

Archival sources of the Government of the Republic of Vietnam at National Archives Center II on chemical defoliants during the Vietnam War

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Abstract

National Archives Center II currently preserves a large body of records created in the course of the activities of agencies of the Government of the Republic of Vietnam between 1954 and 1975. Among these holdings are files and records related to the wartime use of chemical defoliants, damage to crops and agricultural production, environmental and health concerns, compensation activities, and processes of scientific research and exchange concerning the effects of these chemicals. Based on a survey of finding aids and selected representative fonds at the Center, this article preliminarily identifies, introduces, and systematizes groups of records related to this topic, while placing them within the broader context of the Republic of Vietnam-era holdings preserved at National Archives Center II. The article also examines the accessibility and use of these sources through the reading room, electronic finding aids, and digitized archival records. Identifying these sources adds a layer of evidence created in South Vietnam during the war itself and provides a further basis for research on the use of chemical defoliants and their recorded effects on crops, agricultural production, the environment, and social life during the Vietnam War.

Keywords: archival records; Republic of Vietnam; chemical defoliants; Vietnam War; consequences of war; National Archives Center II.

I. Overview of National Archives Center II

National Archives Center II is a public service unit under the State Records and Archives Department of Vietnam and is headquartered in Ho Chi Minh City. The Center is responsible for directly managing and carrying out archival activities for records within its jurisdiction in southern Vietnam (National Archives Center II, n.d.). According to the Guide to Fonds and Archival Collections Preserved at National Archives Center II, the Center holds more than 14,000 linear meters of records created across different historical periods. Its holdings are diverse and include Han-Nom land registers of southern Vietnam from 1819 to 1918; records from the French colonial period in Cochinchina; records of agencies and organizations operating in southern Vietnam from 1946 to 1954; records from the Republic of Vietnam period, 1954–1975; records of the Provisional Revolutionary Government of the Republic of South Vietnam and revolutionary organizations before 1975; and records of central agencies and organizations of the Socialist Republic of Vietnam operating in southern Vietnam (National Archives Center II, 2016).

Among the bodies of records preserved at the Center, those created in the course of the activities of agencies of the Government of the Republic of Vietnam during 1954–1975 are substantial in volume and diverse in type and content. They document many aspects of political, military, economic, social, and governmental life in South Vietnam during the war (National Archives Center II, 2016). These holdings are particularly significant for this article because some files were created during the period when chemical defoliants were used and document issues related to their use, effects, and study.

II. Republic of Vietnam-Era Records (1954–1975)

National Archives Center II currently preserves nearly 100 archival fonds comprising approximately 8,000 linear meters of records created in the course of the activities of agencies of the Government of the Republic of Vietnam during 1954–1975. These holdings are diverse in form, including administrative records, scientific and technical records, and audiovisual records. Their content covers many aspects of political, military, security, diplomatic, economic, financial, cultural, social, health, and educational life in South Vietnam during the war (National Archives Center II, 2016).

2.1. Administrative Records

Administrative records constitute the largest proportion of the Republic of Vietnam-era holdings. The fonds were created by numerous central and specialized agencies, including the Office of the Prime Minister of the Republic of Vietnam, the Office of the President of the First Republic, the Office of the President of the Second Republic, the United States Agency for International Development (USAID), the Security and Development Council, the Ministry of Health, the Directorate of Fisheries, the Directorate of Agriculture, and other agencies (National Archives Center II, 2016).

The Office of the Prime Minister of the Republic of Vietnam Fonds comprises more than 1,000 linear meters of records created during 1954–1975. The records are primarily in Vietnamese, with additional materials in English, French, and several other languages. They document government activities across such fields as internal affairs, military affairs, security, politics, justice, foreign relations, economics, finance, and culture and society. Of particular relevance, the records concerning the economy and natural-resource management include files on aid, resource exploitation, irrigation, forest clearance and land improvement, the development of resettlement areas and plantations, cultivation, and livestock production. The Office of the President of the First Republic Fonds, created during 1955–1963, comprises approximately 460 linear meters of records. Its contents provide relatively comprehensive documentation of government activities in administrative, military, security, political, economic, and social fields. The files include reports, memoranda, maps, bulletins, and documents from various ministries, agencies, and local authorities in South Vietnam (National Archives Center II, 2016).

Other fonds document transitional periods and changing structures of political authority during the war, including the Revolutionary Military Council Fonds (1963–1965), the National Leadership Committee Fonds (1965–1967), and the Office of the President of the Second Republic Fonds (1967–1975). These fonds contain records on governmental organization, military and security conditions, the activities of state agencies, relations with the United States and other countries, and a range of economic and social issues in South Vietnam (National Archives Center II, 2016).

The diversity of creating agencies and subjects documented enables these administrative records to provide multiple perspectives on the activities of the Government of the Republic of Vietnam during the war. They are also the most important group of records for this article, because files related to the use of chemical defoliants and their effects have been identified primarily within these administrative fonds.

2.2. Scientific and Technical Records

In addition to administrative records, National Archives Center II preserves a substantial body of scientific and technical records, consisting mainly of map collections created between 1862 and 1975. The Center holds 23,296 maps, of which 17,244 date from the Republic of Vietnam period. These include administrative and military maps, road and waterway transportation maps, agricultural and fisheries maps, and records relating to construction, bridges, and roads. For research on war and the environment, these maps may provide spatial references concerning place names, land use, transportation, and agricultural activities during the same period. However, the specific potential of these maps for comparison with records on chemical defoliation activities requires further investigation at the level of individual maps and files (National Archives Center II, 2016).

