toxic gas in some populated areas and the poisoning of

drinking water sources in the areas they penetrated. More serious still, the United States is trying to justify and assist China's efforts and is even directly taking part in the criminal manoeuvre of restoring the genocidal regime of "Democratic Kampuchea" which massacred 3 million Kampuchians and drove the Kampuchean nation to the brink of extermination.

In concocting this story, the United States is attempting to distort the just cause of the peoples of Vietnam, Laos and Kampuchea, sow discord among these three countries and to manipulate the internal political situation in the United States.

What the US has been doing in this connection can only be termed hypocrisy, as Representative Robert W. Kastenmeier termed it when the US House of Representatives voted on a resolution on this question.

After a series of hysterical slander campaigns about "human rights", "refugees", "Vietnam's dry-season offensive" and "Vietnam's obstruction of the relief activities in Kampuchea" the problem of "Vietnam's use of toxic chemicals in Laos and Kampuchea" is just another vicious attempt to implement the hostile policy hatched by the Beijing — Washington alliance

against the peoples of Vietnam, Laos and Kampuchea.

This crafty US manoeuvre can deceive nobody. The debts for the genocidal crimes the US committed against the peoples of Vietnam, Laos and Kampuchea can in no way be liquidated by its deceitful allegations.

The Ministry for Foreign Affairs of the Socialist Republic of Vietnam resolutely denounces and condemns the slanders of the United States, which is trying to evade its responsibility for the chemical warfare crimes in Vietnam, Laos and Kampuchea, and calls on the governments of other countries and world public opinion, especially American public opinion, to be vigilant against this cunning manoeuvre. This Ministry also demands that the US Administration admit responsibility and give compensation for the losses caused to the peoples of Vietnam, Laos and Kampuchea and to those servicemen of the US and its allies engaged in the war of aggression against Vietnam, who are now victims of the toxic chemicals used by the United States.

Hanoi, 21 January 1980

ON THE CRIMES OF US CHEMICAL WARFARE IN SOUTH VIETNAM

(From January 1969 to late 1971)

*Commission for the denunciation
of war crimes of the US imperial-
ists and their henchmen in South
Vietnam*

In their extremely savage war of aggression in South Vietnam the US imperialists and their henchmen did not stop at any cruel and savage scheme to subjugate our compatriots, impose US neo-colonialism in South Vietnam and turn it into a US military base and colony of a new type.

Along with massive bombing raids, savage massacres, mopping-up operations, lootings and barbarous killings regardless of opposition and condemnation by the people of Vietnam and the world, the US aggressors and their

henchmen, in violation of international law, used many kinds of chemical weapons in an attempt to commit large-scale massacres of the South Vietnamese population, destroy their livelihood, their crops, orchards, ricefields, soil and their natural environment.

Especially after Nixon came to power, the American aggressors and their puppets used large quantities of toxic chemicals and gases to kill people and cattle, and destroy crops and plants in many southern provinces.

According to still incomplete data, over the past three years, they have sprayed toxic chemicals over an area of 2,276,950 hectares. 790,000 people were intoxicated, many of them several times, thousands of people died due to heavy intoxication. In the first two years of the Nixon Administration, the area sprayed with toxic chemicals increased by half and the number of intoxicated people doubled annually compared with the period under the Johnson Administration. Especially, the sprayings were concentrated in the Mekong delta and along the densely populated coast of Central Vietnam. In the mountain areas they sent spotter-planes to guide cargo planes to spray the slash-and-burn fields. Meanwhile, a number of new

toxic chemicals were tested and used. Toxic gases were also used during their "pacification" operations in 14 provinces in South Vietnam.

Below are the statistics of the sprayings of toxic chemicals and gases in South Vietnam during three years when Nixon was in power in the United States (January 1969 to late 1971).

A - TOXIC CHEMICALS

Quang Tri and Thua Thien provinces:

- In July 1969, US aircraft repeatedly sprayed highly concentrated toxic chemicals over many villages in Huong Thuy district (Thua Thien province), Hai Lang, Trieu Phong and Gio Linh districts (Quang Tri province) destroying almost all vegetation and the local population's crops.

- In December 1969, six villages in the suburbs of Hue City (Hung Loc, Hai Thuy, Minh Thuy, My Thuy, Hong Thuy and An Thuy) were sprayed with toxic chemicals. Hundreds of *mau* (3,600 sq.m.) of rice seedlings were destroyed, many plots of tea, cassava roots and jack-fruit trees damaged. An area 16 km long from Phu Bai to Hue stood in

complete desolation. Hundreds of people were intoxicated. 30 died on the spot.

- In mid-April 1970, Phu Ninh and Dong Da hamlets, Phong An village, Phong Dien district (Thua Thien province) were sprayed. 173 head of cattle were killed and many people were intoxicated, vomiting and losing consciousness.

- On 15 March 1971, several aircraft were sent to spray toxic chemicals over Hong Thuy, Thien Thuy, An Thuy, Bich Thuy, Minh Thuy, Hai Thuy and Hong Loc villages, and along the road from Phu Bai to Phu Loc (Thua Thien province) destroying the ricefields and orchards of the local population. More than 100 people were intoxicated.

- On 14 April 1971, toxic chemicals were sprayed over an area 45 km southwest of Hue City destroying large area of forest and slash-and-burn ricefields of the local population.

- In the last three days of May 1971, toxic chemicals were sprayed over Arun (Hong Lan village) and A Le Loc (Hong Bac village) areas west of Thua Thien province destroying the slash-and-burn ricefields. Forty people were intoxicated.

- During and after the great floods in August, September and October 1971, the Americans sprayed toxic chemicals and dropped insects over a number of villages in Cam Lo and Hai Lang districts (Quang Tri province) damaging thousands of *mau* of rice and other crops. More than 300 head of cattle and pigs were killed.

Quang Da and Quang Nam provinces :

- From 1 to 5 May 1969, US aircraft sprayed toxic chemicals over an area 30 km long from Dien Chanh to Dien Hong village (Dien Ban district) destroying almost all crops and fruit trees. Many people were intoxicated.

- On 25 January 1970, the enemy used three C-123 cargo planes to spray toxic chemicals over Tien Trai and Duong Yen villages (Tien Phuoc district), destroying hundreds of hectares of crops.

- On 18 February 1970, they used three cargo planes to spray toxic chemicals to destroy crops on an area 25 km long and 1.5 km wide of Phuoc Lanh, Phuong Dong and Duong Yen villages (Tien Phuoc district).

- Over 20 days from 1 to 20 March 1970, after spraying CS gas to kill the population of

Ky Phuoc and Ky An villages (Tam Ky district) they used helicopters to spray toxic chemicals destroying the ricefields and gardens of those two villages.

— On 3 April 1970, they used three C-123 cargo planes to spray toxic chemicals, destroying crops in Tra Linh, Que Son district.

— On 5 April 1970, they sprayed more than 10 tons of Agent Orange on an area 15 km long and over 1 km wide in Tra Linh.

— On 7 April 1970, they used three HU-1A helicopters to spray toxic chemicals over Ty Se area (Phuoc Son district) and Danh Son hamlet, Ky Yen village (Tam Ky district), destroying all the ricefields in the area.

— Over 25 days from 1 to 25 May 1970, they used cargo planes and helicopters to spray toxic chemicals repeatedly over Binh Dinh and Binh Tri villages (Thang Binh district), Ky Yen, Ky Son and Ky Que villages (Tam Ky district), Phuoc Lanh, Phuoc An and Tien Tra villages (Tien Phuoc district), Son Tan and Son Hoa villages (Que Son district)... Hamlets 3, 5, 9, and 10 of Phuoc Lanh village and Hamlets 1, 2 and 3 of Tien Tra village were sprayed three times. Almost all the crops in those hamlets were damaged.

— On 16 and 21 July 1970, they used six HU-1A helicopters to spray toxic chemicals over Binh Tri, Binh Phu and Deo Cay Tram villages (Thang Binh district).

— On 27 July 1970, they used three HU-1A helicopters to spray toxic chemicals over Dong Dinh and Phuoc Cuong areas (Phuoc Son district), destroying the ricefields in these areas.

— From 25 July to 10 September 1970, with the intention to destroy all the villages and slash-and-burn ricefields of the area around Kham Duc, every day they used three helicopters to spray toxic chemicals on the Nuoc My, Nuoc Che, Nuoc Xe and Nuoc Lang rivers and over Xuan Mai, Tra Van, Dac Mia areas... Large quantities of rice, subsidiary crops and fruit trees were damaged; pigs, chickens and ducks were killed, and several people intoxicated.

— On 30 August and 3 September 1970, twice they sent HU-1A helicopters to spray toxic chemicals over Ky Yen and Ky Tra villages, Tam Ky district. On 3 September, after strafing and spraying toxic chemicals, they landed troops in those villages and uprooted all cassava plants in unaffected areas, piled the plants up and then set fire to them.

