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SPRING AND VIETNAMESE CUSTOMS

The flower market in Hang Luoc Street (Hanoi) during the days before Tet.

Photo : TRAN NHUE

Chess game at Tet. The chess pieces are young girls in national costumes.

Photo : TRAN PHUONG

A *cheo* (popular theatre) singing competition held at Duc landing place in Ha Son Binh province. The singers are young girls and boys in national costumes.

Photo : NGOC CHAU

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Front Cover: **Hanoi young girl.**
Photo: TRONG THANH

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THIRD PLENUM OF THE CENTRAL COMMITTEE OF THE COMMUNIST PARTY OF VIETNAM

Here follows an extract from the communiqué of the third plenum of the Central Committee of the Communist Party of Vietnam held from 3 — 10 December 1982.

The Plenum discussed the orientation and tasks of the Plan for 1983 and the targets to be attained by 1985, especially some urgent problems related to the circulation and distribution of goods, the improvement and decentralization of economic management and the building up of the district echelon and its reinforcement.

The Plenum unanimously held that over the last year, in the light of the general line and the economic line charted by the Fifth Party Congress, a number of managerial measures recommended by the Party and the Government have stimulated production and brought about significant changes in the economy throughout the whole country. The Plenum praised the progress achieved in agricultural production and held that real possibilities exist for solving the food problem, supplying materials to consumer goods industries, and increasing our exports.

Progress, however, is not uniform, nor is it steady. Many difficulties remain to be overcome if the economy is to be stabilized and consolidated. The Plenum unanimously adopted orientation aimed at solving various problems and attaining the economic and social objectives set by the Party's Fifth National Congress.

ORIENTATION, TASKS AND ESSENTIAL OBJECTIVES OF THE SOCIO-ECONOMIC PLAN FOR 1983 AND THE OBJECTIVES TO BE ATTAINED BY 1985

A summary of the Report of the Council of Ministers to the National Assembly, delivered on 20 December 1982 by Vo Van Kiet, Vice-Chairman of the Council of Ministers and Chairman of the State Planning Commission.

The implementation of the State Plan for 1982 has yielded eloquent results, especially in agriculture, small industry and handicrafts.

1. Agricultural production

— *Food grain:* 16.26 million tons (paddy and equivalent) as against 15 and 14.39 million tons in 1981 and 1980 respectively. *Average animal yields* in paddy in 1982: 24.4 metric quintals per hectare. This has made it possible to procure 2.9 million tons of paddy as against 2.5 and 2 million tons in 1981 and 1980 respectively.

— *Industrial crops:* up 16% in terms of area compared with 1980, of which: up 14% for sugarcane, 100% for soya, and 450% for rubber (new plantations).

— *Animal husbandry:* compared with 1980: up 8.5% for pigs. 4.6% for buffaloes, 11.7% for oxen.

2. Marine products up 10% compared with 1980.

3. Industrial production

In spite of difficulties in ensuring an adequate supply of raw materials, energy and spare parts, total value (in constant prices) of output increased by 12.7% each year on average in 1981 and 1982 (particular progress was recorded by small industry and handicrafts) as against 0.6% for the period 1976-80.

4. Transport and communications have improved, especially unloading at Hai Phong port and food transport from the South.

5. The value of exports (essentially agricultural produce, canned marine products, and handicraft items) has increased by 27% compared with 1980.

6. Agricultural collectivization has been completed in the main in the Centre and has made progress in Nam Bo (the South). Land distribution is being readjusted.

7. Capital construction has begun to be reorganized; investments have been focused on key projects. Some enterprises have gone into commission: the Vinh Phu Pulp and Paper Mill, the Bim Son Cement Works, the Nha Trang Textile Mill, the Ha Tay Woollen-yarn Mill, the spare-part factories of Bien Hoa and Tan Binh, etc.

8. Scientific and technological research and development, basic surveys, and geological explorations are under way.

9. Education (a reform is under way throughout the country), job training, health-care activities, culture and art, mother-and-child welfare, etc., have yielded good results.

The changes and progress recorded in 1981 and 1982 in the social and economic fields have opened up encouraging prospects.

However, many difficulties have not yet been solved while others have developed in the course of our progress, and the present socio-economic situation calls for the solution of urgent problems.

Production has not yet been stabilized due to the serious shortages of energy, raw materials, and spare parts. The weakest sector is the circulation and distribution of goods. It is now the scene of a fierce struggle between the two

roads, the socialist and the capitalist, a struggle in which the enemy outside combines his action with that of the reactionaries within the country.

Our economic management must be renovated and its shortcomings corrected, especially with regard to prices.

Bureaucratism, conservatism, apathy, reliance on budget subsidies, lack of discipline, and parochialism are still serious defects to be overcome.

Insufficient diligence has been shown in the reorganisation of production. In Nam Bo the socialist transformation of agriculture lags behind while that of private industry and trade and market management are neglected.

The dictatorship of the proletariat has slackened in several fields, especially in the circulation and distribution of goods.

However, new factors have emerged in almost the whole country and fine prospects have opened up. The situation has visibly improved compared with what it was two years ago.

* * *

In the present situation, the attainment of the *four socio-economic objectives* set for the 1980's calls for concrete realizations in 1983-85:

— *Living conditions:* Efforts are to be focused on necessities: food, clothing, education, health care... By 1983 we must be self-sufficient in food and by 1984 be able to build up food reserves. Each category of people must receive their full ration of food, which should be gradually increased. By 1985 we should be able to satisfy our needs in cotton clothing, domestic fuel, paper, bicycles and spares, and household utensils. We must strive to solve the housing and employment problem for Hanoi and other cities and industrial centres.

— *Building of the material and technical bases of socialism:* We must complete some major projects and ensure good conditions for their operation so as to reduce our serious imbalances in energy, transport and communications, supply of materials, repair and construction engineering, and to increase our capacities in agriculture, light industry, food industry, and exports. Investments should be made so as to make the most of existing units and preparations be undertaken for the projects of the 1986-90 Five-Year Plan.

— *Socialist transformation:* In Nam Bo, by 1985 all peasants should be organized into production collectives and farming co-operatives, and part of the craftspeople should be organized into co-operatives. We must step up the socialist transformation of private trade, renovate market management and hold firm control over it, broaden the scope of and reorganize the socialist market, transform, reorganize, and manage the free market.

— *National defence and security:* Having to confront our direct foe for a long time to come, we must maintain vigilance, strengthen national defence and meet all its requirements, establish a judicious relationship between the economy and national defence, and bring into play the productive capacities of the army and national-defence industries for the development of the national economy. Political security must be maintained and social order and security reinforced. The enemy's attempts at sabotage must be checked and we must stand ready to foil all aggressions.

To this end, we must

1. Rely on our own strength; uphold the spirit of sovereignty; bring into play all our potential for a harmonious realization of the plan.

2. Focus our efforts on meeting our most urgent needs; achieve all the tasks set for key units and in key domains.

3. Step up the reorganization of production and construction.

4. Restore socialist order in the circulation and distribution of products.

5. Bring into play our potential in science and technology.

6. Renovate economic management and planning; strengthen leadership and guidance.

7. Establish good coordination of the economy and national defence.

MAIN ECONOMIC TARGETS FOR 1983 AND 1985

I — Agriculture

1. Food grain: 17 million tons (paddy and equivalent) of which: 14 million tons of paddy, and dry crops equivalent to 2.7 million tons of paddy in 1983; 19-20 million

tons in 1985 (3.5 million tons of paddy equivalent in dry crops).

Average annual yields in paddy (for three crops): 24.5 metric quintals per hectare in 1983; for high-yield areas: 37.5 quintals per hectare.

To attain these objectives, the basic measure will be intensive cultivation in all rice-growing areas, including fields in the uplands and the highlands. High-yield areas will cover 1.5 — 1.8 million hectares (30% of rice-growing areas) in 1983 and 2 million hectares by 1985: they will account for 50% of total paddy production in the country.

We shall be able to procure 3.6 million tons of paddy and equivalent in 1983, 24% more than in 1982.

In order to obtain more food grain and farm products for food and light industries and for export, we must develop market gardening, the growing of fruit trees and annual industrial crops, the building of "green belts" around cities and industrial centres.

Various technical measures and economic levers are to be applied:

Complete the building of water conservation projects, first of all for high-yield rice-growing areas, build more small- and medium-sized projects by mobilizing local potentialities in manpower, materials and money. Develop water conservation in the Mekong River delta; reduce water-logging in the North. Irrigation will benefit 4.1 million hectares in 1983 and 4.5 million hectares in 1985; drainage, 150,000 hectares. Preparations must be made with a view to the building of large-scale projects.

— Use a wide range of fertilizers: organic manure, river alluvium, lime... Practise crop rotation with leguminous plants in order to improve the soil. Chemical fertilizers, although supplied in larger quantities than in 1982, must be reserved for high-yield rice and dry food crop-growing regions. Develop regional exports of farm produce in order to import nitrogenous and compound fertilizers. Ensure adequate supplies of insecticides and herbicides; struggle against epiphytotics and develop pest-resistant strains.

— Complete the network of seed-selection stations extending from the centre to the co-operatives; revive the original strains; develop high-yield strains with great resistance to disease, drought, water-logging, acidity and salinity, and well adapted to the climatic, hydrologic and pedologic conditions in each region. By 1985, 50% of the rice areas should be planted with high-yield strains.

— Step up the application of technical and scientific achievements to agricultural production, especially with regard to seeds, the struggle against plant diseases, the use of fertilizers, and soil improvement.

— Complete and improve policies aimed at encouraging the production and processing of dry food crops; use the contract system and conduct food procurement in such a way as to ensure control by the State over most of the volume of marketable food grain.

2. Industrial crops: They will be grown on 875,000 hectares in 1983 and 1.24 million hectares by 1985, i.e. an increase of 610,000 hectares over 1980.

Develop the planting of *sugarcane*, and ensure the full operation of our sugar mills.

Increase the *tobacco* area, for home consumption and for export.

Develop *cotton* growing in regions with the proper climatic and pedological conditions: Thuan Hai, Phu Khanh, Gia Lai — Kon Tum, etc. Intensify *silkworm breeding*.

For *rubber:* in the 1981 - 85 period, besides the 70,000 hectares of State plantations, 30,000 — 50,000 hectares will be developed thanks to joint efforts by the General Rubber Department and various provinces in the Mekong delta and in eastern Nam Bo, and Ho Chi Minh City.

Coffee will be planted on 22,000 hectares in 1983 and 41,000 hectares by 1985; *tea* on 50,000 and 60,000 hectares respectively.

3. Animal husbandry: 1983: 11.6 million pigs; 4.46 million buffaloes and oxen, i.e. an increase of 7%

and 4.4% respectively compared with 1982.

II — Forestry

1983: 55,000 hectares of land afforested; 350 - 400 million trees will be planted by the population, yielding fruit, timber, oils; 1.4 - 1.6 million cubic metres of timber will be produced by 1985.

More forestland is being handed over to the management of co-operatives, army units and economic enterprises, together with the application of the contract system to afforestation, and the settlement of nomadic ethnic minorities to a sedentary life.

An end must be put to the practice of slash-and-burn farming.

III — Fishing

Consolidate and develop State fishing enterprises and fishing co-operatives. Develop the raising of fish in fresh and brackish water; that of prawn, lobster, and crayfish in the Mekong delta with a view to export; develop the procurement, transport and processing of fishing products for supply to urban centres, industrial centres and army units.

Marine products: 450,000 tons in 1983: 500,000 tons in 1985.

Fresh and brackish water products: 190,000 tons in 1983; 230,000 tons in 1985.

IV — Industry

1. Light and food industry: Turn our capacities to the best account, including our national-defence industry, small industry and handicrafts. Bring into full play the productive potential for consumer goods of Hanoi, Ho Chi Minh City, Hai Phong, Da Nang... Promote association and co-operation between different enterprises, branches, and processing facilities on the one hand and regions rich in raw materials on the other. Fully exploit local materials while intensifying exports and sub-contracting with regard to foreign countries.

— *Textiles:* Develop our exports in order to import yarn, dyes, chemicals... Complete the building of textile mills in Hanoi, Vinh, Nha Trang... Supply new equipment to the "March 8" Textile Mill and those in Khanh Hoi and Nam Dinh. In 1983, output of cotton fabric will be 260 million metres, and 380 million metres in 1985.

— *Sugar:* 238,000 tons in 1983 and 350,000 tons in 1985.

— *Salt:* Expand the salt-marshes in the North to meet domestic needs while reserving part of southern production for export. Output: 550,000 tons in 1983 and 700,000 tons in 1985.

— Produce more *bicycles*, spare parts, tyres and inner tubes; try to meet minimum domestic requirements in *soap, household utensils, school equipment, medical instruments, labour safety equipment, medicines...*

2. Heavy industry:

— *Electricity:* Turn to full account the existing hydropower stations: commission part of the Pha Lai thermopower station and complete its building by 1985. Step up the building of the Hoa Binh hydropower station on the Da river (Black River); step up preparations for the building of the Tri An hydropower station in eastern Nam Bo. *Output:* 4.37 billion kWh in 1983 (up 5% compared with 1982) and 5.5 billion kWh in 1985 (up 48% compared with 1980).

— *Coal:* 6.5 million tons in 1983 and 8.5 million tons in 1985 (up 60% compared with 1980).