2.3. Audiovisual Records

The audiovisual holdings at National Archives Center II include photographs, audio recordings, video recordings, phonograph records, and some microfilm created before 1975. Their content primarily documents activities of the Government of the Republic of Vietnam, including inspection tours and other activities of senior officials. The Center currently preserves collections of microfilm, audio recordings, video, photographs, and phonograph records from different periods. Although administrative records remain the primary sources for this study, the presence of maps, photographs, and other audiovisual materials points to opportunities to extend research through supplementary sources. Combining different record types may help place administrative files within more specific spatial and historical contexts (National Archives Center II, 2016).

III. Archival Records on the Use of Chemical Defoliants and Their Impacts during the Vietnam War

Based on a survey of finding aids and selected representative files at National Archives Center II, the authors found that the number of files with content directly related to the use of chemical defoliants is not large in comparison with the Center's overall Republic of Vietnam-era holdings. Nevertheless, the identified files are significant because most were created during the war itself and document the use of defoliants, recorded effects on crops and agricultural production, concerns about the environment and people, the assessment of damage and provision of assistance, and processes of scientific research and exchange concerning the effects of these chemicals. Because they were created during or close to the events they document, these records provide evidence of how agencies, organizations, and individuals in South Vietnam recorded and addressed these issues in their contemporary context.

Based on their content and context of creation, the records can be provisionally divided into four main groups:

3.1. Records on Chemical Defoliation Operations and Early Observations of Their Effects

One group of records documents the organization and monitoring of, and proposals for, chemical defoliation activities during the early years of the war. Of particular note is a submission memorandum dated January 24, 1962, reporting on an inspection conducted on January 22 concerning the effects of chemicals on vegetation along Route 15 and adjacent areas. The document states that a team from the General Staff, with the participation of personnel from Committee 202, directly inspected areas that had been sprayed. At the designated spray targets, many trees had turned dark yellow or dried out; in nearby areas, certain fruit trees, climbing plants, and crops were also recorded as affected (National Archives Center II, Office of the President of the First Republic Fonds, File 8111; see Appendix, Figure 1). These observations date from the early phase of the

military herbicide program in South Vietnam, a program that previous studies have reconstructed using U.S. military records and data (Stellman et al., 2003; Young, 2009).

The document records not only the effects on vegetation but also the responses of local residents and the government to the resulting damage. The report refers to a compensation claim by a rubber plantation owner and proposes assistance for several families living along Route 15 whose gardens had been damaged (National Archives Center II, Office of the President of the First Republic Fonds, File 8111). This indicates that, even at an early stage, the use of chemical defoliants was viewed not only as an operational activity but also as an activity that raised issues concerning effects beyond the target area and responses to damage experienced by local residents. In addition, the Center's file list identifies File 7583 in the Office of the President of the First Republic Fonds, which concerns a 1962 request by Binh Tuy Province to conduct chemical defoliation and deploy additional forces to maintain security in the province. This source suggests scope for further research into how chemical defoliation was proposed, approved, and organized at the local level; however, the specific contents of the file require direct examination before more detailed conclusions can be drawn (National Archives Center II, Office of the President of the First Republic Fonds, File 7583).

3.2. Records on Damage to Crops and Agricultural Production and on Compensation

A second group of sources contains relatively clear information on damage to crops and agricultural production. In a file concerning rubber plantations, a French-language document reports that rubber leaves turned yellow and gradually fell after the plantation area was sprayed with chemical defoliants from the air. The document states that production in parts of the plantation was affected and expresses concern about further damage if chemical spraying continued (National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 23305; see Appendix, Figure 2).

Other records in this group show that damage was not limited to rubber trees. A file on the use and effects of chemical defoliants during 1967–1971 addresses their effects on rubber, crops, and fruit trees. The records describe 2,4-D and 2,4,5-T, their effects on plant growth, and cases of defoliation, stem desiccation, and reduced tapping potential in heavily affected rubber trees (National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 25488).

Notably, the same file contains a document marked "Secret" and "Urgent" that refers to sodium cacodylate and dimethylarsinic acid (cacodylic acid), together with 2,4-D and 2,4,5-T. Sodium cacodylate and cacodylic acid are organic arsenic compounds associated with Agent Blue (Young, 2009). The archival document also recommends restricting or suspending certain defoliants because of concerns about possible adverse effects on people, livestock, soil, and crops in adjacent areas (National Archives Center II, Office of the

Prime Minister of the Republic of Vietnam Fonds, File 25488; see Appendix, Figures 3a–3b)

In addition to the files directly examined, the existing file list identifies records concerning compensation for property owners whose crops were damaged by chemical defoliants and records concerning assistance to residents affected by defoliation activities. The existence of these files indicates that the effects of chemical defoliants had become an administrative and economic matter requiring consideration by contemporary authorities, rather than solely a military or technical matter (National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 16826; Security and Development Council Fonds, File 303).

3.3. Records on Dioxin, the Environment, and Fisheries

Beyond damage to crops and agricultural production, some files also document concerns about environmental contamination and food safety. A notable example is a 1973 file containing information on dioxin in fish and shrimp in Vietnam. One document in the file refers to research by Matthew Meselson and Robert Baughman of Harvard University on the detection and quantification of dioxin in fish and shrimp samples from the Dong Nai River basin and links the issue to Agent Orange (National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 27092). Baughman and Meselson's (1973) publication, which describes a method for detecting TCDD and reports their analysis of samples from Vietnam, provides an important scientific source against which the information recorded in the file can be compared.

The issue quickly extended beyond science to administration and trade. The records document concern about possible effects on Vietnam's seafood exports, testing of certain shipments by Japanese authorities, and a request to collect additional fish and shrimp samples in Vietnam for analysis at Harvard University (National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 27092; see Appendix, Figure 4).

The value of this file does not lie in independently confirming the level of dioxin contamination. More importantly, it shows how an emerging scientific finding was received within the administrative system and translated into matters requiring further examination and action. It also illustrates how records at National Archives Center II can be used to study the process through which an environmental risk was recognized and elicited an administrative response during the war.