12 1970
From 28 August to 5 September 1970, they repeatedly sprayed toxic chemicals over Ky Phuoc and Ky Ngoc villages, Tam Ky district, and Binh Phu, Binh Lanh and Binh Tri villages, Thang Binh district, destroying many gardens and ricefields of the local population.

On 21 and 29 September 1970, they sent jet planes to strafe and then cargo planes and helicopters to spray toxic chemicals over Binh Dinh and Phu Hoa areas (southwest of Thang Binh district), destroying local crops.

On 5, 7 and 16 October 1970, they sprayed toxic chemicals over Giac and Nu villages along Ta Vi and Nhoc Y rivers (south of Tra Mi district), destroying many ricefields in cars and forest of the area.

On 2 November 1970, they sprayed toxic chemicals over a large area north of Highway 16, destroying all the remaining crops after the floods in October 1970. On the same day, they also sprayed toxic chemicals over Ty Se and Dong Lang areas of Que Son and Phuoc Son districts. Crops were damaged, many people vomited, their eyes blurred, and lost consciousness.

From 20 to 27 April 1970, American aircraft sprayed toxic chemicals over Hoa Vang

district, destroying many forested areas and local people's crops.

Quang Ngai province:

— In June 1969, four American aircraft in four waves dropped toxic chemicals over the six mountain districts of Ba To, Son Ha, Tra Bong, Song Re, Minh Long and Son Tay. More than 5,000 hectares of maize, more than 4,000 hectares of beans, and more than 20 million cassava plants were damaged. Thousands of cattle were killed. Many people from ethnic minorities were intoxicated and fell ill. This was one of the largest sprayings in the province.

— On 7 July 1969, 4 Dakotas sprayed toxic chemicals over areas around the provincial capital and in the plain of Tu Nghia district. A few days earlier, the American aggressors had also sprayed toxic chemicals over a number of villages of Tu Nghia and Son Tinh districts, destroying thousands of *mau* of vegetables and subsidiary crops. Several people (including those living in the provincial capital) were intoxicated.

— On 2 and 16 February 1970, many waves of American planes dropped several containers of toxic chemicals on Duc Lap village, Mo Duc district, and along 2km on Highway No. 5.

Hundreds of people were intoxicated: many suffered a high temperature right on the spot.

— On 25 February 1970, the enemy used three C-130 cargo planes to spray toxic chemicals destroying almost all slash-and-burn fields of Ba Lang, Ba Dien and Ba Lanh villages in Ba To district.

— On 20 March 1970, they used four helicopters to spray toxic chemicals destroying many slash-and-burn fields of Cao Son village in Son Ha district.

— On 19 and 20 April 1970, enemy jet fighters strafed, then C-130 cargo planes many times sprayed toxic chemicals over Son Thuong and Son Trung villages in Son Ha district, and over areas along Re and Rinh rivers, destroying hundreds of hectares of subsidiary crops. All the fruit trees were damaged. Many pigs, chickens, buffaloes and cows were killed. All the sources of water were contaminated for weeks.

— On 10 April 1970, two C-130 cargo planes sprayed toxic chemicals over Ba Lan and Ba Dien villages in Ba To district.

— On 19 and 20 April 1970, they used aircraft to strafe and then sprayed toxic chemicals over Son Trung and Son Thuong villages in Son Ha district, and over areas along Re

and Rinh rivers, destroying hundreds of hectares of subsidiary crops. Many local domestic animals were killed.

— Several times in March and April 1970, they used helicopters to spray toxic chemicals over the fields of Nghia An, Nghia Binh and Nghia Trung villages, Tu Nghia district, and Pho Nhon village, Duc Pho district when the rice harvest was approaching.

— On 28 and 29 July, they sprayed toxic chemicals over Ba Linh, Ba Lang, Ba Son, Ba Gia, Ba Lam and Ba Cung villages, Ba To district, destroying many slash-and-burn fields. Many local people were intoxicated.

— On 9, 10 and 11 August 1970, first they strafed and then used three cargo planes to spray toxic chemicals many times over the ricefields of Son Thuy, Son Ha and Son Thuong villages, Son Ha district. Son Thuong village was sprayed twice and the survival of its population was seriously jeopardized.

— On 12 August 1970, three American helicopters sprayed toxic chemicals over the fields of Hanh Tin and Hanh Thien villages, Nghia Hanh district.

— On 16 and 20 August 1970, they used two helicopters to spray toxic chemicals over the

slash-and-burn fields of Long Cao and Long Son, Minh Long district.

— On 8 September 1970, they sprayed toxic chemicals over Na Mien, Nuoc Biec and Binh Minh areas and the area along Ta Ich river, destroying many slash-and-burn fields and gardens of the local people.

— On 9 October 1970, they sprayed toxic chemicals over the confluence of Tang river causing heavy losses to local crops and domestic animals.

Binh Dinh province :

— On 7 July 1969, three American cargo planes supported by jet fighters sprayed toxic chemicals over an area along Con river in Binh Khe district, destroying thousands of *mau* of vegetables and subsidiary crops.

— In four days from 27 to 31 January 1970, the enemy strafed and then used cargo planes to spray toxic chemicals and gas destroying hundreds of hectares of rice and subsidiary crops of Hoai Son, Hoai Hao and Hoai Thanh villages, Hoai Nhon district.

— On 11 and 12 February 1970, they sprayed toxic chemicals over Binh Thanh and Binh Giang villages, Binh Khe district, and along Highway 19 East of Dong Khe. Large quantities

of rice and subsidiary crops were destroyed, and many domestic animals killed. More than 250 people were intoxicated. In Phu Lac hamlet (Binh Thanh village) alone, 30 people were seriously intoxicated. 15 cows, 85 pigs and over 100 poultry were killed.

— On 10 and 20 April 1970, for several times they used helicopters and cargo planes to spray toxic chemicals over Ta Xom and Duong Nien areas (Vinh Thanh district), and Thuan Ninh and Thuan Nhat areas (west of Phu Cat district).

— From 20 to 22 April 1970, they sprayed toxic chemicals over many areas west of Phu My and Phu Cat district. First they used cargo planes to spray toxic chemicals on a large scale, then helicopters were used to spray over the remaining places, completely destroying those areas (Dong Quang and Trung Hoi areas). On 25 April, they used three HU-1A helicopters to spray toxic chemicals over slash-and-burn ricefields and subsidiary crops of An Ninh, An Cu and An Nghia villages (west of An Lao district).

— In July 1970, they used helicopters to repeatedly spray toxic chemicals over the slash-and-burn fields south of Highway 19 and over Dong Tre and Hon Giac areas.

- On 17 September 1970, three American C-130 cargo planes sprayed toxic chemicals over Cong Krieng Tun and Cong Krieng Tu areas and over Vinh Kim and Vinh Truong villages, Vinh Thanh district, destroying large quantities of subsidiary crops. Many people were intoxicated.

- On 27 September 1970, first they sent airplanes to strafe and then cargo planes to spray toxic chemicals along Con and Tranh rivers in Vinh Thanh district, destroying many slash-and-burn fields of the local people.

- On 28 March 1971, they sprayed toxic chemicals over My Hiep village, Phu My district, an area of about 4 sq. km, causing heavy losses to the local people.

Phu Yen province:

- On 20 and 21 June 1969, American planes sprayed toxic chemicals over large areas in Tuy An, Son Hoa and Dong Xuan districts. On 14 July 1969, other places in Tuy An and Son Hoa were sprayed again. Tens of thousands of *mau* of subsidiary crops were destroyed.

- On 15 March 1970, American cargo planes sprayed toxic chemicals over large areas in Ky Lo, Dong Xuan district and along the road from

Rong Cau to Cu Mong, destroying large quantity of subsidiary crops.

- On 31 August and 1 September 1970, first they used planes to strafe, and then 3 C-130 cargo planes to spray toxic chemicals over Ma Cheo and Ca Te areas (northwest of Cau river), destroying many slash-and-burn fields of the local people.

- On 22 and 23 March 1971, they sprayed toxic chemicals over Son Long village, Son Hoa district, causing heavy losses to the local people.

- Late in March and early in April 1971, they repeatedly sprayed toxic chemicals over An Chau and An Xuan villages in Tuy An district, over Son Long and Son Dinh villages in Son Hoa district and over Lien Tri, Phu Vang and Thuong Phu villages on the outskirts of Tuy Hoa provincial town, destroying many gardens and ricefields of the people. 31 cattle were killed on the outskirts of Tuy Hoa town.

- In the first months of 1971, the American aggressors sprayed high-concentration Agent Orange over many areas in Phu Yen province. Many cattle and domestic animals vomited blood, their eyes protruded, and then died. In Tuy An and Tuy Hoa districts alone 3,757 head of cattle were killed by this agent. In Ninh Tinh, Lien Tri, Phuong Phu and Phu

Vang hamlets on the outskirts of Tuy Hoa town and in many villages along Highway 1, many people and cattle were intoxicated. In the areas of Dong Tac airstrip and Phu Lam district centre (Tuy Hoa district) 90% of the population were intoxicated. Many suffered heavy eye troubles and became blind. All the ricefields and subsidiary crops in Mang Mang (in the suburbs of Tuy Hoa town) were damaged.