— *Oil and gas:* See to a good execution of the programme of co-operation with the Soviet Union. Work out an overall development plan for the exploitation of hydrocarbons in Vung Tau. Carry on prospection for gas in Bac Bo.

— *Engineering:* Step up the production of spare parts, river and sea transport equipment, hand tools and improved hand tools, equipment for mines, small hydropower stations, processing of farm products. Maintain the production of electrical motors, machine-tools, 12-hp two-wheeled tractors, etc., at an adequate level.

— *Metallurgy:* 46,000 tons of rolled steel in 1983 and 70,000 tons in 1985.

— *Chemicals:* Restore and expand the apatite mine in Lao Cai. Expand the Lam Thao superphosphates plant. Output: 240,000 tons in 1983 (up 21% compared with 1982) and 350,000 - 400,000 tons in 1985.

— *Cement:* Complete the building of the Bim Son and Hoang Thach cement works. Step up the expansion of the Ha Tien works and the restoration of the Hai Phong plant. *Output:* 1 — 1.2 million tons in 1983 and 2 — 2.5 million tons in 1985.

V — Transport

In 1983 the volume of goods moved within the country will increase by 9% in tonnage and 16% in ton/kilometre transported compared with 1982; and in 1985, by 35% compared with 1980.

VI — Capital Construction

In the 1983-85 period: readjust investments for greater efficiency; focus on key projects in food production, processing of farm products, export, heavy industry, transport and communications. Tighten co-operation between the central and regional administrations, between the State and the people. Reduce the rate of construction of non-urgent projects and of those for whose operation favourable conditions do not yet exist. Stop construction altogether if need be.

State appropriations for capital construction in 1983 are up only 19% compared with 1982. They are mostly reserved for projects already under way and to be commissioned in 1983: the No. 1 turbine at the Pha Lai thermopower plant (capacity: 110,000 kW); the No. 2 kilns at the Bim Son and Hoang Thach cement works (capacity: 600,000 and 1.1 million tons per year, respectively); the Hanoi, Nha Trang and Vinh spinning mills; the La Nga sugar refinery (2,000 tons of cane processed per day); 220,000 square metres of housing space in various cities and industrial centres (70,000 sq. m. for Hanoi)...

VII — Export and Import

Our main exports remain farm, forest and marine products. Total value of exports in 1983 will increase by 51% compared with 1982: up 83% for agricultural products, 50% for marine products, 56% for forest products, 21% for products of light industry, small industry and handicrafts, 67% for mining products.

VIII — Finance

In 1983 State revenue will increase by 19% and State expenditure by 11% compared with 1982.

IX — Population and Employment

The population growth rate is expected to be down to 2.1% in 1983 and 1.7% in 1985. Jobs will be created essentially through the development of agriculture, animal husbandry, small industry and handicrafts, forestry and fishing activities, and services in the cities. Between 1983 and 1985, *one million people* (200,000 in 1983) will be moved to new economic zones. In 1983 labour productivity will increase by approximately 6% in industry, 7% in capital construction, 6% in transport, etc.

X — Education

Between 1983 and 1985, 120,000 people will be recruited annually for higher education, secondary vocational education, and job training, 15,000 people for complementary education, and 20,000 people for complementary job training.

XI — Renovation of Economic Management and Economic Guidance

— Renovation of planning: reliance on budget subsidies will be abolished and cost accounting applied.

— Decentralization of economic management; building up of the district echelon.

— Improvement of current managerial policies and measures; promulgation of new ones.

— Reinforcement of organization and leadership for the implementation of the 1983 plan.

— Launching of a mass movement for the execution of the 1983-85 plans.

SRV MINISTER FOR FOREIGN AFFAIRS' NOTE TO FOREIGN MINISTERS OF NON-ALIGNED COUNTRIES

Hanoi, December 4, 1982

Excellency,

The forthcoming Seventh Summit Conference of the Non-Aligned countries to be held in New Delhi is an important event for our Movement. As a member of the Movement, the Socialist Republic of Vietnam considers it its duty to present a number of its views, so as to contribute to the success of the Conference:

1. In the past 3 years, since the Sixth Summit Conference in Havana, the Non-Aligned Movement, overcoming most serious difficulties and trials, has become a powerful force with an increasingly important position and an influential say in international life. This is because our Movement has always preserved its objectives, maintained its solidarity and unity, and foiled all schemes of the imperialist and reactionary forces who have tried by all means to divide the Movement and divert it from its clearly defined objectives, that is, to struggle against imperialism, colonialism, neo-colonialism, apartheid and racism, including Zionism.

The Seventh Conference of the Heads of State or Government of the Non-Aligned Countries will provide us with an opportunity to review the achievements the Movement has made during the past 3 years, to decide the tasks for the next period, to further consolidate and strengthen the solidarity and unity of the Movement surrounding its correct objectives, and to bring the Movement to still greater victories.

This Summit Conference, therefore, should concentrate every effort on the questions concerning the common struggle for peace, independence and sovereignty of nations, for a new, just and equitable economic order, and should not allow the differences and disputes between members of the Movement to mislead the common struggle against imperialism.

2. The question of Kampuchea and that of peace and stability in Southeast Asia are differences between the two groups of Southeast Asian countries: ASEAN and Indochina. Since 1979, these differences have been reflected at the UN forum and, to some extent, at the Conferences of Non-Aligned countries. The developments of the past several years have shown that all efforts to cause opposition between the Indochinese and ASEAN countries and all attempts to impose the will of one group of countries on the other, cannot solve the problem but, on the contrary have made the situation more complicated and tense. Public opinion has increasingly realized that only dialogues and agreements reached between these two groups of countries on the basis of respect for the legitimate interests of both sides can solve the problems of Southeast Asia. Having emerged over the past year and more, the trend of dialogue between the two groups is now developing. World opinion also endorses and encourages the dialogues between ASEAN and Indochina. Our Non-Aligned Movement should promote and encourage it, as well as create a favourable climate to help both sides undertake dialogues and negotiations as has been clearly pointed out by the Movement's resolutions over the past several years, and at the same time to resolutely get rid of all schemes causing opposition and undermining these dialogues and negotiations.

3. For the time being, there is the question of the seat of Kampuchea in the Non-Aligned Movement. Since 1979, in the views of the Non-Aligned countries, there has been no possibility of solving this problem. The forthcoming Summit Conference also may not be able to solve it.

The Socialist Republic of Vietnam, now as before, holds that the seat of Kampuchea in the Non-Aligned Movement belongs to the People's Republic of Kam-

puchea, the only genuine representative of the 5 million Kampucheans who survived the Pol Pot clique's genocide and the 3 million others who were murdered at the bloody hands of the Pol Pot clique; it is the People's Republic of Kampuchea which has brought Kampuchea to life and is now effectively controlling the whole country, and setting Kampuchea on the path of development.

The genocidal Pol Pot clique and the genocidal clique in the guise of the tripartite "coalition government" of Kampuchea headed by Sihanouk are just an exiled group who oppose the rebirth of the Kampuchean people and who can exist only with aid from the imperialist and foreign reactionary forces. They represent nobody and have absolutely no place in the Non-Aligned Movement.

With a view to contributing to the success of the Seventh Summit Conference, the Socialist Republic of Vienam, with a full sense of responsibility as a member of the Movement, completely respects the Sixth Summit Conference's Resolution and leaves the question of the representation of Kampuchea to be considered and decided by the Seventh Summit Conference of the Heads of State or Government of the Non-Aligned countries.

But, there are, at present, manœuvres and schemes being made by some people to impose their intentions on the Conference.

Taking advantage of the respect for the founders of the Non-Aligned Movement, they attempt to bring the genocidal Pol Pot clique, abhorred by mankind, to the Seventh Summit Conference by inviting Sihanouk to the Conference as a founder of the Non-Aligned Movement. Recently, they rigged up the so-called tripartite "coalition government" to cover up the nature of the genocidal Pol Pot clique so as to maintain and save its illegal seat at the United Nations. Now, they attempt to repeat this manœuvre at the forthcoming Summit Conference so as to compel the latter to accept the genocidal Pol Pot clique which opposes the rebirth of the Kampuchean people. If they deliberately impose this question on the Seventh Summit Conference, opposition will arise, thus undermining the atmosphere of dialogue between the two groups of countries, sowing divisions in the Non-Aligned Movement and diverting our common struggle. These manœuvres and erroneous acts will, no doubt, be categorically rejected by justice-loving public opinion.

4. In raising the question of inviting Sihanouk to come to New Delhi to address the Seventh Summit Conference in his capacity as a "founder" of the Non-Aligned Movement, some people have deliberately confused the founders of the Non-Aligned Movement and those who took part in the First Summit Conference of the Movement. If one refers to the founders, then only 5 people have been recognized by the Non-Aligned Movement. They are: Late Premier J. Nehru and Late Presidents Sukarno, N'Krumah, Tito and Nasser.

If invitations were extended to the Heads of State or Government taking part in the First Summit Conference of the Non-Aligned Movement to attend the Seventh Summit, they would be sent to the 25 people who took part in the First Summit. Several of them are dead, some still hold important posts of State and others have taken sides with the opposition forces or oppose the present governments in the countries concerned. The invitation extended to Sihanouk or to any one among the 25 people mentioned above to the Seventh Summit, will set a dangerous precedent for the Movement and may be made use of to oppose the legitimate governments and interfere in the internal affairs of the Non-Aligned member states. This act will obviously undermine the fundamental principles of the Movement and inevitably sow deep division in the Movement.

It is necessary to point out that up to now there has not been any precedent of inviting the founders to participate in the summit conferences. The capacity of the founders or of any delegate attending the conference is closely linked with State or nation they represent. At the Third Summit Conference held in Lusaka in 1970, Sihanouk himself was not permitted to take part because of opposition by several countries, Malaysia, Indonesia, and Singapore included. The reason was that after the coup d'état led by Lon Nol, Sihanouk could no longer control the capital, Phnom Penh, and Kampuchean territory.

5. The Socialist Republic of Vietnam wishes that with their wisdom and goodwill, the Heads of State or Government of the Non-Aligned countries will resolutely foil all schemes and manœuvres aimed at bringing the disguised genocidal clique to the conference to cause trouble and deadlock in the Movement, and believes that the Seventh Summit Conference will be successful.

Please accept, Excellency, the assurances of my highest consideration.

Minister for Foreign Affairs
Socialist Republic of Vietnam
NGUYEN CO THACH

Hanoi's Viewpoint

NEW AND IMPORTANT INITIATIVES FOR PEACE IN EUROPE AND THE WORLD

The meeting of the Political Consultative Committee of the Warsaw Treaty member states held on January 4 and 5, 1983 in Prague culminating in the Political Declaration which was unanimously adopted is a new demonstration of the unshakeable determination and consistent foreign policy of the member states to strive for peace and security of nations and repel and abolish the danger of war. The voice of peace, so moving, calm and convincing, from the capital of Czechoslovakia, has brought new encouragement and strengthened the confidence of all the friends of peace on this planet.

Mankind's concern about a new world war has not been alleviated with the advent of the new year. The spectre of a nuclear holocaust still hovers on the horizon; dangerous hot-spots remain; and a series of crucial questions of a global character affecting the future and even the existence of mankind remains unresolved. The United States' bellicose and aggressive policy consisting in seeking military supremacy and confrontation continues to pose a grave threat to the existence of all nations. In its Political Declaration, the participants in the Prague meeting once again reiterated the basic viewpoint of the socialist community: "Today, for all nations, no task is more important than to preserve peace and put an end to the arms race."

To contribute to the materialization of this motto, the member states of the Warsaw Treaty Organization have again put forth a series of important peace initiatives. These include the proposal for the signing with NATO of a treaty on the commitment by both sides not to use military force against each other or against other countries outside the two blocs, and to maintain relations of peace with each other. These also include the proposal that the nuclear powers make unilateral commitments, as has been done by the Soviet Union, not to be the first to use nuclear arms, and also proposals for the resumption and promotion of the talks on disarmament. There are also proposals for the signing of conventions on banning chemical, radio-active and neutron weapons as well as the placing of any kind of weapon in outer space, for a speedy solution to the question of ensuring security of the non-nuclear countries and the prohibition of the proliferation of nuclear arms. The Warsaw Treaty member states also proposed the promotion of dialogue aimed at an agreement on a phased program for nuclear disarmament and speedy conclusion of a treaty on complete banning of all nuclear tests. It also proposed a substantial reduction of the armed forces and conventional arms, restriction of naval operations, dismantling of foreign bases, reduction of military budgets, etc.

The Prague meeting also put a high value on the Non-Aligned Movement and welcomed the initiatives of various Asian, African and Latin American countries, and underlined the policy of the Warsaw Treaty member states to solve through political means the situation in explosive areas such as the Middle East, the Pacific Ocean, Southeast Asia, the Caribbean and Latin America. The participating states declared their support for the establishment of a new international economic order and called on all countries to join efforts in solving socio-economic problems of a global character such as demographic growth and the question of the environment.

The Western warlike forces headed by the United States, now as before, are arguing for their dangerous and criminal arms race policy by holding out the "Soviet threat" bogey. But their guile has been exposed and will be a complete fiasco. The peace program of the Soviet Union, the repeated peace initiatives it put forward in the past year and the recent new peace proposals of the Prague meeting have shed more light on the consistent policy, strong determination and undeniable goodwill of the Soviet Union and the other countries of the socialist community which are striving tirelessly with a high sense of responsibility for peace and security of nations.