3.4. Records on Scientific Research and International Exchange

The fourth group of records documents scientific research and international exchange concerning the effects of chemical defoliants. Several files show that Vietnamese scientists participated directly in scientific discussions and assessments held in the United States. In May 1973, the International Affairs Directorate submitted a proposal concerning Professors Le Van Thoi and Pham Hoang Ho's participation in a meeting of the Committee on the Effects of Herbicides in Vietnam in Washington, D.C., held on June 9–11, 1973.

Records in the same file indicate that the two scientists subsequently participated in another Committee meeting in Washington on July 11–13, 1973 (National Archives Center II, International Affairs Directorate Fonds, File 2255; see Appendix, Figures 5a–5b). These activities took place within the broader National Academy of Sciences program to study the effects of herbicides in South Vietnam, the principal findings of which were synthesized in a 1974 report (National Research Council, 1974).

In his report dated July 23, 1973, Pham Hoang Ho noted that the Committee had reviewed most of an approximately 200-page synthesis report, building on work considered at the June meeting, while some issues concerning forest and ecological damage remained contested. The report also recorded preliminary information provided by Matthew Meselson concerning the quantification of dioxin in fish caught at Tan Uyen in 1973, while analysis of shrimp samples was still underway. Comparison of these points with Baughman and Meselson's (1973) publication and the National Research Council's (1974) report demonstrates the potential to connect archival sources in Vietnam with contemporary scientific sources in the United States (see Appendix, Figures 5a–5b).

The file list at National Archives Center II also identifies a relatively continuous sequence of activities from 1971 to 1973, including a workshop of the committee studying the effects of herbicides in Vietnam in Puerto Rico, conferences on the effects of herbicides on plants, committee meetings in the United States, and files concerning the participation of Le Van Thoi and Pham Hoang Ho. Within the scope of this article, these files are treated only as a group of sources; fully reconstructing the network of scientists, the circulation of research findings, and the relationships between Vietnamese and U.S. sources will require further investigation (National Archives Center II, International Affairs Directorate Fonds, Files 1705, 1941, 1943, and 2255; Office of the Prime Minister of the Republic of Vietnam Fonds, Files 8153 and 31161).

Overall, the files surveyed reveal a sequence of issues extending from spraying operations and damage to crops and agricultural production to compensation, environmental and dioxin concerns, and scientific research and international exchange. Although the number of specialized files identified to date is not large, their contemporaneous nature, contexts of creation, and diversity of record-creating actors make them particularly valuable for reconstructing how the issue was recorded and addressed during the war.

IV. Accessibility and Use of the Archival Sources

As a state historical archive, National Archives Center II serves users through its reading room, electronic finding aids, and forms of digital access. Under current regulations, archival records in historical archives may be used in three principal ways: on-site consultation in the reading room, online use, and the provision of archival copies (Ministry of Home Affairs, 2025).

4.1. On-Site Use in the Reading Room

The reading room remains an important means for researchers to access records at National Archives Center II. Between 2015 and 2025, the Center recorded 27,680 reader visits, made 94,530 archival units available for use, and produced 433,585 pages of copies. During the same period, the Center's holdings were used for hundreds of dissertations and theses and for numerous research and publication projects on Vietnamese history (National Archives Center II, 2025). For the topic examined in this article, on-site research is particularly important because many files related to chemical defoliants cannot be fully identified from file titles alone. A file may contain multiple types of documents created by different agencies, while content concerning chemical use, impacts on people, crop damage, compensation, or scientific research may appear only in particular documents. Direct examination of files therefore helps researchers identify not only their contents but also their contexts of creation, the circulation of documents, approval annotations, and relationships among the agencies involved in addressing the issue.

4.2. Digitization and Online Search

Alongside traditional forms of access, National Archives Center II has gradually introduced technology into the search for and provision of archival records. File-level descriptive data have been incorporated into a search system; users can search by keyword and, for digitized records, consult digital copies through the Center's service system. This has expanded the ways in which records can be searched and used at the Center (National Archives Center II, 2016). More broadly, digitized records and descriptive information are gradually being integrated into the National Archival Data Portal, which supports searches by keyword, fonds, file list, and holding institution (State Records and Archives Department of Vietnam, n.d.). Under Circular No. 06/2025/TT-BNV, historical archives issue accounts to users for online access to archival records; where records have been digitized, users may consult digital copies (Ministry of Home Affairs, 2025).

For the topic of this article, however, discoverability still depends substantially on how records are described. The language used in Republic of Vietnam-era files does not always correspond to terminology commonly used today. Records may be described using terms such as "*defoliant/thuốc khai quang*," "*chemical defoliant/hóa chất khai quang*," "*effects of defoliants/ảnh hưởng chất khai quang*," "*crop damage/thiệt hại hoa màu*," "*rubber/cao su*," "*dioxin*" (written as "*dioxine*" in some files), or "*fish and shrimp/cá tôm*," as well as by the names of relevant agencies, committees, and scientists, rather than by current terms such as "*Agent Orange*" or the Vietnamese term "*chất độc da cam*." Expanding the range of search terms and understanding the historical context of the creating agency are therefore important for discovering relevant sources.