Khanh Hoa province:

— On 22 July 1970, toxic chemicals were repeatedly sprayed over Khanh Tay, Vinh Nam and Lien Sang in Vinh Khanh and Vinh Son districts, causing heavy losses to the local people. Many slash-and-burn fields were damaged and several people intoxicated.

— From 20 July to 2 August 1970, they used aircraft to strafe and spray toxic chemicals nine times over an area stretching from western Dien Khanh to western Cam Ranh. Many areas in Ba Cum, Hon Giu and Hon Mua and along Lo Hop and Giang rivers were heavily damaged.

— In September, October and November 1971, the American aggressors and Thieu's army sprayed toxic chemicals over many populated areas in the plain of Khanh Hoa province,

including areas which they had temporarily occupied, destroying large quantities of rice, subsidiary crops, fruit trees and domestic animals. Many people were affected. In Ninh Quang village (south of Ninh Hoa) many families suffered from diarrhoea, 70 buffaloes were killed. In Dien Lac village (Dien Khanh district) many ricefields were damaged, all trees were defoliated. Many people suffered from lung inflammation or intestinal diseases. They also sprayed toxic chemicals during the night as they did at Ninh Loc village (south of Ninh Hoa) damaging large quantities of rice plants of the village. Ninh Tho village (north of Ninh Hoa) was sprayed twice a month. Its ricefields were damaged. Many trees and head of cattle were killed. They also dropped insects' eggs which later developed into insects. These insects ate all the crops in those areas. In one area they ate all the rice plants in only one night. These insects also ate all the leaves and bark of a mango garden. In certain places intoxicated pregnant women suffered prolonged stomach pain. Some of them later gave birth to deformed babies.

Ninh Thuan province:

— In late July and early August 1969, parallel with the dispatch of battalions of American

and Pak Jung Hee troops to raid, loot and destroy many villages in Bac Ai district, the enemy sprayed toxic chemicals over many areas west of the province. Fifty slash-and-burn ricefields were heavily damaged and 72 people died of heavy intoxication.

— In September 1970, many places in Bac Ai and Anh Dung districts were repeatedly sprayed with toxic chemicals. Many slash-and-burn ricefields were damaged and quite a few domestic animals killed.

Binh Thuan and Lam Dong provinces :

In September and October 1970, the US aggressors repeatedly sprayed toxic chemicals over many areas in the uplands and highlands destroying many trees and subsidiary crops. Many people were intoxicated.

Kon Tum province :

— In late June and early July 1969, toxic chemicals were repeatedly sprayed over many areas in Kon Tum province. On 3 July 1969, they sprayed toxic chemicals over Konborai-Tuthon, Turet, Nuoc Bao and Nuoc Lai areas destroying many slash-and-burn fields.

— On 25 May 1970, they used three helicopters to spray toxic chemicals over an area of

12 km in the northwestern part of Dac Sieng, destroying many slash-and-burn ricefields and forests.

— From 14 to 20 September 1970, they repeatedly sprayed toxic chemicals over many areas along Nuoc My river destroying crops and forests of Tung Bung and Dac Mia villages. Large quantities of subsidiary crops in Dacpet area were damaged.

— On 3 July 1971, three American planes dropped toxic chemicals on Konborai, Tuthon, Turet, Nuoc Bao and Nuoc Lai areas, destroying hundreds of hectares of maize and other local subsidiary crops.

Gia Lai province :

— In September 1969, they stepped up the spraying of toxic chemicals over many areas in the province, destroying 600 slash-and-burn fields of vegetables and many slash-and-burn ricefields in ears and fields of maize nearing harvest. In district 5 more than 100 slash-and-burn fields of maize and rice were destroyed. Many people were intoxicated, 6 of them died.

— From 15 to 20 May 1970, they repeatedly sent C-130 cargo planes to spray toxic chemicals over large area in Ha Nung and other

areas in Zone 1 of the province, destroying large quantities of local rice and subsidiary crops.

Dac Lac province :

— On 16 March and 31 March 1970, they sent 5 cargo planes to spray toxic chemicals over the whole area of Khue Ngoc plantation, destroying more than 1,000 hectares of subsidiary crops.

— From 5 to 7 April 1970, they sent 4 C-130 cargo planes to spray toxic chemicals over Buon Cham area causing heavy losses to local rice and subsidiary crops.

Bien Hoa province :

— On 28 May 1969, American planes dropped highly concentrated toxic chemicals over Bau Ham area destroying 1,200 hectares of maize, beans and fruit trees. Hundreds of people were intoxicated.

Tay Ninh province :

— In March 1969, the American aggressors repeatedly dropped many packages of toxic chemicals and 150 boxes of toxic chemicals, each weighing 450 kg, on Ta Pang village, Chau Thanh district. More than 100 people were intoxicated. Many other people suffered from

irritation of the eyes, runny noses, coughing, nausea or dizziness for days. Many old people and children vomited blood and there was blood in their faeces.

— In early June 1969, American aircraft dropped toxic chemicals on Bau Duong, Thanh Dien village, Chau Thanh district, destroying 100 hectares of cassava roots and 50 hectares of beans.

— In late June 1969, Dakotas and helicopters were used to spray toxic chemicals along the border with Kampuchea. Two hundred people were intoxicated.

— From 26 June to 3 July 1969, during their raid against the Ba Den Mount in Tan Hung village and the Mon stream east of Ba Den Mount, the American 25th Division dropped over 100 containers of toxic chemicals causing heavy losses to the local people.

— On 18 July 1969, the American aggressors dropped over 100 containers of toxic chemicals and fired more than 100 toxic-gas artillery shells on an area northeast of the Tay Ninh Holy See of the Cao daists in the area of Ba Den Mount. Then on 20 July 1969, they sprayed toxic chemicals over a large area from Trinh Minh The canal to areas southeast and

northeast of Ba Den Mount and Phung Mount. In those two days, more than 1,000 people were intoxicated, including 30 children killed.

— On 6 September 1969, American helicopters sprayed toxic chemicals over Bau Duong and Thanh Dien village, Chau Thanh district (in their occupied zone), destroying about 100 hectares of cassava roots and 50 hectares of beans.

— From June 1969 to April 1970, the American aggressors and their puppets sprayed toxic chemicals over the area of Ba Den Mount over 200 times with a tonnage of about 8 million kg, destroying over 500 hectares of gardens and large quantities of subsidiary crops. Thousands of people were intoxicated, including 15 children killed.

Ba Ria province:

— In four years under the Thieu Administration (September 1967 — September 1971) American toxic chemicals destroyed many large areas of Long Thanh, Nham Trach, Xuyen Moc and Long Dat districts. Over 3,000 hectares of rice and subsidiary crops were destroyed. Thousands of people were intoxicated, and nearly 100 people killed, the majority of them being children and aged people

In 1969 and 1970, they used large quantities of toxic-gas artillery shells against populated areas. In Long Dat district, they fired 40—50 shells at a time. When the shells exploded there were clouds of smoke which seriously affected human beings and animals: high temperature and coughing.

Thu Dau Mot province:

— On the morning of 10 March 1969, American jet planes dropped steel-pellet bombs along Highway 14 near Ben Chua hamlet, Thanh An village, Ben Cat district for hours on end. Then toxic chemicals were repeatedly sprayed over the area. Hundreds of people vomited and lost consciousness.

— In late March 1969, American planes dropped toxic chemicals on a number of villages in the province. Over 200 people were intoxicated.

— In early September 1971, they sprayed toxic chemicals over many villages in Dau Tieng district and district centre. Over 80 per cent of the local population were intoxicated.

Long An province:

— On 10 May 1969, during their pacification raid in Thuan My village, Chau Thanh district,

the US-puppet secret and psywar agents gave six children sweets mixed with toxic chemicals. One hour later all the children were intoxicated, their limbs were racked with convulsions, they foamed at the mouth, and then fell dead.

— In 1969 alone, with modern war means including B.52s, toxic chemicals, phosphorous bombs and artillery, the American and puppet troops killed and wounded over 10,000 people, including 14 children from Hiep Thanh and Phuoc Tan Hung villages. The children died after coughing and vomiting blood, and suffering high temperatures with convulsions. 19 pregnant women (from three to five months) in Nha Be, Can Gioc, Tan Tru, Can Duoc and Chau Thanh districts suffered from miscarriages due to heavy intoxication.

Kien Phong province:

— In late March 1969, American planes repeatedly sprayed toxic chemicals over many villages in My Au and Cao Lanh districts, destroying many ricefields and gardens over an area 40 km long.