The growing people's movement in Western Europe and the United States against the arms race and for the defence of world peace has compelled the bellicose forces in the West to speak of, or rather to pay lip service to, peace. The contrast between the policies of the reactionary forces and of the socialist countries is striking and can be seen by all. The decisions of the recent NATO conferences actually aimed at boosting the arms race and coordinating their plans for war, including nuclear war. The United States is hard put to explain why it still refuses to commit itself not to be the first to use nuclear weapons. On the contrary, the Pentagon has not given up its policy of "first strike" and "limited nuclear war".

The situation in Europe and the global situation are indivisible. Tension on this continent is a matter of concern for all nations. History shows that Europe was the main theatre of two world wars. Today, it is the place of concentration of the two largest hostile armed forces and their weapon arsenal. The relationship between the member states of NATO and those of the Warsaw Treaty Organization greatly affects peace and

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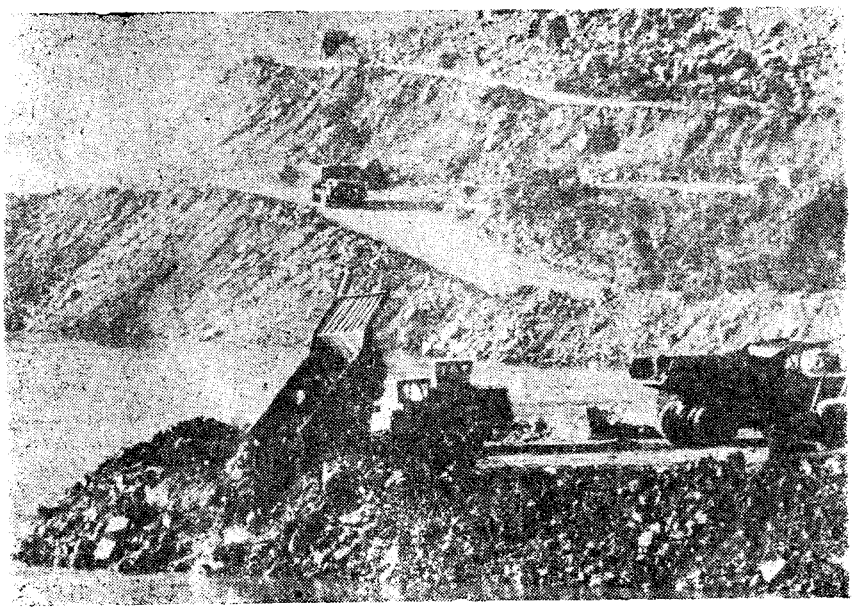
BLOCKING THE STREAM OF THE DA RIVER

On 12 January 1983, at a quarter past 1 p.m., at a point one kilometre upstream from the town of Hoa Binh, the waterflow of the Da river left its natural age-old course and was diverted into a channel dug deep in the rocks on its right bank. The digging of this more-than-one-kilometre channel began two years ago, and on 10 January 1983, more than 70 tons of explosives blasted the dykes blocking both its ends so that the stream would be partially diverted to that channel. Two days later, the main stream of the river was blocked. A ceremony for blocking the Da river was held on that day with the attendance of Pham Van Dong, Chairman of the SRV Council of Ministers, and E.A. Kozlovski, Soviet Minister of Geology. By that time, the width between the 2 banks had been reduced to only 10 metres. For several days, heavy-duty trucks, among them 20 Soviet-made Belaz lorries of 27-ton capacity each, had been driven day and night without rest to dump blocking materials into the river, including 1,600 huge rocks weighing 5-7 tons each and 1,450 concrete blocks in the shape of pyramids weighing 10-15 tons each.

The blocking of the river marked an important period in the building of a great hydrological project which began in late 1970 and has accelerated since 1975 [1]. This will enable the construction of the first major installation of the whole system of the Hoa Binh hydro-electric project — the clay and rock dam 128m high and more than 800m long. After that, other major installations will be built: the spate diversion channel with a capacity of 35,000 cu.m. per second, the underground hydro-electric plant with a set capacity of 1,920,000 kw generating on an average 8.4 billion kwh annually and the system of locks leading to a reservoir 230 kilometres long in Ta Bu. If everything goes as planned, the first of the eight turbines of the plant will be put into operation in 1987 and the whole project will be completed in the nineties. Next comes the Ta Bu hydro-electric plant with an even greater capacity. By then the Da river will be totally harnessed with the completion of this project.

The Hoa Binh hydro-electric project will not only provide significant electric power, a prerequisite for the industrialization of Vietnam, but also reduces considerably the danger of disastrous floods which threaten the Red River delta every year since the Da river is the Red River's largest tributary, making up half of the water of the Red River. In the dry season, moreover, the water from the reservoir will be channelled into the Red River and its delta. This will bring great benefits for river transport, fish raising and also for the



Soviet-made Belaz lorries on the construction site.

Photo: VNA

climate of the North Western part of Vietnam.

For the blocking of the Da river, up to 12 January, 1983 16,000 Vietnamese workers and engineers together with 350 Soviet experts had to dig and move 15 million cubic metres of rock and clay, fill 210,000 cubic metres of concrete, build 50 km of roads on the construction site, dig 1,000 metres of tunnels, build 250,000 square metres of administrative offices and residential quarters, 60,000 square metres of storehouses, workshops and yards, and transport 350,000 tons of materials and equipment to the construction site. During this time, 3,000 hydro-electric workers have been trained, not to mention drivers and mechanics.

In 1983, the bulk of work to be realized will double that of 1982. For the first six months, 6,000,000 cubic metres of rock and clay will be moved to raised the height of the dam to 43 metres as a precaution against floods in the rainy season of 1983.

The prospects for the project are bright as we enjoy devoted assistance from the Soviet Union in both technical matters and equipment. Lenin's well-known motto "Communism is the Soviet power plus nation-wide electrification" is being realized in Vietnam.

1. See Vietnam Courier, No. 10, 1980, "A project of determination and friendship".

CENTRAL VIETNAM ON THE THRESHOLD OF THE NEW STATE PLAN

In the last days of 1982, we drove along Highway No. 1 in the coastal plains of the four central provinces of Quang Nam - Da Nang, Nghia Binh, Phu Khanh and Thuan Hai. These scattered plains are as large as half the area of the Red River delta. The inhabitants of this narrow strip of land enjoy the freshness of sea wind and at the same time see the sun setting behind the purple mountains on the western frontier. This region is fertilized by the alluvium of the rivers which rise on the Truong Son Range and is the door linking these mountains with the sea.

The region, however, has a grim past. It was torn by the war. According to the documents left by the US-puppet regime, the inhabitants were always underfed and lived on imported foods.

Now, seven years after liberation, how does the situation stand ?

Now that the 1982 plan has come to a close, we can say that the region has made steady progress in food production after the completion of agricultural cooperation. From once suffering a food shortage, all the provinces in the region have now been able to deliver tens of thousands of tons of food to the State and to organize 80 - 90% of peasants in agricultural cooperatives and production collectives. The face of the countryside has rapidly changed for the better. Each commune has from 60 to 80% of brick houses and many public utility undertakings such as offices and storehouses of the cooperatives, kindergartens, health stations, etc.

Ten tons per hectare rice output and intensive culture

We visited Dien Tho cooperative (Dien Ban district, Quang Nam - Da Nang province) when the third rice crop of the year was under harvest. Each of the 320 hectares of three rice-crop fields yields 11.5 tons. According to the co-op manager the per capita food output is 802kg, including the surplus of each co-op member after fulfilling their production contract. This year the co-operative will deliver 714 tons of food grain to the State.

There are several cooperatives which harvest over 10 tons of rice per hectare while in the North there are some cooperatives which reach nearly 10 tons. What is worth mentioning here is that in Quang Nam — Da Nang many districts get over 10 tons per hectare on the total area of their ricefields. Delving into this matter we find that when speaking of the districts which obtain 10 tons of rice per hectare, the authorities are refering to not all the ricefields in this district, but only to those that grow three crops of rice per year. In this district, there are also fields planted with two rice crops or one rice crop plus one subsidiary food crop. There is now a large area reserved for the growing of three rice crops in a year. Quang Nam - Da Nang province has 15,000 hectares each yielding over 10 tons of rice a year: Dien Ban district harvests over 11 tons from 4,000 hectares of three rice-crop fields (among 5,900 hectares of ricefields); Dai Loc district obtains 13.2 tons from 3,400 hectares of three rice-crop fields; An Nhon district (in Nghia Binh province) reaps 10 tons per hectare from 5,000 hectares of three rice-crop fields.

This region is taking the lead in the expansion of the area of three-crop, high-yield ricefields. We should also mention that two rice-crop fields also give 7-8 tons per hectare. How can the area be accurately calculated if we lack data giving the exact figure of the total

area under rice? The cooperatives informed us that before a production contract is signed, accurate measurements of the ricefields are taken.

Thanks to the application of the contract system, we can reckon the real yield of the ricefields from the output obtained under contract. This is also an experience freshly gained in this region. In An Nhon district the yields fixed in the contract are 7.3 and 9 tons respectively while those harvested are 10 and 13 tons, or an excess of about 30%. This is very acceptable.

The cooperatives adopt different formulae for the multiplication of crops as the quality of the soil and farming conditions vary in each region. Even in the same cooperative, the use of the fields differs; some fields are planted with three rice crops; others with two rice crops + one soya crop; others with two rice crops + one groundnut crop. In this way, the cooperatives obtain a large quantity of food and the soil preserves its fertility; this is the outcome of the skilful combination of crops (for instance, leguminous plants increase the fertility of the soil after each harvest). In this region of Central Vietnam, the area grown to subsidiary food crops is large, accounting for 30—40% of the total quatity of food harvested. However, they have started to decrease in area and productivity. To remedy this state of things it is necessary to change our policy in order to encourage not only the rice producers, but more important still, the food crop growers (rice and subsidiary food crops) in general.

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Building the district echelon from the grassroots

In the provinces of Central Vietnam, the organization of the economic structure at district level right after the establishment of the agricultural cooperatives and production collectives is an experience drawn from the North after many decades of socialist construction. This is the opinion of many responsible cadres in the region. In fact, three years after the start of agricultural cooperation, many vanguard districts have made their appearance.

As a district mainly engaged in agricultural production, Dien Ban has only 800 square metres of land per head of population. 96 out of 114 villages in the district were destroyed during the war. After the setting up of the cooperatives, its agriculture has made rapid headway. From 1976 to 1981, food production rose from 36,000 tons to 71,000 tons and even 73,000 tons in 1982, and the per capita food output in the district rose from 236 kg to 470 kg, the yearly food collection by the State from 4,000 tons to 11,000 tons and even 12,000 tons in 1982. The pig herd increased 7 times, that of oxen 29 times, and that of buffaloes 3 times.

Beside 36 agricultural cooperatives, the district has 4 State enterprises, 16 handicraft cooperatives and 40 production groups employing nearly 10,000 workers.

The district capital formerly crowded with small traders and people in service occupations has gradually shifted to the occupations connected with agricultural production. It is now the centre of many trades such as silk reeling, bamboo-blind making, processing of agricultural products and animal fodder, paper making, woodwork, engineering and building materials. Its handicraft output value amounted to 23 million *dong* in 1981 and 25 million in 1982, against 67 million *dong* of agricultural production. Of these 25 million *dong*, 11 million derived from the agricultural cooperatives which also tackle handicraft work. The re-division of labour in the cooperatives to determine the ratio of handicrafts-people is the best way to step up the re-distribution of manpower in the district.

The socialist trade network is growing wider and buying and selling cooperatives are taking shape in the district. Shops have opened in all communes.

The people's life has improved. The district has earmarked 8 million *dong* for education, such as the building of 31 basic general education schools and 2 secondary general education schools.

We can conclude that the economic structure of the district has changed for the better, as a result of the re-distribution of labour in the cooperatives, and this exerts a good influence on the development of production and improvement of the life of the district's population.

An Nhon district, in Nghia Binh province, has also made big strides forward. Besides, other districts have made progress in one way or another, such as Tuy Hoa, Ninh Phuoc, Phan Rang... Nevertheless, the provincial authorities have told us that the number of districts which record progress in economic activities is still small and should be increased.

The State and population pooling their efforts

Following this principle, many jobs have been carried out in the provinces of Central Vietnam.

After only a few years, the cooperatives we visited possess a firm material and technical basis. The fixed capital is big and long-term debts contracted with the State are insignificant. The fixed capital of Nhon Khanh cooperative amounts to 1,140,000 *dong*, but its long-term loan is only 30,000 *dong* and is now being paid according to the set regulations. This is thanks to the participation of the inhabitants who even lend their own savings.

With regard to large-scale projects affecting the whole area, the cooperatives pool their funds and work together. For instance, the building of two pumping station in An Nhon district to irrigate 1,100 hectares of cropland with a capital of 5.5 million *dong*. The State helps in the blueprint of the work and supply of building materials while the cooperation make payments according to the area to be irrigated. The capital advanced by the cooperatives is in fact the contribution of the inhabitants.

Insofar as public utility works are concerned, the above mentioned principle is applied in a wider sense. Dien Ban district has built school buildings to the value of 8 million *dong* (6 million contributed by the population, and 2 million by the State). This method is also applied by other districts in the region.