4.3. Access Conditions for Selected Records

The identification of a file in a finding aid does not mean that it can always be used without restriction. The 2024 Law on Archives, Decree No. 113/2025/NĐ-CP, and Circular No. 06/2025/TT-BNV constitute the current legal framework for archival management and use. The 2024 Law on Archives took effect on July 1, 2025, while Circular No. 06/2025/TT-BNV specifies forms and procedures for the use of records in historical archives. Notably, Decision No. 523/QĐ-BNV, issued by the Ministry of Home Affairs on May 13, 2026, approved a list of archival records subject to conditional access in selected fonds held at the National Archives Centers. Access to a particular file must therefore be determined according to its legal status and the regulations applicable to the relevant fonds and file at the time of research. Some documents examined in this study also bear markings such as "Secret" or "Urgent" from the time of their creation. These markings reflect the management regime and processing priority of the documents in their contemporary context, but they should not automatically be equated with current access restrictions. Present-day use must be determined under current law and the access regime of the archival institution (National Assembly of Vietnam, 2024; Government of Vietnam, 2025; Ministry of Home Affairs, 2025, 2026).

4.4. Research Use of the Records

For the files introduced in Section III, research use depends not only on whether records can be read or copied but also on how they are interpreted and used as sources. Many of the records were created to support administrative, military, economic, or scientific exchange activities at particular points in time. Accordingly, statements, figures, or research findings contained in the files must be interpreted within their contexts of creation and, where possible, compared with independent sources; this is a basic requirement of historical source criticism (Howell & Prevenier, 2001). This is particularly important for records concerning crop damage, dioxin in fisheries, or scientific assessments under discussion during the war. For example, an administrative document recording information about dioxin in fish and shrimp is evidence that such scientific information was received and processed within the administrative system at a particular time; the document itself does not replace the original chemical analysis results. Likewise, a report on damage to rubber or crops provides evidence of how such damage was recorded and represented, but the scale of the impact must be verified against other sources if it is to be used for quantitative analysis or causal assessment.

In this article, access is therefore understood more broadly than simply being able to "*open a file*". It includes the ability to discover records, determine conditions of access, understand their contexts of creation, and use them in a verifiable manner. This understanding is consistent with the International Council on Archives' position that access to archives depends both on legal authorization and on the existence of finding aids (International Council on Archives, 2012). These conditions are also necessary if records at National Archives

Center II are to be effectively connected with military records, spraying data, and scientific findings preserved or published in the United States and other countries.

V. Discussion

The survey at National Archives Center II raises, first, the question of how the value of archival sources should be assessed. For this group of records, the number of specialized files is not the sole criterion of research value. More significant is the fact that many of these records were created during the war itself by administrative, military, economic, and scientific agencies involved in documenting, addressing, or studying the issue. They therefore provide a layer of contemporaneous evidence concerning how chemical defoliation activities and their related effects were recognized, described, and addressed within specific historical contexts.

A second issue concerns the relationship between sources created in South Vietnam and U.S. records and data. Many international studies have based their analyses on U.S. military records and spraying data (Stellman et al., 2003; Young, 2009). The records at National Archives Center II should not be used merely to confirm or refute those source systems. Each body of records was created by different actors, for different purposes, and within different contexts. Military records may document operational activities, whereas administrative reports, complaints, compensation files, or scientific reports in Vietnam may document locally observed effects and the responses of relevant agencies. When these sources are placed alongside one another, their research value lies in identifying similarities, differences, and gaps across evidentiary systems, thereby enabling the issue to be reconstructed from multiple perspectives.

This raises an important methodological question: how can sources created within different archival systems be connected while preserving their context and provenance? The files surveyed show that the same issue may be documented through different types of records, including field-survey reports, administrative correspondence, files on crop damage and compensation, scientific records, and exchanges with foreign researchers. Creating points of connection based on time, place, creating agency, personal names, type of chemical, and event-related content may support comparison across sources. However, each extracted data point must retain its connection to the original file and its context of creation, thereby avoiding the transformation of archival records into isolated data detached from their provenance (Howell & Prevenier, 2001).

A direct implication of the survey is that source discovery depends not only on the degree of digitization but also on descriptive language and knowledge of the context of creation. Within this corpus, terms such as "defoliant," "chemical defoliant," "crop damage," "rubber," "dioxin," or the names of committees and scientists may lead researchers to files that would be difficult to identify through searches using only "Agent Orange" or the Vietnamese term "chất độc da cam." Improving accessibility is therefore not simply a matter

of digitization; it also depends on the quality of archival description, finding aids, and researchers' contextual knowledge.

More broadly, the records at National Archives Center II suggest opportunities for interdisciplinary and international collaboration among researchers in archival studies, history, the history of science, environmental science, and agriculture. Several files show that scientific exchanges between Vietnamese and U.S. scientists took place during the war. Further identification of sources in Vietnam and their comparison with military records, scientific literature, and archival collections in the United States may provide a basis for collaborative research on the environmental, agricultural, economic, and social impacts of wartime chemical defoliation. In this sense, the records at National Archives Center II not only add evidence to existing research on these issues but may also generate new questions about how the impacts of war were understood, addressed, and investigated.

VI. Conclusion

The survey shows that National Archives Center II preserves a body of records that is limited in quantity but significant for research on the use of chemical defoliants and their impacts during the Vietnam War. Created primarily during the war, these files document defoliation activities, damage to crops and agricultural production, administrative responses and compensation, and processes of scientific research and exchange concerning the effects of chemical defoliants. Improving the discoverability and accessibility of these sources, and comparing them with international records and datasets, may broaden the evidentiary base and generate interdisciplinary research on the environmental, economic, and social impacts of war.

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Appendix

Scientific statements, interpretations, numerical values, and units are reproduced as recorded in the archival documents and should not be understood as independently verified findings of the authors. The archival materials reproduced in this appendix are drawn from records preserved at National Archives Center II and are included to illustrate the documentary evidence discussed in the article. The records are available for research and publication in accordance with the Center's access and use procedures. Where applicable, the reproduced images include digitally signed archival copies. To improve readability for international readers, each figure is accompanied by an English translation or abridged translation. The translations preserve the evidential content, terminology, structure, and context of the original records, while repetitive administrative wording may be omitted where it does not affect interpretation. Certain expressions, institutional titles, security markings, and political or administrative terminology reflect the language and historical context of the period in which the records were created. Where retained in translation, they are presented as features of the original sources and do not necessarily represent the terminology adopted by the authors.