— On 13 and 14 April 1969, American planes dropped toxic chemicals on Nhi My and My Tho villages, Cao Lanh district, destroying

hundreds of hectares of subsidiary crops and gardens of fruit trees.

— On 13 May 1969, the American aggressors sprayed toxic chemicals along the banks of Cai Beo canal in My Qui village, My An district over an area 4 km long. They also sprayed toxic chemicals over Thien My, Nhi My and My Tho villages, Cao Lanh district. Over 500 hectares of subsidiary crops and fruit trees were damaged. Tens of people were intoxicated. In the whole of May 1969, 30 hectares of sweet potatoes and cassava roots, and 1,085 hectares of subsidiary crops and fruit trees in those villages were destroyed.

— On 26, 27 and 29 November 1969, American planes repeatedly dropped toxic chemicals along the canals of four villages in Cao Lanh and My An districts over an area 40 km long. Many people were intoxicated. Large quantities of subsidiary crops and fruits were damaged.

— On 1 February 1970, they sprayed toxic chemicals along Nguyen Van Tiep canal in Phong My and Phong Thanh villages, Cao Lanh district.

— On 4 February 1970, they dropped toxic chemicals on Binh Hang Trung and Thach My

villages, My An district. Many people were intoxicated. Many gardens and ricefields were damaged.

— On 6 February 1970 (the first day of the Lunar New Year) American planes sprayed toxic chemicals over Tan Tich, Hoa An, Tan Thuan Dong, Tan Thuan Tay villages in the suburbs of Cao Lanh provincial capital. Hundreds of people were intoxicated and hundreds of hectares of gardens of fruit trees damaged.

— From 31 January to 16 February 1970, American toxic chemicals destroyed all the rice ready for harvest of My Hoi, My An, Phong My, Phong Thanh, Tan Tich, Hoa An, Tan Thuan Dong and Tan Thuan Tay villages.

— On 23 February 1970, American planes dropped toxic chemicals on Phong My, Phong Thanh, Tan Tich, Hoa An and My An villages. All the ricefields and subsidiary crops of these villages were heavily destroyed.

— From 26 November 1969 to 24 February 1970, American planes sprayed toxic chemicals 15 times along the banks of Nguyen Van Tiep canal in Thien My and Quy Qui villages destroying many ricefields and gardens of the local people.

— On 30 January 1970, they dropped toxic chemicals on My Hoi, My An (Cao Lanh), destroying many gardens of fruit trees and subsidiary crops. Many people were intoxicated, including 30 serious cases.

My Tho province :

— In April 1969, American planes sprayed toxic chemicals several times over Dang Hung Phuoc village, Cho Gao district. Hundreds of people were intoxicated, including 30 serious cases.

— On 17 May 1969, four American helicopters dropped toxic chemicals on Danh Thanh and My Phong villages and on areas in the suburbs of the provincial capital, destroying 50 *mau* of gardens of fruit trees.

— On 28 June 1969, American planes dropped toxic chemicals on Long Tuong 2 and Long Binh hamlets, Long An village, Chau Thanh district, destroying over 50 hectares of gardens of fruit trees. Hundreds of people were intoxicated, mostly aged people and children.

— On 30 June 1969, many waves of American planes sprayed toxic chemicals over My Tinh An, Tan Binh Dien, Phu Kiet, Hoa Dinh and Luong Hoa Lac villages five kilometres northeast of My Tho town. Tens of hectares

of vegetables, subsidiary crops and fruit trees were damaged. Many people were intoxicated, mostly old people and children.

— On 30 July 1969, American helicopters dropped toxic chemicals on Binh Thoi Son and Binh Thanh Hung strategic hamlets, Cai Be district. Many people were intoxicated. Many trees and gardens were damaged. In late July 1970, toxic chemicals were sprayed over Thanh Hoa, Cam Son, Xuan Son, Binh Phu, Phu Nhuan and Tan Binh villages, Cai Lay district, destroying thousands of hectares of ricefields and gardens of fruit trees. In Hamlet 4, Binh Phu village alone all the fruit trees and ricefields were destroyed. Hundreds of people were intoxicated.

— In the first few days of November 1969, American planes repeatedly dropped toxic chemicals on twenty villages of Cai Be, Cai Lay and Cho Gao districts. On 11 November, they used tens of helicopters to spray toxic chemicals over My Duc Dong, My Duc Tay and My Loi villages in Cai Be district. On 18 November they sprayed toxic chemicals over many villages along Nguyen Van Tiep canal. Between 14 and 18 November, they sprayed toxic chemicals over Long Trung, Long Khanh and Dong Tien villages (Cai Lay district) and

Binh Ninh, An Thanh Thuy and Hoa Dinh villages (Cho Gao district).

In all, the twenty villages of those three districts were sprayed 60 times in November 1969. American toxic chemicals destroyed tens of thousands of hectares of ricefields and gardens, and thousands of hectares of subsidiary crops and fruit trees. 11,000 people were intoxicated.

— From 14 April 1970, American planes repeatedly sprayed toxic chemicals over a long area along Ba Rai river in Cam Son, Xuan Son, Hoi Son, Thanh Hoa and Long Khanh villages, destroying many gardens of fruit trees. Many people were intoxicated.

— On 21 July 1971, they used two river craft to spray toxic chemicals from Hung Thanh to Phu My, Chau Thanh Bac district, destroying many gardens of fruit trees along the local canal. Many people were intoxicated.

— In July and August 1971, they also despatched troops to spray toxic chemicals to destroy many gardens of fruit trees of the local people in areas close to the provincial capital.

— On 2 August 1971, they used two ships to spray toxic chemicals over areas along Nguyen Van Tiep canal from Hung Thanh to Phu My villages (Chau Thanh Bac), destroying large

quantities of subsidiary crops. Thousands of people were intoxicated, many of them suffered from eye complaints.

Ben Tre province :

- On 13 February 1969, American toxic chemicals destroyed almost all ricefields and gardens of Luong Hoa and Luong Phu villages, Giong Trom district.

- On 13 and 16 February 1969, American planes dropped tons of highly concentrated toxic chemicals on a number of villages in Binh Dai and Ba Tri districts. Hundreds of people were intoxicated. Almost all local subsidiary crops were destroyed.

- On 16 February 1969, they sprayed toxic chemicals over a large area from Giong Trom to Ben Tre provincial capital, destroying thousands of hectares of ricefields.

- On 16, 17 and 18 March 1969, they dropped toxic chemicals over Phu Huu, An Khanh, Phu Quoi, Thanh Loi and My Thuan villages, destroying almost all subsidiary crops and fruit trees over an area 30 km long.

- On 1 May 1969, after heavy bombardment, six Dakotas sprayed toxic chemicals over Luong

Phu and My Thanh villages (Giong Trom), destroying all fruit trees of the two villages.

- On 13 and 15 February 1970, American planes dropped toxic chemicals 8 times over an area along Ba Lai river in Ba Tri and Binh Dai districts, destroying over 40 hectares of subsidiary crops. Many people were intoxicated, suffering high temperature immediately.

- On 9, 12, 15 and 20 July 1971, they dropped toxic chemicals on An Nhon, Giao Thanh, An Quy and Thanh Phong villages (Thanh Phu district), destroying many trees and subsidiary crops. Many people were intoxicated.

- From September 1967 to September 1971, the American and puppet troops dropped 1,000 tons of toxic chemicals on the province. More than 10,000 people were intoxicated, many of them died. Over 100,000 hectares of orchards were destroyed, thus depriving thousands of families of their livelihood.

Tra Vinh province :

- On 25 May 1969, 7 American helicopters sprayed toxic chemicals over Long Duc and Nguyet Hoa in the suburbs of the provincial capital, and over Dai Phuoc, Binh Phu and Nhi Long villages, Cang Long district. Thousands

of people were intoxicated, coughing and vomiting blood. They also had high temperatures and headaches. Tens of thousands of hectares of gardens of fruit trees and subsidiary crops were destroyed.

— On 12 July 1969, American planes dropped toxic chemicals on Hiep Thanh, Truong Long Hoa and Long Vinh villages in Duyen Hai area. Many people were intoxicated and large quantities of subsidiary crops destroyed.

— From 26 to 28 August 1969, American helicopters sprayed toxic chemicals over 7 hamlets of Trung Ngai, Tan An Dong, Quoi An and Phung Hiep villages. Nearly 400 people were intoxicated. Over 120 hectares of gardens and 320 plots of rice seedlings were damaged. On 25 August, 11 Dakotas, 13 jet planes, helicopters and L-19s strafed and then sprayed toxic chemicals over Nha Mat and Con Cu hamlets, destroying large quantities of vegetables and subsidiary crops of the local people.

— From 10 to 20 March 1970, they dropped toxic chemicals several times on populated areas in the suburbs of the provincial capital and along Tien river up to Highway 7 including Trung Ngai, Nhi Ly, Duc My, Binh Phu, Phuong Thanh, Dai Phuoc and Long Duc

villages. Tens of thousands of people were intoxicated.