A local cadre told us: "This principle will be followed not only at present when conditions are hard, but in future when we have fewer difficulties."

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Our visit to the provinces in Central Vietnam at the threshold of a new State plan makes me think of a region which, though facing great difficulties at present, has known how to turn its potential to good effect.

After HUU THO

THE FIGHT AGAINST TUBERCULOSIS AND OTHER LUNG DISEASES IN VIETNAM

In Vietnam, the fight against tuberculosis was undertaken on a mass scale right after the liberation of North Vietnam in 1954. The Central Anti-Tuberculosis Institute founded in 1957 is one of the earliest research centres of the public health service. It has the well-defined task of organizing the fight against and prevention of tuberculosis on a national scale with a view to reducing of TB incidence and eventually to controlling, curbing and eradicating the disease. The resolution of the Third Congress of the Vietnam Workers' Party (Now the Communist Party of Vietnam) held in September 1960 called for "the eradication of social diseases, first of all malaria and tuberculosis".

In 26 years since its adoption and in spite of adverse conditions, the anti-tuberculosis program has yielded some notable successes.

A widespread anti-tuberculosis network has been formed reaching down to the remotest places. Each year more than 90,000 patients received treatment, of whom nearly 50,000 were cured and returned to their jobs. Anti-tuberculosis vaccination for new-born babies and children is organized on a regular basis. Each year more than 1.2 million children are given the BCG vaccine which is an important requisite for the abolition of tuberculosis among future generations. Many research projects on the theoretical as well as practical planes have been conducted. Hundreds of specialized medical workers have been trained each year for this purpose.

All these activities have brought about visible results. The endemic rate of tuberculosis has dropped drastically. The incidence of TB among the population has dropped to a half compared with ten years ago and to less than one-third compared with twenty years ago. Compared with other countries in the region TB incidence in Vietnam can be listed among the lowest, well below average. In fact, in the present five-year plan (1981-1985) a number of communes and even a few districts have been able to set for themselves the target of completing the first phase of the campaign for the eradication of tuberculosis by lowering the TB rate to the same level as in a number of countries with a developed economy and a modern health service.

That is something which the more than 4,000 medical workers of the tuberculosis department operating at all levels and in all regions of the country can be proud of.

To this achievement there has also been no small contribution by tens of thousands of medical workers at the grassroots: hospital assistants, nurses and midwives at the village health stations who have spared no effort in giving BCG vaccine to babies and children and distributing medicine to patients. Neither can it be thought of separately from the efforts of the cadres of the Party, administration and mass organisations who have created every possible condition for expanding an efficient mass medical network and who have themselves zealously joined in the movement for disease prevention and hygiene in the countryside.

While tuberculosis may be considered the "pathological physiognomy" of a backward society which will be liquidated together with powerty, advanced society has brought its own problems for the lungs, problems which are growing

along with the development of industry: the diseases caused by dust and polluted air.

Respiratory diseases, which many assume a chronic or acute form such as pneumoconiosis, lung cancer, pleuro-pneumonia, bronchitis, asthma, emphysema, sclerosis of the lungs, etc. are aggravated by a polluted environment. Dust-related lung diseases, especially silicosis, should be given first attention. Silica is a very commonly met compound on the earth's crust. Regular inhalation of silica dust has caused this disease among a growing number of workers of many occupations such as miners, quarry workers, tunnel diggers, workers in porcelain factories, firebrick kilns and foundries, etc. In some factories, in recent years no new case of tuberculosis has been signalled while the proportion of silicosis sufferers has increased alarmingly, accounting for 2 or 3 per cent of the total of the workforce and even higher.

Some newly found diseases of the lungs caused by coal dust or the dust of asbestos or feathers, have also made their appearance though on a still modest scale.

In Vietnam, according to surveys conducted during the past seven years by the Central Anti-Tuberculosis Institute, chronic broncho-pneumonia can be regarded as a widespread lung disease in both the industrial and agricultural sectors, in town and country, in the plains and the mountainous regions as well.

Bronchial asthma, which has an allergic source, in the conditions of a humid tropical climate and an abundance of vegetation as in Vietnam, has been more and more frequently met in recent years, affecting people of all ages, both sexes and in all areas. Studies by the Oto-Rhino-Laryngology Institute show that floor dust may be one of the causes of the disease. It can also be safely assumed that the dust of feathers, flower pollen and the tropical monsoon climate are important contributing factors.

Lung cancer which has become a growing health problem in the world as well as in Vietnam is a major concern of many. The number of confirmed patients is growing each year and it is not confined to any specific geographic area or any particular section of the population.

At the Anti-Tuberculosis Institute nearly twenty years ago Doctor Pham Ngoc Thach detected the first cases of lung tenias in Vietnam. In an environment still heavily burdened by pollution of the water and the soil, other lung diseases such as those caused by fungi and parasites are also met quite frequently. That is to say nothing of the acute lung disease caused by bacteria and especially by viruses which, during major outbreaks, have affected in no small measure the workforce of the factories, construction sites and agricultural cooperatives.

It has been observed at the chest operation department of the Anti-Tuberculosis Institute over the past ten years that TB cases accounted for only about 20 per cent of the surgical operations while the rate of other lung diseases such as cancer, abscesses, bronchiectasis and asthma has been on the increase.

Apart from TB sufferers the lung department of the Institute has admitted a growing number of patients affected by lung diseases of very diversified origins.

Obviously, today in Vietnam the study of lung and bronchi pathology has become a major question which requires better attention from the medical service, in clinical study and theoretical research, in the medical schools as well as in society.

While continuing with urgency the campaign to eradicate tuberculosis in a relatively short period of time, a new front has been opened for lung specialists.

This is no easy task. Many questions concerning the orientation, policies and the training of qualified personnel, the acquisition of modern equipment, etc., have been raised. Some of the basic requisites have been found and the first foundations have been laid. On the basis of an ever expanding healthcare network and a more and more effective fight against tuberculosis, new prospects have opened for the further advance of lung disease research in Vietnam.

NGUYEN DINH HUONG
Central Anti-Tuberculosis Institute

STONE DOGS

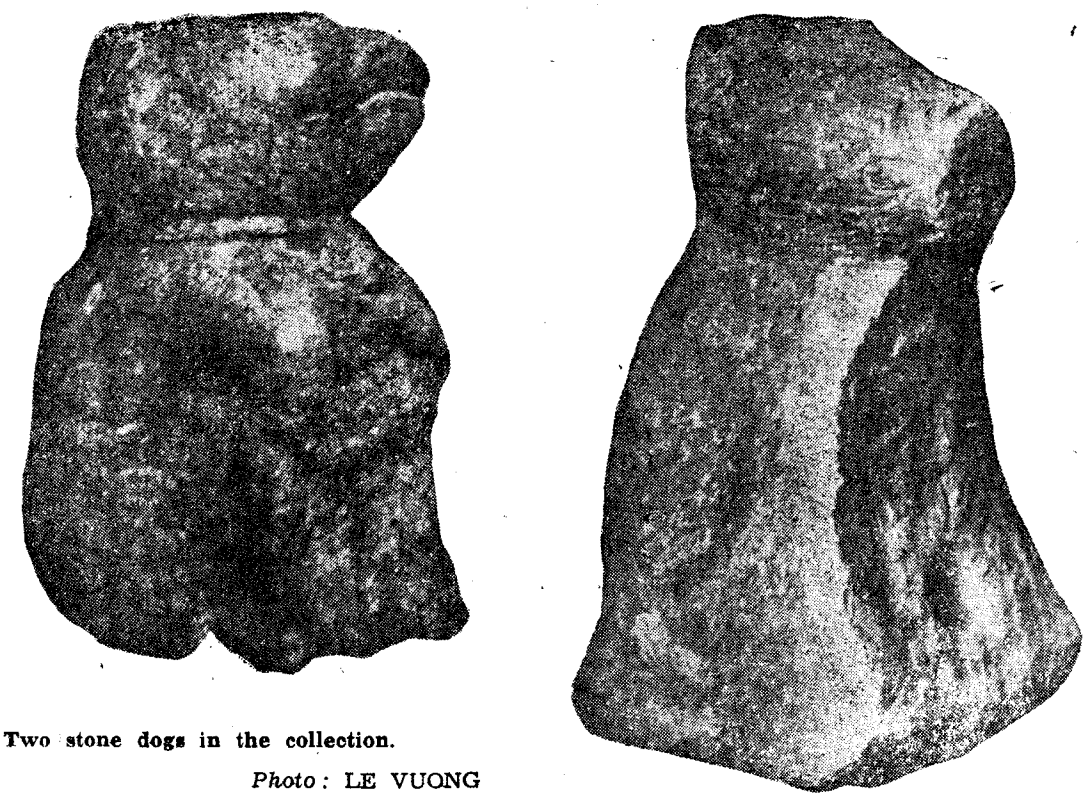
The Hen, the Water Buffalo, the Pig, the Dog and other animals are used to designate years in the Lunar Calendar. Hens and pigs, however, seem to be painter's favourites. They are the main subjects in many Tet paintings. As for dogs, they are treated with condescension. Rarely do they appear in paintings, and then, only as minor subjects.

In architecture and sculpture, the situation is different. Ancient architects had a preference for dogs as decorations. A dog was carved on a brick found at the 16th-century Dau Pagoda in Thuong Tin district, Ha Son Binh province. Folk sculptors, for their part, have bequeathed to posterity a very great number of stone dogs. Many houses in Bac Ninh, Ha Dong, Hoa Binh, Phu Ly and Thanh Hoa are still guarded by a brace of stone dogs at the gate.

Stone dogs also adorn many homes in Hanoi. The most valuable private collection, owned by Nguyen Tu Nghiem, a painter, consists of seven pieces, the biggest, 32cm in height, the smallest, 24cm, placed one on top of another in a group to one side of the house entrance. Made of different materials — black, grey and brown sandstone and white marble — and exquisitely and realistically executed, they do great credit to their creators' ingenuity and artistic sense. One, carved from shiny black sandstone and with a long head, upright ears, big chest and lean haunches, is typical of the rural "Blackie". Another, of marble, is more highly stylized. The head forms a pyramid, the legs and tail another. The neck and shoulders merge almost completely with the head. It looks more like the work of a modern cubist than the homely creation of a folk artist.

Sophisticated or plain, all these quaint sculptures are as endearing as the living native breeds which grace many rural homes. Like the folk paintings of pigs and hens, they are a collector's item.

LUONG KHOI



Two stone dogs in the collection.

Photo: LE VUONG

A 400 YEAR-OLD BUDDHA STATUE

Pham pagoda in Cap Nhat hamlet, Tien Tien commune, Nam Thanh district, Hai Hung province, has long been known for its artistic vestiges. Among the relics found there is a statue of Quan Am Nam Hai (Buddha), particularly precious for the inscription carved on the back of the pedestal and detected by the Department of Research into Ancient Art of the Institute of Fine Arts. The inscription mentions the reign of the ruling king and the names of the artists. Given that no Buddha statues so far found in Vietnam bear a definite date of production, the discovery of this inscription is of paramount importance as it can help assess the date of other statues.

Quan Am statues are found in all pagodas and temples in North Vietnam and are known by the Vietnamese as "one thousand eyes and one thousand arms Quan Am"; this means that Quan Am is a very benevolent person who can see the sufferings of the people and save them from misery. In fact Quan Am is represented in Vietnam as a "woman" and "one thousand eyes and one thousand arms" is only an expression as these numbers may actually be around 1,000 as at the But Thap, Tam Son, Me So pagodas, or some hundred as at Da Tan pagoda (all these pagodas are located in former Bac Ninh province). Often Quan Am statues have only 12 arms. The inscription states: "This statue is erected by the subscription made by 14 persons on a propitious day of the 12th month of the year Nham Ngo, the 5th year of the reign of King Dien Thanh" (a King of the Mac dynasty), that is 1582.

The Quan Am statue at Pham Pagoda, in a sitting position on a wooden board 2 centimetres thick, is 0.78 metres high, the size of a seated Vietnamese woman. According to the rules of carving such a Quan Am statue, the complete work is composed of the statue and its pedestal. The pedestal represents the surface of the sea, the sides of which are either carved with heads of devils or dragons supporting an open lotus flower which serves as a seat for the statue. The pedestal is 0.5 metre high while the height of the pedestal and the statue put together is 1.3 metres.

It is quite difficult to make a life-sized statue and maintain its aesthetic qualities. By observing the figure of a Vietnamese girl, the anonymous 16th-century artists created the statue in the shape of a sturdy handsome country girl: Her oval face has a straight nose, pensive eyes, a smiling mouth, hair in a knot on top of the head and she is wearing earrings. The two main hands are clasped at the breast — maybe the statue originally had 12 arms, but only 9 are now left); the naked arms are slender and adorned with bracelets, the fingers are slim. Though following the rules concerning Buddha statue making of that time, the statue at Pham pagoda resembles a charming Vietnamese woman.

The lotus flower on the pedestal is in full bloom with many petals.

Quan Am statues discovered up to now and thought to be of the 16th century have their dates confirmed by the inscription on the back of the pedestal of the statue of Pham pagoda. Together with other pieces of art and decorations on ancient ceramics, the statue at Pham pagoda confirms the artistic value of Vietnamese sculpture of this period.