Figure 1. Submission memorandum dated January 24, 1962, reporting on the effects of chemicals on vegetation along Route 15.

Source: National Archives Center II, Office of the President of the First Republic Fonds, File 8111.

P H IẾ U

đề trình ²⁰²

Ông BỘ-TRƯỞNG, PHỤ-TÁ QUỐC-PHÒNG
(1/18)

MM/23.I.61
Trung tâm Lưu trữ quốc gia II
~~VIỆT-NAM-CỘNG-HÒA~~
BỘ QUỐC-PHÒNG
TỔNG THAM MƯU
PHÒNG III
UB-202
Điện thoại số 30.162
Số 157 /TMM/P3/UB202
KBC. 4002, ngày 24.01.1962.

THƯỢNG KHẨN

ĐỀ MỤC : - Ảnh hưởng của hóa chất đối với
cây cối dọc Quốc lộ 15.

THAM CHIẾU : - Phiếu trình số 139/TMM/P3/UB202
ngày 22.I.62.

Trân trọng kính trình Ông Bộ-Trưởng
thăm tường :

Trong ngày 22.I.1962, Bộ Tổng Tham-Mưu
chúng tôi có cử Sĩ-quan đặc trách UB.202, Trưởng
Phòng 5/T.T.M. cùng một số Ủy-viên của UB.202 đi
điều tra ảnh hưởng của hóa chất đối với các mục
tiêu đã phun thuốc dọc trên Quốc lộ 15 và các vùng
lân cận.

Trong các mục tiêu đã phun thuốc, là các
cây cối (đa số là các bụi chàm) hầu hết đã ngã sập
màu vàng sẫm; một vài cây cao lá đã khô đen và cũng
có vài cây cao vẫn xanh tốt.

Quan sát các vùng lân cận các mục tiêu
đã phun thuốc (từ 1000 tới 4000 thước), phải đoàn
nhận thấy các loại ngũ cốc và các cây ăn trái nhất
là các loại cây có nhiều mủ, nhiều nước và các loại
cây leo (như các cây dưa hấu, nho, đu đủ, chuối,
mít, bạc hà v.v...) đều bị rũ liệt, héo chết, trái
lại có hoang và các loại cây mọc tự nhiên vẫn xanh
tốt như thường.

...../2

1/1 / 2) T

ÔNG-THÔNG PHU
THAM-MƯU BIỆT-ĐỘ
25.6.1962
R11

11/7) T

- 2 -

17

Trong cuộc thăm dò kín đáo ý kiến dân chúng trong vùng gần mục tiêu, họ có cho biết rằng : Trong khi phi cơ công tác phun thuốc họ người thấy hơi khét như diêm sinh (lưu huỳnh) và có người không chịu nổi hơi thuốc nên bị ngất đi (?).

Phái-đoàn có liên lạc với Tòa Tỉnh-Trưởng BIÊN-HÒA và được biết nơi này đã nhận được 28 lá đơn của dân chúng (không kể đơn của Ông ĐOÀN-BÁ-KỲ Chủ sở đồn điền cao su Suối-Chưa đã nói trong phiếu trình dân chiếu) kê khai các tổn thất về cây cối ăn trái đã bị thiệt hại. Số tổn thất do họ kê khai có trên 2 triệu đồng. Theo sự nhận xét của phái đoàn các sự tổn hại thiệt thọ chỉ độ 1/10 con số mà dân chúng nêu ra. Tòa Hành-chánh địa phương, sau đó đã có giải thích cho một số dân chúng sơ tại : đường lối của Chanh-Phủ là luôn luôn khuyến khích giúp đỡ phương tiện, cho vay vốn, để nông gia khuếch trương sự trồng tía ; nhưng sự tổn hại vừa qua nếu có, đều là ngoài ý muốn và là những sự kiện không tránh được trong công tác chống Cộng hiện tại, công tác đòi hỏi mọi tầng lớp xa hội phải đóng góp tài sản và xương máu để đánh lại an ninh và tự do chung. Dân chúng được giải thích đã tỏ vẻ thông cảm và hài lòng.

Tuy nhiên, những sự thiệt hại này, Bộ Tổng Tham-Mưu chúng tôi trân trọng đề nghị Thượng-cấp chỉ thị cho Chính-quyền địa phương trong dịp Tết gần tới, kín đáo giúp tiền hoặc cho tặng phẩm những gia đình sinh sống dọc Quốc lộ 15 mà có việc trực hư hại để tỏ lòng ưu ái của Chanh-quyền với dân chúng đồng thời tránh trước các mầm mống phản uất trong dân chúng sơ tại mà V.C. có thể khai thác để làm trở ngại sự tiến triển của công tác xử dụng hòa chất tại Việt-Nam.

Trân trọng kính trình Ông Bộ-Trưởng thẩm định.

T.L. Đại-Tướng LE-VAN-TY
Tống-Tham-Mưu-Trưởng Q.B.V.N.C.H.
Thiếu-Tướng NGUYỄN-KHÁNH
Tham-Mưu-Trưởng.



11/7) T

L. Thanh

English translation (Figure 1):

REPUBLIC OF VIETNAM

MINISTRY OF NATIONAL DEFENSE

GENERAL STAFF

THIRD BUREAU – COMMITTEE 202

No. 157/TTM/P3/UB202

KBC 4002, January 24, 1962

SUBMISSION MEMORANDUM

Subject: Effects of chemicals on vegetation along Route 15

Reference: Submission No. 139/TTM/P3/UB202 dated January 22, 1962

Respectfully submitted for the Minister's consideration:

On January 22, 1962, the General Staff dispatched the officer in charge of Committee 202, the Chief of the Fifth Bureau of the General Staff, and several members of Committee 202 to investigate the effects of chemicals on the designated targets that had been sprayed along Route 15 and in the surrounding areas.