— On 7 February 1971, they put toxic chemicals into food and then gave the food to the people. After eating many people were intoxicated.

— In July and August 1971, they sprayed toxic chemicals over Long Huu, Long Toan, Truong Long Hoa and Hiep Thanh villages, Cau Ngang district, destroying almost all the newly-planted rice and gardens of fruit trees of those villages.

— From September 1967 to July 1971, American toxic chemicals destroyed more than 50,000 hectares of gardens of fruit trees and subsidiary crops in the province. Over 100,000 people were intoxicated.

Vinh Long province:

— On 15 April 1969, American planes dropped toxic chemicals on Dong Thanh village, Binh Minh district, destroying many gardens of fruit trees and large quantities of vegetables and subsidiary crops.

— On 2, 3 and 4 July 1969, American planes sprayed toxic chemicals over Song Phu, Ngai Tu and Binh Ninh villages, Tam Binh

district, destroying 350 hectares of ricefields and gardens. Hundreds of people were intoxicated.

— On 27 and 28 August 1969, American helicopters dropped toxic chemicals on Phu Hoa and Phu Quoc hamlets, Nhon Phu village, Cai Nhum district, defoliating over 50 hectares of gardens of fruit trees and wood trees. Many people were intoxicated.

— From 1 to 5 December 1969, American planes sprayed toxic chemicals several times over My Loc village, Tam Binh district, destroying hundreds of hectares of subsidiary crops. Hundreds of people were intoxicated.

— On 9 February 1970, four American helicopters strafed and then sprayed toxic chemicals over an area 3km long in Hoa Tan village, Chau Thanh district. On the following days the American aggressors sent planes to strafe, spray toxic chemicals and drop phosphorous grenades on Hoa Tan, Phu Long, Phu Khanh, Phu Huu, Phu Quoi, An Khanh and An Phu Thuan villages (Chau Thanh district), and Tan Quoi, Tan Luoc and My Thuan A villages (Binh Minh district). Over 1,000 people were intoxicated, including 200 serious cases. Many ricefields and gardens of fruit trees of the local people were destroyed.

— On 12, 13 and 14 July 1971, they sprayed toxic chemicals over the area of Cau Kinh arroyo, and from there to the Can Tho crossroads. Many people were intoxicated and suffered from eye complaints.

Can Tho province :

— In January 1969, the American aggressors repeatedly sprayed toxic chemicals over Nhon Ai village, Chau Thanh A district, destroying many ricefields and large quantities of local subsidiary crops.

— On 27 March, 1 and 10 April 1969, American planes dropped toxic chemicals several times on a number of villages in Chau Thanh A and Phung Hiep districts. On 27 March and 1 April, 16 Dakotas sprayed highly concentrated toxic chemicals over Truong Long and Truong Thanh villages (Chau Thanh A), destroying thousands of hectares of gardens of fruit trees and subsidiary crops of the two villages and certain neighbouring villages such as Truong Xuan, Thoi Lai, Dinh Mon and Truong Lac (O Mon district).

— On 12 April 1969, the American aggressors sprayed toxic chemicals over a large area in the suburbs of the town of Can Tho including Dong Phuoc, Luc Si Thanh and Phu Huu

villages, and part of Dong Phu village, destroying thousands of hectares of gardens of fruit trees and of sweet potatoes. Many people were intoxicated.

— On 7, 11 and 12 June 1969, American and puppet troops dropped toxic chemicals from helicopters along Ngang Dua river in Luong Tam and Xa Phien villages, Long My district, destroying large quantities of subsidiary crops over an area 10km long. Many people were intoxicated.

— On 25 June 1969, American helicopters twice dropped toxic chemicals on a number of villages in Phung Hiep and O Mon districts, destroying large quantities of trees, vegetables and subsidiary crops.

— On 9 August 1969, American planes of different kinds repeatedly bombed and shelled Phuong Binh village, Phung Hiep district. Later on, six Dakotas dropped toxic chemicals on Phuong Binh village, Phung Hiep district, and Long Binh, Long Tri and Long Phu villages, Long My district, destroying hundreds of hectares of rice and gardens of fruit trees. Many people were intoxicated and tens of houses damaged.

— On 18 October 1970, they used vehicles to spray toxic chemicals on the local people's

houses and gardens along the roads in Binh Thuy and Tra Noc areas destroying many orchards. They also distributed sweets mixed with toxic chemicals. Over 200 people were intoxicated, 17 of them died. Many others vomited blood or had bleeding nose and ears or eyes complaints.

— In July 1971, they dropped toxic chemicals on the suburbs of Vi Thanh town and along Highways 4 and 40, Xa No and Ngang canals, destroying thousands of hectares of orchards, ricefields and subsidiary crops. Thousands of people were intoxicated.

An Giang province :

— In November 1969, American planes dropped different kinds of toxic chemicals and phosphorous bombs on areas at the foot of Dai, Co To and Cam mountains, causing heavy losses of life and property to the local people. Many people living at the foot of Dai mountain were intoxicated, 10 of them died.

— From 26 January to 28 March 1970, American planes bombed and sprayed toxic chemicals several times over the Bay Nui area causing heavy losses to the Khmer people. Thousands of them were intoxicated.

- In April 1970 they sprayed toxic chemicals several times over Nhon Hung, Thoi Son and Lac Quoi villages, Tinh Bien district, destroying many orchards and ricefields of the local people.

- In late July 1971, the chief of Tri Ton district ordered his troops to spray toxic chemicals on Tahu, Tale and Soc Xuoi hamlets, destroying 10 hectares of gardens and ricefields. Over 100 people were intoxicated, their eyes were swollen.

Soc Trang province :

- On 17, 18 and 23 June 1969, American planes bombed, strafed and sprayed toxic chemicals over My Phuoc and My Tu villages, Chau Thanh district, destroying large quantities of subsidiary crops and fruit trees. All five members of Mr An's family were killed; hundreds of people were seriously intoxicated.

- On 11 July 1969, they sprayed toxic chemicals over an area 3 km long from Nga Nam township to O-Chummaram pagoda. Three people were killed and hundreds of others intoxicated.

- In June and July 1969, they sprayed toxic chemicals over Nhon Hoa village (Phuoc Long district), Long Hung, An Ninh and Ho Dac

Kien villages (Chau Thanh district) and many other areas adjacent to the provincial capital, causing heavy losses of life and property to the local people. The losses caused to the three hamlets of An Ninh village amounted to over 50 million *piastres*.

Rach Gia province :

In late May and early June 1969, American and puppet troops used planes to spray toxic chemicals over Hon Me area, Chau Thanh A district, Ta Keo area and Soc Ruong mount (near the town of Rach Gia), and along Thanh Hung canal (Giong Rieng district) and from Lanh Huynh canal to Moi canal and Thap pagoda, damaging large quantities of subsidiary crops and fruit trees.

- In late June 1969, American toxic chemicals were repeatedly sprayed over Tan Hoi, Soc Son and My Lam villages, Chau Thanh district. Almost all local subsidiary crops and fruit trees were damaged. In Soc Son and My Lam alone over 500 hectares of gardens and slash-and-burn fields were destroyed.

- In early July 1969, American planes sprayed toxic chemicals over Soc Son area, Chau Thanh district, destroying over 100 hectares of slash-and-burn fields.

- On the morning of 22 September 1969, after sending many flights of aircraft, including B.52s, to bomb, the American and puppet troops used 6 planes to spray toxic chemicals over many areas in Vinh Thuan and Vinh Phuoc districts, destroying hundreds of hectares of gardens and slash-and-burn fields of the local people. Hundreds of people were intoxicated, mostly old people and children.

- On 21 February 1970, they sent aircraft to bomb, strafe and spray toxic chemicals over Khanh Lam and Van Khanh villages in both Rach Gia and Ca Mau provinces over an area 17 km long. 600 people were intoxicated. Over 1,000 hectares of ricefields and gardens of fruit trees were damaged. While the intoxicated people were being treated they sent helicopters to strafe the area, wounding several others. On the following days they repeatedly sent B.52's to bomb the area.

- From 21 to 28 March 1970, they used aircraft to bomb and spray toxic chemicals several times over Tho Son and Soc Son villages, Chau Thanh district, destroying many orchards and subsidiary crops. Many people were intoxicated.

- In January 1971, they dropped toxic chemicals over an area 6 km long along Tran river, destroying over 100 hectares of orchards and ricefields of the local people in both Rach Gia and Ca Mau provinces.

- On 19 February 1971, American planes dropped toxic chemicals on an area 10 km long from the canal of Kham hamlet to Nong Truong canal in Vinh Hoa village, Vinh Thuan district, destroying all gardens, fruit trees and subsidiary crops. Thousands of people were seriously intoxicated, mostly women and children.

- On 3 May 1971, they sprayed toxic chemicals over Hau Chac Bang area in Tri Phai and Vinh Thuan villages, destroying many slash-and-burn fields of pineapples, gardens of fruit trees and subsidiary crops of the local people in both Rach Gia and Ca Mau provinces.