CHU QUANG TRU
and TRAN LAM DIEN

DONG KY firecracker festival

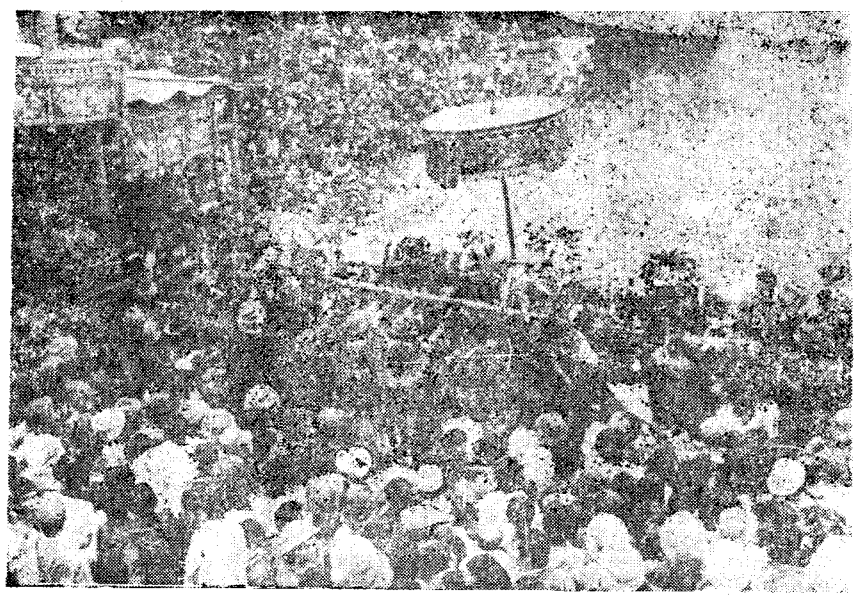
In this Year of the Pig, Lunar New Year's Day falls on February 13, 1983. Here we present one of the Spring festivals of the Red River delta.

From Hanoi, if you go northeast, after about 15 km, across the River Duong, on both sides of National Highway One, you see rich villages with brick walls surrounding tiled houses. That is Kinh Bac as the region was formerly called, a cultural centre of the Vietnamese in the Bac Bo delta, now belonging to Ha Bac province. It was the seat of the Chinese administration during its thousand-year domination beginning in the first century A.D. It was also the cradle of an independent dynasty credited with many contributions to the restoration of national culture in the 11th — 13th centuries : the Ly dynasty. These cultural endeavours have left to this day communal houses, pagodas and temples noted for their size and architecture, whose fame is increased by the festivals which unfolded in their vicinity as cultural centres of the village. One of the festivals known far and wide is the festival of firecrackers in Dong Ky village organized early in Spring each year.

Dong Ky is a big village lying on the banks of River Ngu Huyen Khe, about 3 km from the highway. Besides agriculture its population is engaged in other trades: sawing and woodwork, weaving, bamboo blind-making, etc. Dong Ky craftspeople, who go and work outside their village, are highly regarded for their skill. With its position near big arteries and Hanoi, the village has long served as an intermediary in the exchange of agricultural products between countryside and town, while distributing industrial and handicraft articles to surrounding markets. This explains the relatively better life of the population as compared with other villages despite many years of war.

This also accounts for its fairly rich cultural life. Dong Ky knows how to preserve and treasures its cultural activities, and is proud of its time-honoured habits and customs as symbolized by the yearly festival of firecrackers. Although modified by the passage of time, the festival still reflects the days of yore, the beliefs of the Vietnamese when they first settled in the Red River delta.

As in other Vietnamese villages, the Dong Ky festival is organized through the village *giaps*. These are organizations grouping the males in a village from birth to death, ranked according to their age. Every year each *giap* chooses a man aged 51 called *Mr. Dam* to run its



A scene at the firecracker festival in Dong Ky.

Photo: NGUYEN VAN LONG

affairs throughout the year. The man for the new year takes over from his predecessor on the 20th day of the 12th month (lunar calendar) in a ceremony called "transfer of order". Dong Ky has four *giaps:* Dong (east), Tien (anterior), Doai (west) and Thuong (superior). Upon entering office the four *Mr. Dam* meet to organize the festival.

First of all, they select three families who are to make the big crackers fired in the festival which are called First, Second and Third crackers. The choice imparts honour for those families and their relatives. However, only rich families can apply for the job because it is very costly, sometimes requiring the financial help of all their relatives. Other conditions are that those selected do not violate village rules or are not in mourning for close relatives. The applicants generally exceed the required number and lots have to be drawn. Then three other families are chosen to make three strings of crackers to be fired before the big ones. Besides, those families who wish to make crackers can do so and fire them after the big crackers.

Dong Ky is not a village which specializes in making crackers, therefore it sometimes has to ask people from other villages for help. The job is done in the last days of the 12th month and has to be completed before the new year. The size of the crackers depends upon the capacities of the families, and the difference between the crackers is in their ornamentation — which explains why these are made secretly, away from the eyes of strangers. Some crackers are 1.2m in diameter and 8m in length so that roofs and fences have to be removed to take them outside. The lines of firecrackers are not difficult to make but care has to be taken when linking them to get them to explode without interruption.

So the preparations are made. Right on 0.00 hour on New Year's Day the villagers throng to the communal house. Beside it stands a small temple in honour of the village genie which contains four columns where the four *Mr. Dam* sit during the ceremony. As a rule, each *giap* keeps the *Thai Bach* column (that on the left near the altar) for one year, and the next year the four *Mr. Dam* change places anti-clockwise. The *giap* keeping the *Thai Bach* column presides over the festival. However, before taking their set places the four *Mr. Dam* still have to perform a rite of competing for the *Thai Bach* column. The rite is only symbolic but the legendary atmosphere of the festival unfolding in the flickering light makes it a real contest. Clad in red ceremonial robes and red turbans the four old men grapple with one another in a ceremony called "column-grasping". When one old man manages to grasp the column, the three others try to pull him away with the cheers of their *giap*. Even if their turbans and their robes are undone or they are tired, the four *Mr. Dam* have to wrestle from midnight to dawn. He who holds the column at sunrise is believed to bring luck to his *giap*. And when a peal of gong and drum beating announces the end of the "column-grasping" contest the old men return to their set places. Then begins the ceremony in honour of the village genie to greet the New Year. The first days of the New Year are devoted to family rejoicing. On the morning of the fourth day the festival of firecrackers opens. The families which make the big crackers invite the people of their *giap* to bring the crackers to the main artery of the village. In front of each big cracker stand a palanquin with four carriers. The cracker is put on a bamboo support adorned with red ribbons carried by many men. In the old days they had bare chests and only wore loin-cloths. The crackers are marched according to their order. Opening the procession is a man holding a five-colour flag, followed by four others holding four *giap* flags, green, white, red and black representing east, west, south and north. People go slowly in time with the gong and drum beating while the youths carrying the big crackers now and then jump and shout to the order of the pace setter. As for the crackers outside the competition they are brought in advance to the square in front of the communal house.

The procession should arrive at the communal house at noon. Right on midday a peal of small firecrackers explodes while the big crackers are brought into the communal house square, marched around it from east to west, and carried before the altar. Then the village elders proceed to the ceremony to invite the genie to witness the contest. One hour later, the ceremony ends and the festival of firecrackers begins.

At first, the men responsible for order fire small crackers to keep the spectators away from the square. After that the crackers are fired from small to big, ending with the First cracker. Each time before firing a big cracker, a string of small crackers is fired (which may be 150m long, hung on a high tree or slung on the temple roof, dangled above the square and which can explode for a whole hour). In the past, the big crackers were put in the temple; at the moment of firing they were carried to the river meandering in front of the temple and fired on its bank. Today they are hung on a column erected before the temple. The crackers are very well adorned: the First cracker is wreathed with a paper dragon in relief, the Second with a paper dragon in low relief and the Third with paper stars. The body of the dragon holds the powder and its mouth the fuse. The latter's length is calculated so that he who lights it has enough time to run away — which does not, however, prevent possible accidents. The cracker with a good size, beautiful

ornamentation and particularly the loudest explosion wins the contest. A cracker with no explosion or a low bang spells very bad luck for its maker. After each explosion there is a peal of gong and drum beating while the four *Mr. Dam* stand up and brandish small gongs to chime in. The smell of the powder, the dense smoke and the deafening explosion carry the spectators back to a mythical time and space...

Once the big crackers are fired, youths rush in and carry *Mr. Dam* of their giap three turns around the square anti-clockwise. In tune with gong and drum beating the four *Mr. Dam* flourish their arms about in a *Flower dance* or *Cheer Mr. Dam*. After the procession they are brought to a mat laid in front of the altar. The ceremony goes on with the village elders asking the genie's advice on the contest by drawing lots while in the square crackers continue to be fired amid the people's cheers (the firing may last far into the night and even to the next day).

The festival also unfolds around the communal house with such games as swinging, human-chess and wrestling. On the sixth day people over fifty-one are invited to the communal house for a ceremony to end the festival. Only then does the communal house open its doors for the ceremony to take place in front of the altar in the central hall. The village genie is carried from the temple to the communal house to this effect and carried back to the temple after that.

The rites followed in the Dong Ky festival of firecrakers have been linked to the story of the village genie *Thien Cuong Dai Vuong* worshipped in the temple beside the communal house. He was a legendary general in the Hung Kings period who defeated the *Xich Qui* invaders and contributed to the victory of Genie Giong, a famous legendary personage worshipped in Phu Dong village [1]. The "column-grasping" contest depicts the competition between the unit commanders under the general fighting the enemy. The festival of firecrackers re-enacts the march to the front, ending with the ceremony of victory. All this is written in the village genie's record of feats kept in the communal house. Like most genii records in the villages in Bac Bo (northern Vietnam), this record was written in the 17th century under the Le dynasty to ask the Court for a title for the above-mentioned genie. Undoubtedly these records were the interpretation of the scholars who wrote them.

First of all, there is an anti-clockwise movement of all cycles, that is according to the apparent movement of the sun from east to west: the change of places by the four *Mr. Dam* to keep the pillars of the temple, the procession of the crackers around the communal house square and of the four *Mr. Dam* around it. The prevailing colour, red, is that of the sun for the Vietnamese. However, there is a doubt about the name of *Thai Bach* column: it is a Chinese term for a star rising in the east in the morning and setting in the west in the evening. Have the Vietnamese mistaken or likened *Thai Bach* (Venus) for the sun — a common fact in the adoption of Chinese notion? [2] And the main pillar in the temple may be a vestige of the cosmic pillar receiving the first ray of the sun in the beliefs of South-east Asian peoples. The "column-grasping" contest also reminds us of an agonistic struggle between brothers among the tribes in ancient history. The striking events of the festival are all related to the position of the sun at a given moment: the "column-grasping" contest ends when the sun rises while the festival begins when the sun is at its zenith.

Moreover, ethnologists have found many other rites now fallen into oblivion in Dong Ky. In particular, the procession of linga and yoni accompanied with males and females chanting alternate songs evoking copulation [3]. And what is most striking is that the peripeteias of the festival are linked with sun-worship. It is not fortuitous that all the cycles in the Dong Ky festival are at one with the movements of birds, boats and camouflaged people dancing as engraved on the Dong Son drums which existed in the Red River basin over two thousand years ago. An attendance at popular festivals in the countryside always brings you back to the origins of national culture.

Finally, one point should be mentioned. Powder was invented in China in the 8th century and was not used for military purposes until the 11th century. So powder could not have been introduced into Vietnam, nor Dong Ky, before then. It is possible to visualize a more ancient period when the Dong Ky festival unfolded to the thunderlike repeated beating of bronze drums to pray for propitious weather. Later on, the appearance of firecracker all the more enhances the fecund character of the festival. But what is worthy of note is that Dong Ky has adopted an exogenous factor and assimilated it in the rites of its festival. That attraction of the Dong Ky festival of firecrackers has drawn not only the local villagers but also spectators from afar into the exciting and yet mythical atmosphere of Spring festivals.

THU LINH

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1. The story of Genie Giong is a well-known Vietnamese legendary motif prevailing in the former Kinh Bac region. It tells of a boy who could not speak nor grow, but suddenly turned into a giant to defeat the incoming invaders.

2. This fact is mentioned in Eassays on Vietnamese Civilization, Vietnamese Studies, No. 63.

3. Toan Anh, About Festivals, Nam Chi Tung Thu Publisher, Saigon, 1974.

A folk tale of old Hanoi

THE YOUNG GIRL IN THE PICTURE

It was at the time when one of the suburbs of Hanoi was called "The Blue Stream". It was an idyllic spot—a small canal threaded its way between two rows of willows amidst gardens and flowers.

It was there that the young Tu Uyen came to live in a house of bamboo, far from the noise of the town. He was a student and poet who lived alone, devoting himself to reading and meditation.

One spring afternoon he went to a nearby pagoda to take part in the traditional Flower Festival. At sunset, just as he was about to return home a green leaf with bright red writing on it fell at his feet. Tu Uyen picked it up and found a short verse inviting him to a poetry competition.

Raising his eyes the student saw a young girl smiling at him from the shade of a weeping willow. She was so beautiful that she hardly seemed real. Guessing that it was she who had issued the challenge he improvised a reply. She walked a little way with him along the avenue of the pagoda and then disappeared in a swirl of perfume.

Tu Uyen realised that she was one of those immortals told of in books and that she lived in another world. He returned sadly to his humble abode and fell into a state of deep melancholy. He was obsessed by the idea of meeting the girl he loved again and resolved to look for her.