At the sprayed target areas, the leaves of the vegetation, most of it consisting of indigo shrubs, had largely turned dark yellow. The leaves of several taller trees had dried and blackened, while some tall trees remained green and healthy.

In examining areas surrounding the sprayed targets, at distances of approximately 1,000 to 4,000 metres, the delegation observed effects on food crops and fruit-bearing plants, particularly plants containing substantial sap or moisture and climbing plants. Watermelons, grapes, papayas, bananas, jackfruit, mint, and similar plants had suffered scorched leaves, wilting, or death. By contrast, wild grasses and naturally growing vegetation remained green and appeared normal.

During discreet inquiries among residents living near the target areas, the delegation was informed that, while aircraft were carrying out the spraying, residents noticed a burning smell resembling sulphur. Some people were reportedly unable to tolerate the fumes and fainted (?).

The delegation contacted the Bien Hoa Provincial Administration and learned that it had received 28 petitions from residents, excluding the petition previously submitted by Mr. Doan Ba Ky, owner of the Suoi Chua rubber plantation, as mentioned in the referenced submission. These petitions reported losses involving damaged fruit trees. The total losses claimed amounted to more than two million đồng. In the delegation's assessment, however, the actual damage was only about one-tenth of the amount claimed by the residents.

The local administration subsequently explained to some residents that the Government's policy was consistently to encourage agricultural production by providing assistance, resources, and loans to farmers so that they could expand cultivation. Any recent damage, if it had occurred, was unintended and constituted an unavoidable incident in the course of the current anti-Communist operations. The task at hand, it stated, required all sections of society to contribute property and make sacrifices in order to regain common security and freedom. According to the report, after receiving this explanation, the residents concerned appeared understanding and satisfied.

Nevertheless, in view of the damage, the General Staff respectfully recommends that higher authorities instruct the local administration, on the occasion of the approaching Lunar New Year, to discreetly provide financial assistance or gifts to families living along Route 15 whose gardens had been damaged. Such assistance would demonstrate the authorities' concern for the population while at the same time helping to forestall resentment among local residents that the VC might exploit to hinder the progress of the program for the use of chemicals in Vietnam.

Respectfully submitted for the Minister's decision.

For General LE VAN TY

Chief of the General Staff, Republic of Vietnam Armed Forces

Major General NGUYEN KHANH

Chief of Staff

Figure 2. Letter from Plantations des Terres Rouges reporting the effects of aerial chemical defoliation on rubber plantations, including the Courtenay plantation in Long Khanh Province, 1967.

Source: National Archives Center II, Office of the Prime Minister of the Republic of Vietnam
Fonds, File 23305.

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PLANTATIONS DES TERRES ROUGES
SOCIÉTÉ ANONYME AU CAPITAL DE 1.998.034.000 FRS. DJI.
SIÈGE SOCIAL: DJIBOUTI (CÔTE FRANÇAISE DES SOHALIS)
236, BOULEVARD CONGO-LY, SAIGON VIETNAM - R.P. 411
R. C. SAIGON 136 - TÉLÉGR: RUBBERHANK. TÉL.: 20.328-20-40
BO QUOC GIA DANH-DO: 23-603-21-001

Saigon, 10/10/1967, 16h57-18h07:00/19 67
Trung tâm Lưu trữ quốc gia II

DIRECTION GÉNÉRALE

DG, N° 96

Monsieur Trương-thai-Tôn
Secrétaire d'Etat à la Présidence
SAIGON

Monsieur le Ministre,
DEFOLIATION DES HÉVÉAS.-

J'ai l'honneur de porter à votre connaissance que sur l'ensemble de nos cultures, nous observons depuis un mois une évolution tout à fait anormale des feuillages des hévéas.

Nous devons admettre maintenant, tous les signes cliniques le prouvent, que ces feuillages souffrent des effets des pulvérisations par voie aérienne de produits chimiques défoliants = les feuillages jaunissent progressivement puis les feuilles tombent.

L'ensemble de nos cultures est touché et le phénomène étant en pleine évolution, nous ne pouvons encore nous prononcer sur ses conséquences; les cultures en rapport sont en cours de défoliation, notre plantation de Courtenay (Province de Long Khanh) est d'ores et déjà entièrement défoliée. Les cultures non en rapport sont plus ou moins gravement atteintes, 201 hectares de cultures 1962 à 1965 à Longthanh apparaissent condamnés.

Nous rappelons que notre Société exploite 18.500 hectares dont 14.000 hectares de cultures en rapport. Notre potentiel de production est de 18.000 tonnes/an, nous avons pu produire 15.000 tonnes en 1966. La population vivant dans nos villages est évaluée à 18.000 personnes environ.

Nous nous permettons, Monsieur le Ministre de souligner la gravité de tels traitements défoliants effectués sans suffisamment de précautions, et notamment sans tenir compte de vents dominants, aux alentours de surfaces plantées en hévéas. Cet arbre étant particulièrement sensible à de tels produits.

Si nous osons encore espérer que nos cultures se remettront après un temps suffisant de repos, une nouvelle atteinte de produits chimiques défoliants conduirait à des pertes très graves et à une suspension d'activité. Mais d'ores et déjà, la production de caoutchouc de notre Société pour cette année est lourdement handicapée.

Nous vous présentons, Monsieur le Ministre, l'expression de notre très haute considération./.

PLANTATIONS DES TERRES ROUGES
Direction générale
Marc CONTÉ.