- In August 1971, they dropped toxic chemicals several times over many villages in Vinh Thuan and An Bien districts, destroying large quantities of subsidiary crops, forests and ricefields of the local people. Over 30,000 people were intoxicated.

- On 2 September 1971, they sprayed toxic chemicals along Xang Xeo Ro canal from Chu

Niem canal to canal No. 8 in Dong Hoa village, An Bien district, destroying many gardens of fruit trees. Hundreds of people were intoxicated.

Ca Mau province :

— From 28 December 1969 to 11 January 1970, American planes bombed, strafed and sprayed toxic chemicals over an area 70 km long including Khanh Hung A, Khanh Hung B, Van Khanh and Dong Hung villages. Thousands of people were intoxicated and 35,000 hectares of ricefields and gardens of fruit trees were damaged.

— On 21 February 1970, many Dakotas supported by four jet planes sprayed toxic chemicals over Khanh Lam village, Song Doe district, destroying over 10,000 *mau* of subsidiary crops, fruit trees and cajuput forest. 700 people were intoxicated.

— In January, February and March 1971, the American aggressors sprayed toxic chemicals over many areas in the province, destroying many orchards, ricefields and forests in an attempt to carry out their campaign of encroachment on the U Minh forest. In January alone they sprayed an area 6 km long along Tram river, destroying 1,000 *mau* of gardens and

slash-and-burn fields. Many serious cases of intoxication were recorded. In lower U Minh, Song Doc district, in late April, they repeatedly dropped napalm bombs, setting on fire 1,000 hectares of forest. They also dropped toxic bombs on Khanh Hung village, destroying many orchards. Many people were intoxicated.

In April 1971, they used bombs, shells and toxic chemicals to destroy over 2,500 hectares of U Minh forest.

— From 14 to 21 September 1971, every day they sent from 3 to 4 waves of aircraft to spray toxic chemicals over an area 6 km long in Phu My A, Phu My B, Hung My and Phong Lac villages, Cai Nuoc district. Hundreds of hectares of gardens of fruit trees and subsidiary crops were damaged, and thousands of people intoxicated.

B. TOXIC GAS

Thua Thien province :

— In February 1969, American troops used toxic gas against many areas west of the province.

— On 17 and 18 May 1969, American troops used toxic gas 34 times against the western part of Thua Thien province.

- On 19 February 1970, they fired toxic-gas rockets on the western part of the province (BZ gas).

- On 23 February 1970, American planes dropped 6 containers of toxic gas on the western part of the province.

- On 26 February 1970, they dropped CS gas on the western part of the province.

- From 19 to 31 May 1970, American planes dropped CS-2 gas on the western part of the province.

- On 30 June 1970, American planes dropped CS-2 gas on Hang Doi area, Phuoc An.

- On 12 February 1969, American and puppet troops raided Phuong Tan hamlet, Thang Binh district. They arrested 10 old people aged between 64 and 77, and a number of pregnant women close to confinement. They drove them all into a shelter then sprayed toxic gas into it. All were killed.

- In February 1969, American planes dropped 60 containers of CS gas on Ben Giang area.

- On 12 March 1969, American planes dropped CS gas on Binh Duong village, Thang Binh district.

- On 31 January 1970, American planes strafed three times and dropped over 100

bombs and containers of CS gas on Ky Phuoc and Ky An villages, Tam Ky district. The gas covered all five hamlets of the two villages and spread over to some other neighbouring hamlets. Over 250 people were seriously intoxicated.

- On 22 January 1970, the enemy used H-34 helicopters nine times to drop over 100 containers of CS gas on Ky Phuoc and Ky An villages, Tam Ky district. 250 people were intoxicated, 16 of them died. Hundreds of pigs and poultry were killed. The gas lingered on for a week.

- On 28 February 1970, enemy troops positioned at Tuan Duong fired over 100 toxic-gas artillery shells on Binh Dao and Binh Duong villages, Thang Binh district. 450 people were intoxicated. Many of them vomited, their eyes watered and they had chest pains and coughing fits. Quite a few of them lost consciousness.

- On 1, 2 and 3 March 1970, American HU-1As and HU-1Bs dropped 50 toxic-gas bombs and hundreds of toxic-gas grenades on Xuan Binh, Phu Tho and Tu Chanh hamlets, Tam Ky district. Hundreds of people were intoxicated.

- On 2 April 1970, during their raids in Son Khanh, Son Thach and Son Long villages, Que Son district, the American aggressors threw

more than 100 bags of toxic gas, each weighing 3.6 kg, into shelters and houses of the local people. Again on 20 April, they used helicopters to drop 40 containers of toxic gas on those villages.

— On 19 May 1970, at 7 a.m. American troops positioned at Son Binh fired over 200 toxic-gas artillery shells on Chau Son, Phuc Long and Phu Binh hamlets (northeast of Hiep Duc district centre). At noon of the same day they used helicopters to drop more than 300 containers of toxic gas and steel pellet bombs on those hamlets. The air was suffocating for weeks afterwards.

— On 27 May 1970, they used helicopters to drop 80 containers of toxic gas on Tra Linh and Tan Thuan areas (east of Hiep Duc district centre). On the same day they used H-34 aircraft over 10 times to drop hundreds of CS bombs on Tan An and Que Son. After that they sent B.52s to bomb and a battalion to raid this area.

— On 10 May 1970, the American aggressors sent 30 H-34 aircraft to drop 300-400 containers of CS gas and toxic-gas bombs on Chau Son, Thang Dong and Hiep Duc.

— On 6 and 8 June 1970, American troops positioned at Xuan Binh and Liet Kiem fired

hundreds of toxic-gas shells on An Vinh, Phu Huu, An My and Dong Binh hamlets (10-15km southeast of Hiep Duc district centre). They also used helicopters to drop over 50 containers of toxic gas on those hamlets.

Quang Ngai province :

— From 13 January 1969 to 3 February 1969, American troops used toxic gas and other kinds of weapons against the shelters of the people of Ba Lang An.

— In January 1969, American planes dropped 80 containers of CS gas on Nghia Lam and Nghia Trang areas (Tu Nghia district).

— On 9 March 1969, American planes dropped CS-2 bombs and explosive bombs on Nghia Trang and Nghia Lam areas.

— On 26 March 1969, American planes dropped 800 containers of CS gas and explosive bombs on Duc Pho area.

— On 12 and 17 January 1970 and 10 February 1970, American helicopters dropped over 100 toxic-gas bombs and containers on Hamlets 1 and 2, Duc Lan village, Mo Duc district; Vuc Liem, Duc Pho district; Truong An, Ba To district and on Highway 5 from the 7th kilometre post to the 13th kilometre post.

— On 16 February 1970, wave after wave of American planes dropped many containers of toxic gas on Doc Lap village, Mo Duc district and on an area 2km long along Highway 5. Hundreds of people were intoxicated.

— On 20 February 1970; they dropped 100 containers of toxic gas on Nghia Thang and Nghia Lam villages, Tu Nghia district, and Son Dong (Son Tinh district).

— On 31 March 1970, American troops positioned at Tri Binh fired hundreds of toxic-gas shells on hamlets southeast of Chu Lai base.

— On 10 April 1970, American helicopters dropped 30 containers of toxic gas on Vuc Liem area (Duc Pho district) and Ba Trang area (Ba To district).

— On 14 April 1970, American planes dropped 4 containers of CS-1 gas on Khanh Giang, Truong Le and Tan Cau hamlets, Nghia Hanh district. 250 people were intoxicated, a number of them killed.

Binh Dinh province:

— In January 1969, American Dakotas and helicopters dropped CS-gas bombs and arsenic gas on many areas in Binh Khe, Hoai An,

Hoai Nhon, An Lao, Vinh Thanh, An Nhon, Phu My and Phu Cat districts.

— In February 1969, American troops used toxic gas several times against the western part of An Khe.

— On 30 April 1970, the enemy fired toxic-gas shells on Phu Tai hamlet (west of Qui Nhon town). The entire hamlet was affected by the gas.

— From 1 to 15 May 1970, during their raids in Thanh Ha, Phuong Phi and Vinh Hoi areas (southeast of Ba mountain, Phu Cat district) Pak Jung Hee troops sprayed toxic gas and used hundreds of bags of toxic gas, toxic-gas mines and grenades (including CS and Adam-site grenades) against the local people's shelters. Many people suffocated and coughed up blood. Tens of them died.

— On 3 July 1970, American planes sprayed toxic chemicals over the fields and dropped 20 toxic-gas bombs on the houses of Gia Duc hamlet, An Duc village, Hoai An district. Many people lost consciousness. Twelve others went mad and had to be taken to hospital for emergency treatment.