A year had passed and it was the 15th day of the first lunar month — a propitious day on which to ask the help of the genies. Tu Uyen went to the Temple of the White Horse to consult the oracle. He lit incense sticks, said his prayers and then fell asleep on the dais. A majestic old man appeared to him in a dream and told him laconically, "Come to the East Bridge tomorrow."

Well before dawn the student was waiting at the spot. He waited there until nightfall but nobody came. He was making his way home dejectedly when a passing picture seller offered him a painting for a modest sum. When he saw the picture Tu Uyen was overjoyed for it was a life-size reproduction of the one he was seeking.

The poet hung the picture of his beloved in his room above his desk and spent his time talking to it as though it were a real person. Every morning he brought fresh water and flowers, at each meal two bowls and two pairs of chopsticks, and each evening, in the enveloping smoke of the incense, he would recite love poems to it.

Tu Uyen lived thus for a whole year. One spring evening, when he had recited his latest poem, he saw the young girl smile as she had done at their first meeting. Trembling with emotion he took a step towards her, but just at that moment the smile disappeared. He stood motionless in front of the picture for a long time, thinking that he must have been dreaming.

The next day another strange thing happened. Returning from his studies he found the house cleaner than usual. A meal had been prepared and an intoxicating perfume wafted about his room as though a beautiful woman had just left it. The next morning he pretended to go out, but kept watch nearby. He saw the goddess descend from the picture and comb her long ebony-black hair in front of the mirror. Crying with joy he ran to her and begged her never to leave.

She reassured the young man, saying that he had passed his test. Her name was Giang Kieu and obeying the law of Destiny she had come to earth to acquit herself of a debt of love which she had made in a previous life. With her hairpin she transformed the student's hut into a sumptuous palace where richly dressed servants hurried to and fro. A wedding breakfast was served and fairies descended from the sky on chariots of cloud to wait on the couple.

Tu Uyen lived happily with his celestial bride. From their union a son was born, looking just like him.

He was even more talented than his father and the couple showered him with affection. When he reached the age of reason, Giang Kieu revealed a secret to her husband: the name of Tu Uyen had been inscribed on the Register of Immortals and the couple were soon to leave their earthly paradise.

One fine morning, two pure white cranes came to the palace at Blue Stream. Tu Uyen and Giang Kieu told their son of their imminent departure. He accepted the hand of Destiny but many tears were shed at their farewell.

So the two chosen ones climbed onto their heavenly steeds and the birds flapped their wings and flew away amidst perfume and music.

Adapted by VU CAN

THE LASTING CONSEQUENCES OF CHEMICAL WARFARE

On the occasion of the international symposium on this matter held in Ho Chi Minh City from 14 to 19 January 1983 we publish this dossier which has been compiled by Dr Nguyen Khac Vien from data supplied by Vietnamese biologists and doctors.

In 1961, for the first time in the history of mankind, large-scale chemical warfare was started in South Vietnam by the Kennedy Administration. Massive sprayings of so-called defoliants were carried out by the US Army between 1961 and 1971, mainly in 1967-70, then sprayings were carried on by the Saigon army, on a lesser scale, until 1975.

Here are the estimates of the American biologist Arthur H. Westing:

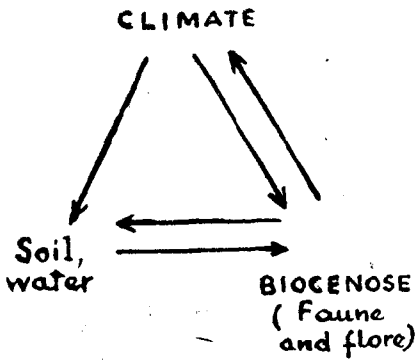
— 44,300 cubic metres, i.e. 57 million kilograms of Agent Orange were used.

— This quantity of Agent Orange means that South Vietnam received 170 kilograms of dioxin.

(*Nature*, London, 298 (5870): 114, 8-7-1982)

American biologists were the first to point to the serious consequences of chemical warfare on the vegetal environment. And as early as 1970, at a scientific conference held in Orsay, France, Vietnamese Professor Ton That Tung laid stress on the mutagenic effect of dioxin on chromosomes, its carcinogenic effect, and posed the problem of the correlation between chemical warfare and the increase in the rate of primitive liver cancer in Vietnam. Chromosomic aberrations were detected in people who had stayed in contaminated regions. Ecological consequences were studied, by American biologists Westing and Pfeiffer in particular, and although thorough surveys were not possible due to wartime conditions long before the war ended, distressing questions were already being asked. The classical diagram

of the "ecological triangle" is well known:



Abruptly changing conditions in the biocenose has an affect on the soil and climate, which will produce changes affecting the fauna and flora and human life.

The consequences of this chain of reactions cannot be predicted. In the long run what are the effects of those massive sprayings of toxic chemicals

— on the natural milieu, the ecological environment of Vietnam ?

— on the health of the Vietnamese population, given the carcinogenic, teratogenic and mutagenic effects of dioxin, at present and in the future ?

For Vietnam the problem assumes an immense importance. And so, in spite of major obstacles — shortage of technical and financial means; difficulties encountered in conducting analyses requiring high technology — Vietnamese biologists and medical doctors have made great efforts in the last few years in studying the lasting consequences of this war in order to lay the groundwork for future large-scale and long-term action.

The accident in Seveso, Italy, and the claims made by American and Australian veterans of the Vietnam war who were subjected to the action of those chemicals have attracted renewed public attention in the West to the problem.

Below are some concrete data on the persisting sequels of that chemical war.

PART ONE

DESTRUCTION OF THE NATURAL ENVIRONMENT

Chemical warfare aimed at

— destroying those areas of forest and brush which could serve as refuges for guerillas: it was the anti-guerilla weapon *par excellence ;*

— destroying food crops and making life impossible for the peasants: defoliation was one of the main elements of the strategy of "forced urbanization" which would empty the rural areas of their inhabitants and strike at the root of national resistance.

The British Major Thompson, who had directed the war against Malay insurgents and later became an adviser for the Pentagon, wrote that guerilla warfare would be impossible in a desert. So turn Vietnam, a tropical country with a luxuriant vegetation, into a desert !

It should not be forgotten that the massive sprayings of chemicals were preceded or accompanied by deluges of bombs and shells, incendiary products, napalm, phosphorus bombs, etc. In the Vietnam war, the Americans dropped 15 million tons of ordnance, that is more than three times the tonnage dropped on all theatres of operations during the Second World War. Two-thirds of the villages and hamlets of South Vietnam were either destroyed or heavily damaged. Ten million people were driven from their native regions to the towns and cities or to regroupment centres.

One must keep in mind this total war in order to grasp the serious effects of the chemical war studied hereinafter.

General data

The most often used defoliant was so-called Agent Orange, which is a butylesteric mixture of 2, 4-D (dichlorophenoxyacetic acid) and 2, 4, 5-T (trichlorophenoxyacetic acid) with a residual substance, TCDD, 2, 3, 7, 8 tetrachloro-dibenzo-para-dioxin, dioxin for short.

Effects on forests

The effects of defoliants are immediate: fall of leaves, drying up of trunks, loss of crops, death of plants, insects, fish and other animals.

Long-term effects:

— erosion of the soil by tropical downpours, aggravated by the disappearance of the foliar cover; impoverishment of the soil in organic matter, nitrogen and other elements; lateritization. Persistence for long years of products resulting from the degradation of defoliants: organic arsenic, chlorophenol, substances harmful to plants and man. As recently as 1981, they were still detected in many soil samples.

— alteration of the vegetal cover through disappearance of natural vegetation which is replaced by a

poorer secondary vegetation. Rich forests are often replaced by a savanna of tough grass (Imperata cylindrica);

— direct action by chemicals or action following bio-degradation, on soil micro-organisms, plants, insects and other animals, leading to considerable modifications in the food chains of various species and compelling some to leave the contaminated areas for good;

— extension of noxious effects far beyond the sprayed areas through the washing away of defoliants and their degradation-related products by running water;

— in the dry season, which lasts many months, the secondary vegetation is highly susceptible to fire following the disappearance of the thick foliage cover protecting the soil. Only grasses with intertwined and resistant rhizomes can survive.

— natural regeneration is impossible and artificial reafforestation has proved in experiments to be very costly and to take a long time.

— leeches, mosquitoes and flies, after completely disappearing, reappear in large numbers. Honeybees are permanently destroyed. Fish, frogs, snakes, and birds quickly vanish; many wildlife species (boars, deer, bears, tigers) die or are forced to leave the area for lack of food, while rodents thrive, hence the outbreak of certain epidemics e.g. **plague**;

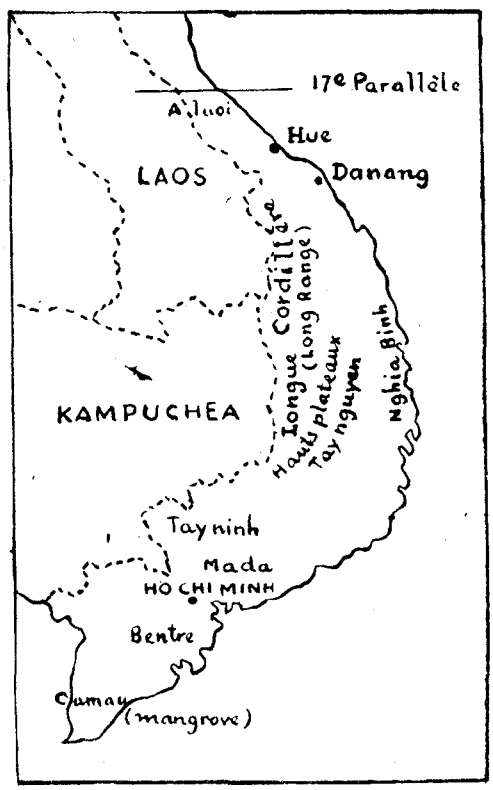
— the disappearance of the vegetal cover over large areas brings about important climatic changes: greater differences in temperature between seasons, between day and night and aggravated evaporation on land stripped of vegetation.

The damp tropical forest, an ecosystem very rich in animal and vegetal species and with a high productivity, usually offers effective resistance to cyclical climatic changes or local perturbations. But chemical warfare, by brutally destroying important factors for equilibrium, often leads to its definitive disappearance when massive sprayings are carried out repeatedly and when the soil shows a steep gradient.

On crops

All vegetal groups are affected, all forms of plantation, and at all stages of growth. Stems, branches, leaves, flowers, fruit lose their colours and become deformed and brittle. Germination and growth are hampered. Finally, the plants wither and die. Effects vary according to the products used, atmospheric conditions, soil qualities, the resistance offered by each species, but because of the high concentrations used during the war — often a hundred times as high as those used in agriculture — all species are affected.

Plants no longer produce fruit; affected fruit and tubers are spoilt and can no longer be consumed. Total nitrogen percentage in rice goes down from 1.16% to 0.98%; in maize from 1.14% to 0.74%. The amount of starch also diminishes, from 60.77% to 57.70% for maize, from 70.98% to 66.21% for rice. In



SOUTH VIETNAM:

Regions where ecological and epidemiological investigations have been conducted.

the tubers of sweet potato and cassava, proteic nitrogen disappears almost completely. Biochemical modifications in fruits are also considerable.

Defoliants affect enzymatic processes, hamper the metabolism of reserve products in fruit and tubers, reduce their nutritive qualities, lessen their resistance to micro-organisms. Substances are formed which taste bad and cause gastro-intestinal disorders. Cattle, pigs and poultry eating contaminated feed are poisoned.

On contaminated soils, seeds cannot sprout for weeks, and for months after, germination is still slowed down or hindered. Some seedlings die soon after germination. After a spraying, there is quick diminution of the number of micro-organisms in the soil. Agent Orange also hampers the growth of fungi of the Aspergillus and Trichoderma groups. Over large areas, the biological population is greatly diminished in both quantity and quality and the ecological equilibrium is destroyed for a long time.

Here are some concrete cases.

The Ma Da forest

This damp tropical forest located 100 kilometres northeast of Ho Chi Minh City covers about 30,000 hectares of rolling hills averaging 120 metres in height and with gentle gradients (less than 15%.) Annual precipitation: 2,185 millimetres. Average temperature: between 23 and 27 degrees Celsius throughout the year. The soil is clayish schist. Given the very sparse population the forest was not subject to exploitation.

This was a rich tropical forest with the dominant canopy made up of Dipterocarpacae which can grow as high as 40 metres and whose trunks can be as much as two metres across. The forest was a three-tiered one which could yield up to 200 cubic metres of timber per hectare. Many wild animals lived there: elephants, tigers, panthers, bears, deer, roe deer, pythons, a wide variety of other snakes, as well as swarms of honeybees. Many species of medicinal plants which could be used in traditional pharmacology grew there.

Massive sprayings of defoliants were conducted between 1967 and 1969 seriously affecting about 5,000 hectares. The Dipterocarpacae and Leguminosae quickly withered. This was immediately followed by a rapid development of Imperata cylindrica and Pennisetum polystachyum grasses. When the dry season came bombardments by artillery and what remained of the underbrush and the shoots of such valuable species as Dalbergia cochinchinensis together with some Sapindacae grown from seeds coming from surrounding areas.

All that remains now is a vast stretch of savanna of Imperata cylindrica and Pennisetum polystachyum with some worthless shrubs.