O. T. N. S.
Kien nhieu vung nay va lang
hai nhieu vung nay va lang
Thi can thay
hieu sau. Kien hong va.
10/4

Phu Hung,
Kien thau thi cho bien
nhu hau y Kien cap tan
ghe tien
11/4/67

133
10/4

English translation (Figure 2):

PLANTATIONS DES TERRES ROUGES

General Directorate

DG No. 96

Saigon, 1967

To Mr. Truong Thai Ton

Secretary of State at the Presidency

Saigon

Subject: Defoliation of Rubber Trees

Sir,

I have the honor to bring to your attention that, throughout our plantations, we have for approximately one month observed an entirely abnormal development in the foliage of the rubber trees.

We must now conclude, as all the observed symptoms indicate, that the foliage is suffering from the effects of aerial spraying with chemical defoliant: the leaves progressively turn yellow and then fall.

All of our plantations have been affected. As the phenomenon is still developing, we are not yet in a position to determine its full consequences. The mature, producing rubber plantations are currently undergoing defoliation, and our Courtenay plantation in Long Khanh Province is already completely defoliated. The immature plantations have also been affected to varying degrees. At Long Thanh, 201 hectares of plantings established between 1962 and 1965 appear to be lost.

We would point out that our company operates 18,500 hectares, of which approximately 14,000 hectares are mature producing plantations. Our potential production capacity is 18,000 tonnes per year; in 1966, we produced approximately 15,000 tonnes. The population living in our plantation villages is estimated at approximately 18,000 people.

We respectfully wish to emphasize, Sir, the seriousness of such defoliant treatments when carried out without sufficient precautions, particularly when prevailing winds are not taken into account in areas surrounding rubber plantations. Rubber trees are particularly sensitive to such products.

Although we still hope that our plantations will recover after a sufficient period of rest, any further exposure to chemical defoliants would result in very serious losses and could lead to a suspension of operations. Already, however, our company's rubber production for the current year has been severely affected.

We respectfully ask you, Sir, to accept the assurance of our highest consideration.

PLANTATIONS DES TERRES ROUGES

General Director

Marc Comte

Figure 3. Selected records from File 25488 concerning the use and effects of chemical defoliants in Vietnam, 1967–1971.

Figure 3a. Report of the Ministry of Agriculture on the effects of chemical defoliants on rubber plantations, subsidiary crops, and fruit trees, May 26, 1967.

Source: National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 25488.

VIỆT-NAM CỘNG-HÒA
BỘ CANH-NÔNG

Trung tâm Lưu trữ quốc gia II
02/10/2026; 16:57:17; +07:00

Saigon, ngày 26 tháng 5 năm 1967

Số 3460 - BCN/KH/2.D

ỦY-VIÊN CANH-NÔNG

Kính gửi : Ông ỦY-VIÊN CHỦ-TỊCH
Ủy-Ban Hành-Pháp Trung-Ương
S a i g o n

Trích-yếu : V/v ảnh-hưởng của hóa-chất khai-quang và các thiệt hại gây ra đối với hoa-mau phụ, cây ăn trái và cây cao-su.

Thưa Ông Ủy-Viên,

Bộ tôi trân-trọng trình Quý Phủ dưới đây về ảnh hưởng của hóa-chất khai-quang và các thiệt hại gây ra đối với cây cao-su, các loại hoa-mau và cây ăn trái :

1. Đặc-tính thuốc khai-quang, tính-chất hóa-học và ảnh-hưởng đối với cây :

Hóa-chất do Cơ-quan quân-sự hiện đang dùng có thể là thuốc trừ cỏ 2,4-D (acide de 2,4 - dichlorophenoxy-lacétique) và 2,4,5-T (acide de 2,4,5 - trichlorophenoxy-lacétique) có tác-dụng ảnh-hưởng sự phát-triển của thảo-mộc.

2,4-D và 2,4,5-T dễ thấm vô trọng lá cây lưu-đẫn qua các bộ-phần của cây khiến sự phát-triển sinh-lý mất thể quân-bình và cây phải chết.

Mấy năm gần đây, 2,4-D và 2,4,5-T đã được dùng trong công-tác khai-quang những vùng rậm-rạp. Việc rải thuốc bằng máy bay cách mặt đất quá cao, gặp gió to, không rơi thẳng xuống đất mà có thể bay xạ vài cây-số hay nhiều hơn nữa gây thiệt hại cho mùa-mang.

2. Ảnh-hưởng thuốc khai-quang

Số thiệt hại cao-su

Theo tài-liệu do Viện Khảo-Cứu Cao-Su Việt-Nam (I.R.C.V) cung-cấp, trên 20.000 mẫu cao-su hiện bị ảnh-hưởng nặng vì thuốc khai-quang.

... 2

VIỆT-NAM CỘNG-HÒA
LƯU VÂN CẦN
Ngày 26.5.67
Số 3788/B

25488/2.20

Theo tài-liệu mà Bộ tôi biết sự thiệt hại có khai-bào vì khai-quang tại các đồn-diên cao-su là 7190 Ha (chưa kể các đồn-diên nhỏ của người Việt-Nam ở vùng bất an-ninh không có khai-bào).

Ngoài sự thiệt hại vì khai-quang, sự chiếm đóng của Quân-Đội khiến cho cây bị pha-hoại đồn lam, cui gây nhiều thiệt hại và khó khăn trong việc khai-thác.

Hậu quả trong tương-lai

a. Cây cao-su bị nhiễm thuốc rụng hết lá, thân cây khô nứt, việc khai-thác phải tạm ngừng để dưỡng cây.

b. Nếu bị nặng cây chết, diện-tích khai-thác sụt giảm.