— On 26 July 1970, they used three H-34 aircraft to drop hundreds of toxic-gas bombs

and containers of toxic gas on Ta Xom and Duong Nien areas, Lo Giang village, Vinh Thanh district. Many people suffocated and coughed up blood, 18 of them went mad. 8 women died as a result.

Phu Yen province :

— On 2 April 1970, they used three aircraft to drop 30 containers of toxic gas on Chu Ma Bat and Chu Gay mountain areas. Many people were intoxicated, 20 of them lost consciousness.

Kon Tum province :

— On 24 and 25 February 1969, American troops sprayed CS gas along Sa Thay and Yadran rivers.

— On 19 April 1970, they dropped many toxic-gas bombs on the mountainous area of Dakpet district.

Dac Lac province :

— On 4 January 1970, they fired toxic-gas shells on an area 12km east of Ban Me Thuot. 12 people were intoxicated; they vomited, suffered chest pains and then lost consciousness.

Tay Ninh province :

— On 10 January 1969, American planes and helicopters dropped CS-gas bombs and fired CS-gas shells on Ben Cui area.

— In March 1969, American planes dropped bags and boxes of toxic gas several times on Chau Thanh district.

— On 24 June 1969, American planes dropped 22 containers of toxic gas on Ta Pang village, Chau Thanh district.

— From 26 June to 3 July 1969, in a raid conducted by the US 25th Division in Tan Hung village in the area of Ba Den Mount, American planes dropped over 100 containers of CS gas, causing heavy losses to the local population.

— On 18 July 1969, American planes dropped over 100 containers of CS gas and fired toxic-gas cannon shells on the area northeast of the Cao Dai Holy See in Tay Ninh province.

— On 20 July 1969, American troops sprayed toxic gas from Trinh Minh The canal to Phung mountain. Over 1,000 people were intoxicated; 30 children were killed.

— For 20 days in September 1969, American Chinooks and other kinds of aircraft repeatedly dropped thousands of containers of CS gas on

Ninh Thanh and Hiep Ninh villages (with an area less than 15 sq.km.) in the area of the Cao Dai Holy See in Tay Ninh. Besides, American troops fired 500 toxic-gas shells on the area.

— On 7 September 1969, American planes dropped toxic-gas bombs on Go Dau market place. One baby was killed in its mother's arms. Several other people vomited blood right in the market.

— In January 1970, American troops used toxic gas several times against the Ba Den Mount area.

My Tho province :

— On 14 July and 4 August 1971, American planes dropped toxic-gas bombs on areas in the suburbs of the provincial capital of My Tho. Thousands of people were intoxicated.

Tra Vinh province :

— On 7 February 1971, in their raid on Hiep Phuc hamlet, Nhi Long village, Can Long district, soldiers of the puppet 7th Division commanded by US advisers put poison into drinking water and food of the local people. Many people were intoxicated. Prior to that, in their raids on Tra Cu, Tra Ong and Cau Ngang districts, they also put poison into local food. Many people were intoxicated and died on the spot.

An Giang province :

— In November 1969, American planes dropped toxic gas on areas at the foot of Dai, Cam and Co To mountains. Many people in the Dai mountain area were intoxicated, 10 of them killed.

Ben Tre province :

— On 12 April 1970, five American planes dropped explosive bombs and fired toxic-gas rockets on Thoi Lai hamlet, Thoi Thuan village. 71 people were intoxicated including 28 children.

— On 21 July 1971, in their raid on An Qui village, they pumped toxic gas into the population's shelters, killing a number of people.

Ca Mau province :

— In their prolonged raids called "Campaign for the pacification of U Minh forest" started from 1 December 1970, they used explosive bombs, phosphorous bombs, flame-throwers, toxic chemicals and gas against the province.

— On 10 April 1971, they dropped toxic-gas bombs on Khanh Hung B village. Many people were intoxicated.

31 December 1971

RESOLUTION OF THE ORSAY CONFERENCE

This international conference of scientific workers coming from fourteen countries, organized under the auspices of the World Federation of Scientific Workers and held at Orsay on December 12, 1970, has looked into fresh information regarding the scope of the chemical warfare waged by the US armed forces against the Indochinese peoples.

The use of these chemical products has continued to increase since 1961 despite world protests. Among these chemical products are defoliants and herbicides, particularly 2,4-D and 2,4,5-T (known to contain a most toxic impurity, dioxin) and CS toxic gases.

Defoliants and herbicides are used in concentrations much higher than in agriculture, and in such conditions that their effects go far beyond those required in agriculture.

Evidence has been gathered on the direct effects of defoliants and herbicides on the

population and on the fauna. There are grounds for believing that contact with defoliants can cause sight troubles and genetic lesions.

Experiments conducted on test animals have given formal proof that 2,4-D, 2,4,5-T and dioxin produce certain teratogenous effects and important internal modifications likely to alter the transferable patrimony.

The first clinical observations presented by Vietnamese physicians point to a direct relation between the population's contact with defoliants and the grave dangers — still to be assessed — to which this type of warfare exposes present and future generations.

There is incontrovertible evidence of the direct effects of defoliants on food crops, forests and all the vegetation. They entail a general famine and untold sufferings among the civilian population whose living conditions are thoroughly disturbed. Their long-term effects cause deep, even irreversible, upheavals in the ecology, soil and climate of vast regions in Viet Nam.

As regards toxic gases, it is evident that their use in Viet Nam leaves long-term toxic effects. Their lethal power is well-established and many people have been their victims.

There is no doubt that the US armed forces are using Viet Nam as a chemical warfare laboratory, conducting experiments that are all the more efficacious as they are directed against predominantly agricultural populations.

The scope of human losses and devastations of nature enables one to conclude that this is *genocide coupled with biocide*.

We, participants in the conference, reaffirm our belief that the use of these products constitutes a flagrant violation of the stipulations of the 1925 Geneva Protocol sanctioned by the UNO Resolution of December 16, 1969, in spite of all protests by the Nixon Administration.

We call for an immediate end to the use of chemical agents in war.

We condemn the perversion of Science and Technique through the research, development, and massive and illegal use of these products against the populations of Viet Nam, Laos and Cambodia.

We hail the courageous stand taken by various American scientific circles against the use of chemical weapons in Indochina. We call on their colleagues in the United States and in other countries to realize this tragic

situation and join us in a world protest against the use of defoliants and other toxic chemicals. In face of the terrible upheavals caused in Viet Nam's ecology, the magnitude of which is beyond imagination, we appeal to all scientific organizations in the world, particularly those which are members of the World Federation of Scientific Workers, to join their efforts for an efficacious assistance in various and appropriate forms to the Vietnamese people, and for a further study of the effects of the toxic substances used in this war as well as of the means to combat them.

Since all the crimes committed by the US armed forces spring from the aggressive war they are waging, we energetically demand that the United States stop this war and unconditionally withdraw all its troops from Viet Nam, Laos and Cambodia.

Only then can Law and Justice be preserved.

REPORT BY AN INQUIRY MISSION ON THE
SPRAYING OF HERBICIDES IN KAMPUCHEA *

J. LAVOREL**

In late December 1969, a mission was sent to Cambodia to get information on the damage caused by the sprayings of US herbicides in Kampong Cham province, near the Vietnamese frontier. The mission was to look into the effects of these substances on rubber plantations, orchards and food crops, all the vegetation in general, and also on the health of the population and on animals. It comprised two Americans: A.W.Pfeiffer, professor of zoology (Montana University, Missoula, Montana) and A.H. Westing, professor of botany (Windham

* *Les massacres de la guerre chimique en Asie du Sud-Est*. François Maspero, Paris 1970, pp. 67-72.

** Research director at the NCSR, director of the photosynthesis laboratory of the NCSR, Paris (France).

College, Putney, Vermont) and two Frenchmen: L. Matarasso, barrister at the Paris Court, Vice-President of the International Information Centre for the Denunciation of War Crimes, and myself. This mission was financed by French and American funds; it was carried out with the consent of Cambodian government which put at its disposal all facilities for road and air travel and organized all necessary contacts with functionaries, technicians and the population.

What are the facts? In a period of fifteen days between April and May 1969, many cases of sudden defoliation took place in the above-mentioned region. This was the beginning of the rainy season, the active phase of vegetation. The cases in question mostly involved small family orchards and rubber plantations. After an investigation by the Cambodian Ministry of Agriculture a complaint was sent to the US government. The source of the damage was obvious, owing to the proximity (about ten kilometres) of the Vietnamese province of Tay Ninh where the Americans were systematically spraying herbicides. One mission of US experts came to make an inquiry on the spot in July 1969. It confirmed the gravity of the damage estimated by the Cambodian functionaries and

concluded that a direct spraying by aircraft had taken place of "Agent Orange" (codename of an herbicide made up of a mixture of 2,4-D and 2,4,5-T). Given the extent of the damage, its location and the meteorological conditions at that time, the possibility was ruled out that the whole damage could have resulted from herbicides drifted in from Tay Ninh province by the wind.