In less affected areas, many species of the dominant canopy disappeared. Only about 25% remain but their crowns are either gone or attacked by insects and various germs. At present 74% of the Ma Da forest is either savanna, or clusters of degenerate bamboos, or sparse groves of quick-growth species. Valuable species, those bearing latex or oleoresins and with tall foliages, were the first to be affected. Birds and other animals have become quite rare.

Twenty percent of the area could go through a process of natural restoration but the rest must be reafforested. As early as 1978, a State enterprise began working on the savanna tracts planting such forest species as Tectonia grandis, Eucalyptus camaldulensis, Dipterocarpus dyeri... but dry-season fires ravaged the plantations and soil lateritization hampered plant growth. To cope with these difficulties, there has been recourse to a preliminary plantation of Acacia ameura for environmental improvement, but this has proved to be costly in time and money.

The same observations can be made about the former military zones C and D in Song Be and Tay Ninh provinces where large-scale military operations took place mostly between 1965 and 1972 (Operations Cedar Fall and Junction City). Massive sprayings of defoliants were followed by intensive aerial bombings, artillery shellings and the razing of villages and fields by giant bulldozers ("Roman ploughs").

In those regions were high-productivity forest ecosystem, essentially made up of Dipterocarpacae which could grow as high as 80 metres and with a density of 200-300 trees per hectares and of endemic Leguminosae yielding wood for luxury furniture fetching high prices on international markets.

Together with the total destruction of the damp tropical forest and its replacement by a secondary bush with species of little value, or savanna and bamboo thickets, there have also been disastrous hydrological consequences. Because

those forests grew on the slopes of important river basins (Dong Nai, Song Be and Saigon rivers) there has been a worsening of floods and drought for regions in their lower reaches — Ho Chi Minh City and rice-growing provinces in the Mekong delta.

Reafforestation has proved to be a difficult undertaking. Important capital investments have been made to plant rubber on those tracts but judicious and expensive technical arrangements are called for. Experiments have been conducted with a view to recreating a type of multi-tiered damp tropical forest with many species and serving several purposes :

— a canopy of tall Dipterocarpacae ;

— a tier of continuous foliage with Leguminosae ;

— an underbrush for paper pulp and fuel ;

— herbaceous vegetation and medicinal plants.

Experiments have shown that the proper forest environment should first be restored with the planting of nitrogen-fixing Leguminosae (Cassia, Indigofera. Taphosia, Leucanea) on Imperata savanna in particular and on areas stripped of vegetation.

The Ca Mau mangrove forest

One of the favourite targets of chemical warfare was the mangrove forest of the Mekong delta. It grows along the coast on alluvial land bathed by salt water. About 100,000 hectares were affected, of which 45,000 hectares in Ca Mau very seriously. In this region siltation by the Mekong forms new land in a south-western direction, adding about 60 metres each year to the Ca Mau tip.

Vegetation growing on this land helps the silting process. Growing on mud bathed in salt water with little oxygen, the plants form a peculiar ecosystem where a varied fauna lives. Vietnamese biologists have counted 43 different vegetal species not including algae — almost the totality of species living in Southeast Asian mangroves.

The dominant species is Rhizophora spiculata whose prop roots form a kind of scaffolding a few metres high from which the trunk may rise to 20-30 metres. It gives timber for the building of houses, boats, and for joinery and cabinetmaking. Saigon used to be supplied with charcoal made in this region. Tannin is obtained from the bark of the tree. Each hectare yields about 100 cubic metres of timber a year.

The first species to grow on the new land is Avicenna alba, which forms homogeneous forests. Then, as the soil is consolidated, comes Rhizophora which evicts Avicenna and eventually occupies 60-80% of the land. In the shadow of Rhizophora lives Ceriops decandra. Further inland, on the fringe of swamps, the vegetation is more varied.

In this mangrove forest an abundant fauna dwells : tigers, crocodiles, boars, a wide variety of fish, shrimps and birds. The brackish water circulating among the prop roots of Rhizophora and filled with all kinds of rotting vegetal and animal debris is a veritable fishpond. With only rudimentary fishing gear, local fishermen take a 200-kilogram catch each night on an average. Birds, wading birds in particular, live in large groups numbering tens of thousands. Logging, charcoal making, fishing, bird catching, not to mention the collecting of honey from the innumerable beehives of the forest, supplied the local population with comfortable incomes.

With the alluvial deposits the land gains on the sea and the ecosystem is repeated. Inland areas are cleared by man. People live mostly in houses on stilts along the rivers and channels crisscrossing the region.

In spite of the absence of declivity, a high degree of humidity and the ebb and flow of the tide, the massive and repeated sprayings of defoliants had particularly noxious and durable effects. The loss of the vegetal cover worsened erosion by rainwater along the canals, which were silted up. The ecological system was deeply changed.

In the first years, putrefied substances from destroyed leaves and plants accumulated, causing a les-

sening of the oxygen content of water and a sharp diminution of the number of living organisms. A few years later, those products were mineralized and absorbed by living organisms. The environment became cleaner but the number of fish, shrimps and crabs had decreased greatly. In some places the catch was a mere 10-15% of what it used to be. Loss in timber amounted to millions of cubic metres, for Rhizophora alone. The larger animals and birds had decreased considerably in number, or even completely vanished for some species. Soil analyses show large modifications in the content of total nitrogen and in Mg, Fe, Al, Ca cations.

At present, about 30% of the area is still without vegetation — far more than American biologists had thought. Several regions have regained their vegetal cover, but with significant modifications. Those parts that are submerged only by very high tides see their soil hardened and with a higher degree of salinity. Here Rhizophora gives way to Phoenix paludosa. Where the soil is regularly submerged by tidal water, Avicenna alba reappears, followed by Rhizophora which will be dominant in about fifteen years' time. Further inland, both plants are replaced by Ceriops. On those affected tracts extending between untouched forests, from which seeds can come, favourable conditions exist for the natural regeneration of Rhizophora, which by now have risen to 6-10 metres in height on about 10% of the total area. Highlying grounds, formerly covered by such species as Bruguiera parviflora, were exposed to the sun following defoliation and have become very saline. No tree or plant can grow there.

Since liberation in 1975, an intensive programme of regeneration has got under way. Within the space of six years, more than 20,000 hectares of Rhizophora have been revived in Minh Hai province. Work, however, has been hampered by the lack of capital and equipment for many canals have to be dredged or dug, many swamps drained, and a large staff needs to be maintained. At first the population tried to grow soya. For two years, the yields were satisfactory, but the absence of a vegetal cover caused desiccation of the soil with attendant increased salinity. Finally the attempt had to be given up. The main objective remains the artificial regeneration of the mangrove forest and the return of the rich ecological system which characterizes it — a long haul indeed.

The A Luoi region

Lying close to the 17th parallel and Highway 9 in an area which saw fierce fighting, A Luoi suffered greatly from the war. For years bombs, shells and defoliants were poured on this region which straddled roads leading from north to south Vietnam and from Vietnam to Laos. It is a valley 30 kilometres long, 2-6 kilometres wide, at an altitude of 600 metres, a part of the long Truong Son mountain range running west of the whole of central Vietnam. Although precipitation is 3,500 mm. per year, there is a dry season.

Conditions of soil and climate give rise to a rich biocenose which comprises a great variety of animal and vegetal species. The damp, sempervivens, tropical forest includes several tiers: tall trees yielding valuable timber, 20-30 metres high, such as Podocarpus impricatus, Dacrydium pierrei, Dipterocarpus turbinatus, etc. which provide a canopy of foliage and a timber reserve of about 300 cubic metres per hectare. The lower tier is made up of smaller trees such as Calamus rodentum, Dendrocalamus sp... and at the bottom a herbaceous layer.

Now, as a result of 15 years of defoliant spraying the region has a sinister look: bare stumps of the trees which have died, and in their place, stunted brush, herbaceous plants with serrated leaves, proliferous roots and robust rhizomes like Thysanolanae maxima, Miscanthus arundinaceum, 3-4 metres tall; here and there a bushy vegetation of Rhodoirtus tomentosa, Melastoma candidus... Down in the valleys grow shorter grasses, hydrophilic and heat-resistant. As in the case of Ma Da, those species which reappear are those which thrive in light, can endure a harsh cli-

mate and survive in the aftermath of fires. The proliferation of those herbaceous species prevents the regeneration of the others. As elsewhere, the soil thus exposed and washed by abundant rains and subjected to intense evaporation in the dry season undergoes considerable modifications. And as elsewhere, biologists have noted important changes in the mineral and organic contents of the soil (total nitrogen, Fe, Mg, Ca...).

The destruction of the fauna was especially spectacular in A Luoi. There used to live 150 animal species, among them 40 kinds of wild beasts: Panthera tigris, Elephas indicus, Bos gaurus, Neofelis nebulosa... and a large number of deer, monkeys, etc. The streams and ponds teemed with fish and the forests with birds.

Following the sprayings, dead bodies of deer, foxes and wild dogs, which had died from hunger or from poisonous substances were found in the denuded forests. Dead fish, shrimps and other aquatic animals floated on the surface of rivers and ponds.

At present, only 21 kinds of large-sized birds of prey are found there. All have come from other regions and no regional species have survived. There are no fruit or insects to feed the birds. In August 1981, in the midst of summer, a team of researchers working a whole night caught only a few insects belonging to ten different species; in the ponds and rivers they found only three kinds of frogs. Researchers counted 191 kinds of algae, one-third less than previously. One-sixth of the algae collected presented malformations, a much higher proportion than in unaffected regions. The plankton had greatly declined.

Aquatic invertebrates had diminished in both number and variety, especially Mollusca, Rotatoria, Cladocera. No larvae of Chironomidae, Oligochaeta and Potamidae Urionidae were found. There remained very few species of local fish and some had to be brought in from other regions.

In 1981, no sizable mammal of any value was found while in the neighbouring regions, which had not been sprayed, about fifty species were counted: deer, boars, flying squirrels, bears, wild cats... All those species which used to live in the higher tiers of the forest and those feeding on fruit and leaves had died or left. The stunted and herbaceous growth suited only the small rodents, which thrived as a result of the disappearance of the big carnivores, with serious economic consequences and the increased risk of an outbreak of plague.

The local people used to own a large number of cattle (buffaloes and oxen), pigs and also elephants for portage. All of them had disappeared by 1968. In 1975, stock had to be brought in from the North to regenerate the herd. It is estimated that tens of thousands of head of cattle have been lost. The region, which used to sell cattle to others, now has to buy from them.

The regeneration of the flora and and fauna has proved to be well-nigh impossible. At any rate it will call for immense efforts and a very long time.

PART TWO
DIOXIN AND MAN

The problem of the action of chemicals, medicaments, pesticides and industrial products on human health is a burning topic. Many experiments conducted in laboratories and clinical observations have shown that a large number of chemical products have mutagenic, teratogenic and carcinogenic effects. The defoliants used in chemical warfare in Vietnam at exceptionally high concentrations immediately attracted the attention of physicians and biologists to their possible effect on the health of the population.

So long as the war lasted any systematic research in the theatre of operations itself was out of the question. Only some observations were made on people who had lived in contaminated areas in South

Vietnam and suffered various ailments and had been evacuated to the North for medical treatment. As we said earlier in this report, as early as 1970, Vietnamese doctors noted the existence of chromosomic aberrations in expqsed subjects and a disquieting increase in the number of primitive cancer of the liver, congenital malformations and abnormal pregnancies which seemed to be related to defoliant sprayings.

After 1975, more thorough surveys, especially from the epidemiological point of view, were conducted in the South as well as the North, on people having lived in sprayed areas in the South and on people from the North who had lived or fought in those regions during the war and had later returned home. Check groups in both North and South, composed of people who had never been exposed to defoliants or other chemicals such as pesticides or to various radiations, helped control the results. This was difficult research work which called for sophisticated techniques and abundant material if significant results were to be gathered. This means that the research work so far conducted in a country which has suffered from decades of war must be carried on with ever closer international cooperation. The results collected so far, however, have great value for the facts observed are often significant enough for relatively well-founded conclusions to be drawn from them.

We shall give below the results of studies conducted in the following fields:

— The mutagenic effects of defoliants (dioxin);

— The teratogenic effects: abnormal pregnancies, malformations;

— The carcinogenic effects;

— Effects on general pathology.

Chromosomic alterations

It was in the Hematology Department of Bach Mai Hospital in Hanoi (the laboratory was destroyed by American bombs in late 1972) that chromosomic alterations were detected for the first time in subjects having stayed for a long time in defoliant-sprayed regions. The study was resumed on a larger scale after 1975 and confirmed the results obtained. Research was conducted in various areas of South Vietnam (Quang Nam, Nghia Binh, Ben Tre, Dong Nai) on direct victims of sprayings or on children born of mothers having lived in sprayed regions. Check groups included people living in areas in the South with similar ecological conditions but not affected by sprayings, and people living in the North.

It is known that chromosomic anomalies are provoked by radiation and some chemicals. A report by Dr Bach Quoc Tuyen, a hematologist, says:

"The study of caryotypes (chromosomic dispositions) of affected people shows a very statistically significant rate of anomalies... Besides simple and double breaks, rings, minuscule chromosomes, di-centrics, di-tri-quadri-radial figures have also been observed quite frequently. The anomalies detected present similarities with those observed among people and animals that have been irradiated...

Can defoliants induce lesions in sexual chromosomes and cause them to be transmitted to future generations? Research we have conducted on children born of mothers who had been subjected to sprayings of defoliants long before their pregnancies also shows chromosomic anomalies at statistically significant rates. So far we have not been able to carry out experimental studies on this aspect of the problem of herbicides in the South. But our hypothesis seems to be upheld by the frequency of spontaneous miscarriages and congenital malformations of the kind observed among mothers who have been subjected to radiation or have been using some chemical drugs. Chromosomic aberrations have been found by authors in the majority of aborted foetuses. So there is good reason to think that defoliants not only have noxious effects on the present generation but also present dangerous consequences for future generations."

In subjects living in the South, Cung Binh Trung also found quantitative chromosomic alterations:

the number of altered cells, of cells with more or fewer than 46 chromosomes, of polyploid cells is far superior to the figures found in check groups. He also found morphological and structural alterations in chromosomes: gaps, breaks, translation, rings. Similar alterations may be observed in normal subjects but here the frequency of the alterations had increased in a statistically significant manner.

The same author also observed an increased frequency of exchanges of chromatids between two chromosomes, with formation of "four-rayed strands" or "cross-shaped" ones in mother-cells, this frequency being twenty times that found in the check group. As in the case of Hiroshima survivors, the persistence of chromosomic alterations long after the event is a serious danger: the existence of abnormal cells is often the harbinger of cancer or leukemia. Chromosomic alterations in the course of foetal development may bring about miscarriages, foetal death or congenital malformations. These alterations in reproductive cells may be transmitted to future generations.

Abnormal pregnancies — Congenital malformations

Epidemiological studies on the frequency of abnormal pregnancies and congenital malformations confirm the hypothesis of the genetic transmission of mutagenic effects of deloliants.

This disturbing frequency was quickly noted by Vietnamese doctors soon after the first defoliant sprayings but systematic studies were only possible after 1975. Here are the results of some of those surveys.

A comparative study was conducted by Dr Ngoc Phuong on three groups:

— in Thanh Phong village, Ben Tre province, in the Mekong delta — a heavily affected locality;

— in the 10th district of Ho Chi Minh City, not directly affected; one group was composed of never-exposed parents and another of parents coming from affected areas.

Frequency rate	Thanh Phong Exposed subjects	10th district	
		Exposed	Not affected
Congenital anomalies	6.49%	16.33%	2.58%
Death in utero	4.72%	1.02%	0.18%
Natural abortion	47.02%	50.00%	21.65%
Molar pregnancy(1)	10.65%	11.22%	2.30%

(1) Degenerescence of the chorion in the form of a cyst.

When these figures are compared with the data obtained in an area of the northern delta, not affected by defoliants, we have these results:

Frequency rate	Thanh Phong (South)	My Van (North)
Congenital anomalies	6.49 %	0.45 %
Death in utero	4.72 %	1.91 %
Natural abortion	47.03 %	5.77 %
Molar pregnancy	10.65 %	0.09 %

In several villages of Giong Trom district, also in Ben Tre province, comparison was made between data obtained before the sprayings with those obtained after them and with data from non-affected villages. It was noted that the rate of spontaneous abortions increased after the sprayings and remained high several years later, compared with non-affected villages. So did the frequency of congenital malforma-

tions. The same observations were made at the polyclinic in Tay Ninh city on parturient women and patients from a province greatly affected by chemical warfare.

At the obstretric-gynecological clinic of Ho Chi Minh City (former Tu Du hospital) where treatment is given not only to patients residing in the city but also to a large number of difficult or abnormal cases from all provinces of South Vietnam, retrospective research has been conducted on abnormal pregnancies and malformations as far back as 1952 relying on periodical hospital reports and doctoral dissertations. It has been noted that the rate of natural abortions, which was 0.45% in 1952, shot up to 14.58% in 1967, reaching a peak of 18.14% in 1978, then went down to 10.09% in 1981. The rate of molar pregnancies and chorioepitheliomas (malignant degenerescence of the chorion), 0.78% in 1952, increased steadily after 1960 reaching a peak of 4.19% in 1981. The increase in the frequency of congenital anomalies is less noticeable, yet differences are statistically significant. The rate of abnormal pregnancies and congenital malformations is visibly higher than that found in other countries of Southeast Asia with similar natural and social conditions (Tu Du hospital: 4.6%; Southeast Asia: 0.5%). Figures obtained in North Vietnam are also clearly lower.

In the same hospital, in surveys of subjects exposed to defoliants, a high rate of molar pregnancies, chorioepitheliomas and malformations was noted. In the North, comparative studies were made of figures obtained from parents having lived in affected regions in the South — combatants who returned home in particular — and those from the non-affected local population. For the town of Yen Bai and the village of Quy Mong, the following data were obtained:

1975 – 78	Yen Bai	Quy Mong
Local population	35,000	4,500
Former combatants	700	30
Malformations in local population	15	0
Malformations in groups of combatants	15	9

The malformations observed went from simple anencephalia to that associated with other defects: absence of nose, eyes, ears, harelips, shortened limbs; from simple hydrocephalus to associated hydrocephalus; from syndactylism to the absence of some body parts: forearm, upper jaw, abdominal wall... There was also close connection between the frequency of those anomalies and the particular regions where the combatants had lived, which were affected by chemical war to a varying extent.

All studies, conducted either in the South or the North and in many localities, tallied: chemical warfare led to a visible increase in the rate of abnormal pregnancies and congenital malformations in the affected areas, and this action persisted long after the defoliant sprayings.

Carcinogenic effects — Effects on general pathology

In 1973 Professor Ton That Tung remarked that the frequency of primitive cancer of the liver (PCL) had visibly increased over the past few years. At the Vietnam-GDR Friendship Hospital in Hanoi there were recorded

— from 1955 to 1961, 159 PCL cases out of a total of 5,492 cancer cases;

— from 1962 to 1968, 791 PCL cases out of a total of 7,911 cancer cases.

PCL incidence had thus increased from 2.89% to 9.07%.

Since then a survey has been conducted in order to find the relationship between this rising PCL incidence and the start of chemical war. Many experiments have indeed highlighted the carcinogenic effect of dioxin at infinitesimal doses (especially experiments on rats conducted for the firm Dow Chemical).

The cancer research group (CRG) of the agency for the protection of the environment holds that the carcinogenic effect of dioxin is several times superior to that of other chemicals such as aflatoxin.

Studies made over the last few years in Vietnam have shown that PCL incidence is five times higher in subjects exposed to defoliant sprayings than in non-exposed subjects. No definitive conclusions have so far been drawn by Vietnamese doctors because of the limited number of cases studied.

However, there is strong reason to think that dioxin is a possible cause of liver cancer. More studies are being undertaken to clarify the problem.

Epidemiological surveys conducted in seriously affected localities in Ben Tre province (South Vietnam) have shown, by comparing results with those obtained in non-affected areas, the long-term noxious effects of defoliants on general human health. The following data have been noted:

Ailments	Exposed group	Non-exposed group
Gastro-duodenal disorders (including ulcers)	12.50%	5.5%
Chronic hepatitis	6.6 %	0.5%
Neurosis, neurasthenia	12.5 %	3.5%
Bucco-dental ailments	8.9 %	2 %

It is clear that the destruction of the environment leading to precarious living conditions and the stress weighing on the people living in areas subjected to repeated bombings, shellings and defoliant sprayings lie behind the bad health conditions prevailing in those regions. There remain to be elucidated the direct cause-effect links between the various chemicals and the symptoms and disorders observed.

* * *

Chemical warfare conducted on a large scale and over long years in Vietnam has led to both immediate and persistent consequences that are extremely serious for both the natural environment and for man. Vietnam now confronts problems on a vast scale. In order to solve scientific and practical problems arising in the fields of economy and health, it needs considerable technical and financial means. Effective international assistance and cooperation are indispensable.

NEW AND IMPORTANT...

(continued from page 9)

security not only of the nations on that continent but of other nations as well. That is why the proposal of the Prague meeting on the signing of a treaty on the mutual non-use of military force and the maintenance of relations of peace between the two organizations assumes a particularly important significance. This is a judicious, necessary and urgent proposal. Its materialization would be no small an achievement which would establish mutual trust, promote the process of detente and open the way for checking the arms race and step by step achieving disarmament. The NATO countries cannot elude this proposal as well as other proposals put forward by the Prague meeting. To refrain from the use of force against each other, to conduct dialogues, and to hold talks aimed at reaching agreements on step-by-step implementation of the disarmament program and resolution of complicated international issues, that is the most correct way of meeting the demands of common sense and the aspirations of the whole of mankind.

NHAN DAN
January 8, 1983

CHRONOLOGY

(December 16, 1982 — January 15, 1983)

DECEMBER 1982

16. Vietnamese Foreign Minister Nguyen Co Thach pays an official visit to India and attends the first session of the Vietnam — India Joint Commission for Economic, Scientific and Technological Cooperation.

— A symposium is held in Ho Chi Minh City by the Organization of Post and Communication Cooperation of the socialist countries.

— A seminar is held in Ho Chi Minh City on meteorology and hydrology of Vietnam, Laos, and Kampuchea.

17. Signing in Budapest of an agreement on scientific and technological cooperation between Hungary and Vietnam.

— The State Commission for Science and Technology holds a conference to review the implementation of key State programmes on scientific and technological improvement for the period 1981 — 1985.

— Signing in Hanoi of an agreement on Friendship and Cooperation between the Vietnam Committee for Solidarity and Friendship with Other Peoples and the Cuban Committee for Solidarity with Vietnam.

18. A Vietnamese Party and State delegation, led by Le Duan, General Secretary of the Communist Party of Vietnam Central Committee, left Hanoi to attend the 60th anniversary of the USSR.

— Signing in New Delhi of an agreement on economic, scientific and technological cooperation between Vietnam and India.

— Holding in Hanoi of the first conference on geography — more than 70 papers were read.

20. Founding of the Vietnam — Poland Friendship Association.

22. A delegation of the Bulgarian Chamber of Commerce and Industry pays a visit to Vietnam.

23. A high-ranking Vietnamese military delegation ends its visit to India.

24. A delegation of the Vietnamese Ministry of Public Health ends its visit to Burma begun on December 18.

— Signing in Hanoi of a protocol on goods exchanges and payment for 1983 between Vietnam and Cuba.

25. A delegation of the Belgian Communist Party pays a visit to Vietnam.

— Signing in Hanoi of a protocol on goods exchanges and payment for 1983 between Vietnam and Laos.

27. A high-ranking delegation of the People's Republic of Kampuchea ends its friendship visit to Vietnam.

28. Holding of the fourth session of the National Assembly of the Socialist Republic of Vietnam, 7th Legislature, from December 20 to 28 to adopt:

— the reports on the implemention of the 1982 State plan and on the decision of the State plan and State budget for 1983, and the orientation to be followed until 1985.

— the section on "generalities" of the criminal law.

30. Vietnam returns to Thailand 63 Thais captured while illegally intruding into Vietnamese territory.

31. A Trade Union delegation of India ends its friendship visit to Vietnam begun on December 24.

JANUARY 1983

4. *VNA* rejects the news reported by the *Bangkok Post* that Vietnamese troops in Kampuchea fired artillery shells on Thai territory killing a number of Thai civilians.

7. The Vietnamese Foreign Ministry demands that Thailand stop its exploration for oil and gas in the area belonging to the Vietnamese continental shelf.

8. Ending of a session of the Political Bureau of the Communist Party of Vietnam to discuss the work on Hanoi Capital begun on 4 January. The session appreciated the achievements and progress made by the Hanoi Party Committee and people, and at the same time pointed out their shortcomings and weaknesses.

9. The juridical branch holds a conference to review the work in 1982 and discuss the orientation and tasks for the three coming years 1983 — 1985.

10. Deputy Foreign Minister Vo Dong Giang leaves for Managua to attend a conference of the Coordinating Bureau of the Non-Aligned Movement.

11. Vietnamese Minister of Foreign Trade Le Khac ends his visit to Burma begun on January 8.

12. Completion of the first phase of the blocking of the Da river for the construction of the Hoa Binh hydro-electric plant (with a generating capacity of 1,920,000kW).

14. Opening in Vientiane of the 16th session of the Mekong Interim Committee of the three Indochinese countries Vietnam, Laos and Kampuchea.

— A delegation from Thailand headed by Siphanom Vichivorasan, deputy to the National Legislative Assembly, pays a friendship visit to Vietnam.

— Opening in Ho Chi Minh City of an international symposium on the consequences of US chemical warfare in South Vietnam with the participation of 140 scientists from 20 countries.

IN THE FRUIT-TREE GARDENS

Jack fruits in a garden of the Red River delta.

Rambutans in western Nam Bo.

Mangoes in the Mekong River delta.

Photos : VNA

US CHEMICAL WARFARE IN SOUTH VIETNAM

Chemical weapons used by the US army during the US war of aggression in South Vietnam.

Ca Mau mangrove forest devastated by US toxic chemicals.

Deformed children born in sprayed areas being treated in Ho Chi Minh City.

Photos : VNA

Vietnam courier

НОВОСТИ ВЬЕТНАМА

Le courrier du Vietnam

El Correo de Vietnam

Báo đối ngoại **TIN VIỆT NAM**

Ra hàng tháng bằng các ngữ Anh, Pháp, Nga, Tây ban nha

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