The affected area covered 70,000 hectares, 10,000 of which were seriously hit. The plantations in that region (Krek, Chalang, Mimot) account for one-third of the acreage grown to rubber in Cambodia; actual loss in latex production was about 40 per cent. The big plantations belong to national or foreign companies but about 10 per cent of the area is covered by small plantations, orchards and fields belonging to the peasants; 30,000 people live there - mostly plantation workers. Total damage runs to 12 million US dollars not including after-effects.

The observations made by our mission took place eight months after the incidents. And these were a far cry from the heavy defoliation and destruction of the vegetation cover by herbicide-spraying in South Viet Nam. Our mission, however, was interesting for two reasons: look-

ing into the situation eight months after the actual happening, it was able to assess the degree of restoration of the vegetation, compare it with the (rather optimistic) forecasts of the US mission and realize the complexity of the consequences of defoliation not only as regards plant physiology, but also on the economic and human plane. One may wonder about the interest of a scientific mission on defoliation in South Viet Nam: when everything or practically everything has been destroyed, one can but observe the facts, and difference between the former natural state and the present one is too great for an accurate assessment of the destructive power of herbicides. On the contrary, a rubber plantation after a limited attack is a simple case, almost a model system: the physiology of this plant is relatively well known and the ecologic system (doubtless artificial) which it constitutes collectively in a plantation is also accurately known, as it is constantly watched and observed by man. The case we investigated was thus very interesting, both to estimate the differential, liminal, effect of herbicides on ecology and to realize their long-term consequences.

At first, we flew at low altitude over normal plantations (particularly those of Cambodian

Research Institute on Rubber at Chup) then over stricken plantations to make a comparison. Seen from the air, the defoliated patches present a greyish blue aspect in contrast with the uniform green of the normal ones. Two conclusions were reached:

1. On the affected plantations, the sensitivity of the different species (in fact, of clones) varies greatly; one can see apparently normal patches alongside nearly completely defoliated ones.

2. From the air, the aspect of a plantation is quite characteristic: a very homogeneous green in contrast with the mixture of species in a natural forest. Flying over a young plantation, one clearly sees the alignments of the trees. In sprayings by aircraft — these being carried out necessarily in clear weather in the first hours of the morning — a mistake is inconceivable. The more so as the Cambodian localities near the frontier are clearly visible; thus, from our plane, we clearly saw the inscription Mimot painted in capital letters on the roofs of the buildings of the airport of that locality. After that, we called at the Cambodian Research Institute on Rubber to consult specialists, then visited plantations, big and small, and orchards in the affected area. We conferred with the

plantation managers and through interpreters, with the staff and villagers.

Several factors determine the gravity of the damage and the duration of the after-effects. Age is the most evident one: the plants grown in the year were completely destroyed on the worst hit plots, the young trees which began to produce (6-7 years) particularly suffered, their growth loss being estimated at one year at least. Their aspect was characteristic: the foliage top was dry, dead on 2-3 metres, and a second foliage had appeared after the fall of the normal one but it was scarce and concentrated at the roots of the branches on the more important boughs. This picture explains the aspect of trees seen from the plane and fits in with the mode of action of these "systemic" herbicides which penetrate through the leaves into the layers of the bark and produce according to their concentration an erratic start of many physiological processes - particularly the fall of leaves - or a greater disorder, even the death of tissues. A second factor is the sensitivity of the clone - and more generally of the variety or of the species. This is due mostly to the nature of the cuticle of the leaf and the relative easiness of penetration by the herbicide. This factor appears as soon as the

product is applied but its action is complex and sometimes paradoxical. A clone may immediately lose its leaves but having "rid itself" of the poison, it resumes a quasi normal vegetation. On the other hand, another may keep its leaves longer and seem to hold out, but in fact, the herbicide goes deep and causes havoc: the tree will lose its leaves later on and will have more difficulty in recovering than the one with an immediate response. Other factors, such as the state of health, phase of vegetation, climatic conditions, etc., may of course intervene.

The consequences are easy to foresee. Apart from the loss in latex output, there is also a lessening in quality (dry rubber content). One-year plantations will have to be uprooted and the operation started anew. Not only do the trees show a growth deficit but the time needed for recovery cannot be estimated with any accuracy - perhaps from one to three years. For this very reason, the US mission had to return in 1970 to assess the degree of recovery. The uncertainty of the long-term consequences is no doubt one of the most disturbing aspects of the indiscriminate use of herbicides.

We were struck by the multiple aspects taken on by the ecological disequilibrium in a

plantation after these sprayings. They help one understand the complexity of the interactions which contribute to the precarious equilibrium of an ecosystem. One of the indirect consequences of defoliation is an increase in soil insolation which results in a disquieting growth of a parasitic herbaceous vegetation. This competes with the trees for the mineral resources of the soil and must be suppressed — which requires an unproductive supplementary work — in order not to hamper the recovery of the trees. The bark of the rubber tree is relatively frail: it is normally protected against solar heat by the leafy canopy which leaves the underwood in a cool shade: and so, on the defoliated plots, we saw many cases of bark burns (scorching). Let us also note that the unexpected fall of leaves and their desiccation on the ground increase the risks of fire: we visited a plot which had been completely destroyed by fire after defoliation. The risks of more parasitic diseases are also a factor affecting the return to equilibrium.

The incidences of the human factor — which must also be reckoned with in the ecological balance — are not negligible. Thus the tempo of "tappings" i.e. the renewal of the cuts on the bark, normally carried out every three or

four days — ought logically to be drastically reduced, even suspended, in order to let the trees recover. The need for the plantations to keep their skilled personnel, therefore to provide them with jobs, prevents one from falling below a minimal tempo of tappings. This hampers the recovery of the trees.

Visits to orchards and fields around the village showed us a whole spectrum of sensitivity. We were able to confirm the impression of the mission about the effects of "Agent Orange" which, in view of the normal appearance of the herbaceous vegetation, seems to exert no action on the latter after a few months. Among the worst hit fruit trees, the jack-fruit tree is most sensitive. Other species like banana, pineapple, papaw, cassava etc., had more or less suffered. Fruit trees often show tardy fructification, and give altered products or ones of abnormal size. Cassava crops had to be re-stocked to suppress the dead parts. The blind and indiscriminate character of the chemical and biological weapon is particularly obvious, given the dispersal of food crops in this region.

According to the villagers' testimony, many people, most of them children, had suffered from diarrhoea and vomiting. Small animals (poultry, piglets) had died or weakened, includ-

ing wild birds. However, the records of the Mimot hospital did not reveal any increase in the number of in-patients in that period. We paid especial attention to birth malformations. To our knowledge, their frequency had so far been normal.

As for the sprayings, the only controversial point was whether they had been direct (by aircraft) or indirect (by the wind). It has been noted that the second alternative could not explain all the damage. The following reasoning supports this assertion.

Given a dose of 0.5 kg/ha—that for domestic weeding, very inferior to the current doses applied in defoliation missions—the 70,000 ha. would have received in all 35 tons of toxic products, roughly the payload of 10 aircraft. If one thinks that wind had carried this agent in from the frontier, one can admit a yield of 10 per cent. Thus, about one hundred defoliation missions would have had to take place in the Tay Ninh region in that period. The figures given by the US Army are much smaller.

This mission has drawn our attention to three aspects of the use of herbicides as a chemical and biological weapon:

1. By hitting the enemy's food crops, which is practically inevitable, one strikes essentially at the civilian population. In this particular case, this rule takes on another form: if the US government agrees to pay damages, one can wonder, without questioning the intention of the Cambodian authorities, whether the indemnification of small owners and villagers will be equitable as these people, given their educational level, are not in a position to accurately estimate the damage they have suffered, while the technicians in the big plantations have a quasi-scientific knowledge of the state of their domain.

2. This weapon has a fantastic destructive power, certainly superior to that of the nuclear weapon. One can assess it by the ratio between the amount of destruction and the cost of the weapon. In the present case and without taking into account unknown long-term effects, it stands between 10^3 and 10^5 . Moreover, this weapon is very economical in comparison with classical ones.

3. The long-term effects of this weapon on the ecological equilibrium are completely unknown and consequently all the more disturbing. By acting in a scientifically uncontrolled manner on the surrounding biological environment, man plays at being a "sorcerer's ap-

prentice". His purpose of military destruction is but an aggravating circumstance.

Why should one pay such deep attention to chemical and biological weapons? After all, what matters first is the will of destruction and what one should pull from man's heart is the roots of war mania. We would like to adopt a more realistic and pragmatic perspective. This weapon has been newly developed, the scientific and industrial investments it has required are not economically considerable as in the case of the atomic weapon. Lastly, the conversion of this activity to pacific aims is easy (in fact, this weapon is but a perversion of chemical and bacteriological research and industry). The prohibition of this weapon is therefore a realistic goal. The success reaped by those struggling against it would be a great one for mankind.

PRINTED IN THE SOCIALIST REPUBLIC OF VIETNAM