Những sự thiệt hại không được bồi-thường thỏa đáng, làm chán-nản những người có thiện-chí mở-mang ngành trồng-tía cao-su mà trước đây Chánh-Phu đã cho vay khuyến-khích trồng-trọt.

Và việc khai-quang nếu không được giảm bớt, số thiệt hại vật-chất thật khó lường được.

Đối với hoa-màu phụ và cây ăn trái

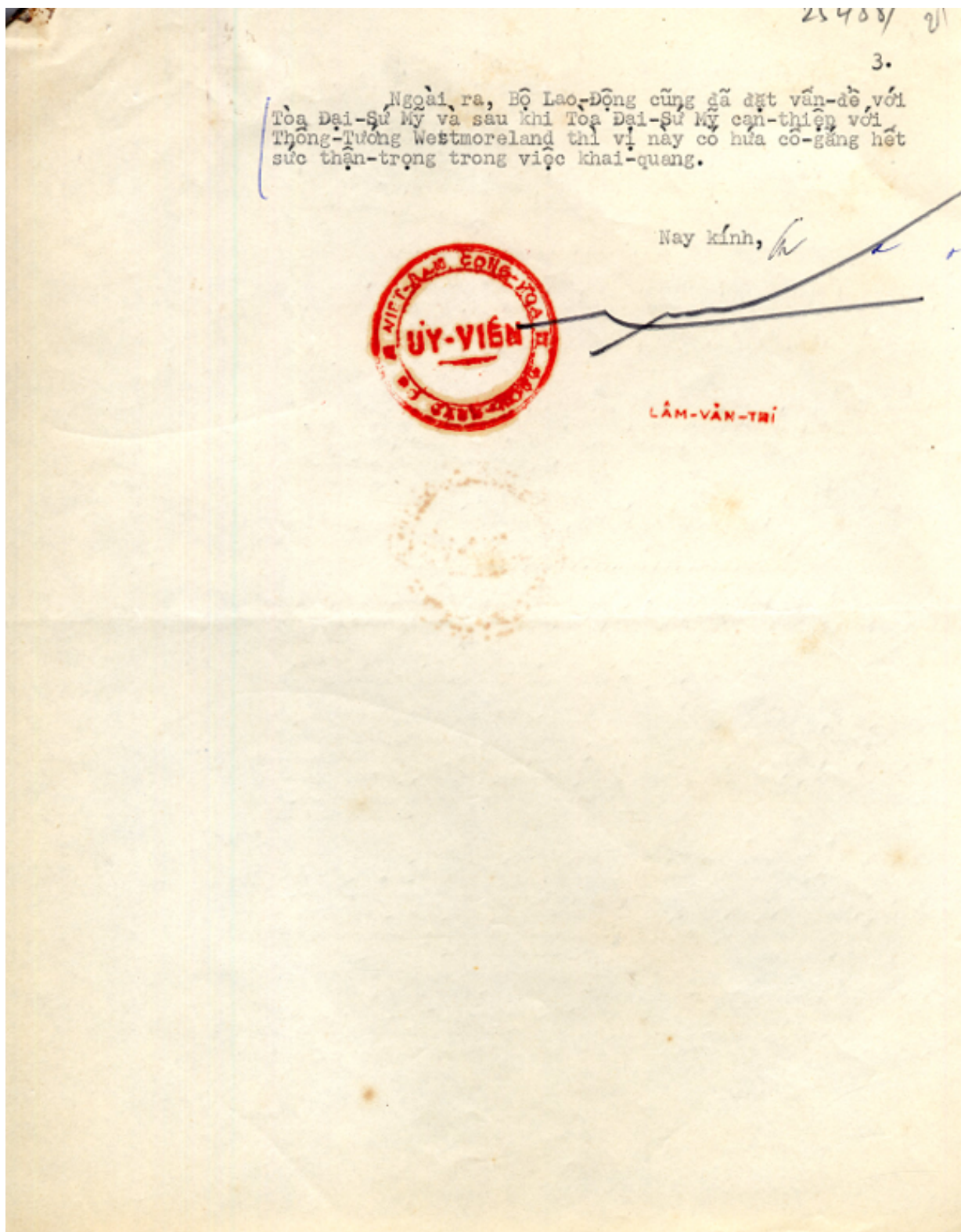
Trước tiên là rau đậu, khoai mì, khoai lang, vú sữa, mít, đu-đu bị nặng-nề nhất, kế đến dưa, ổi, mận, cầu cùng các loại cây ăn trái khác cũng đều bị ảnh-hưởng nặng hoặc nhẹ tùy theo cây bị nhiễm thuốc nhiều hay ít (vùng khai-quang hay vùng lân-cận).

Những cây đa-niên nếu chỉ bị nhiễm một lần thì có thể phục-hồi lại tốt hoặc ra mầm non nhưng yếu-ớt không ra gì hoặc chết luôn. Sự thiệt hại ban đầu là thế, nhưng di-hại cho sự sản-xuất rất nhiều, hoa-quả sụt kém, rụng hoặc lớn mà không chín và sợ còn ảnh-hưởng đến nhiều năm sau nữa.

Sự thiệt hại gây cho cây-cối và hoa-màu phụ ghi nhận được qua các phiên họp của Ủy-Ban bồi-thường Liên Bộ và do đơn khiếu-nại từ 1963 đến nay là : 6.028 sản-chủ bị thiệt hại ước-lượng là : 70.980.506\$00. Đó là chưa kể tới những vụ không được cứu-xét và không có đơn khiếu-nại như : khai-quang tại vùng kem an-ninh.

Mới đây, do công-văn số 1.140-HP/KT ngày 22.4.1967, Phủ Chủ-Tịch đã yêu-cầu Bộ Quốc-Phong chỉ-thị cho các cấp hữu-trách cố-gắng tránh sự thiệt hại cho các đồn-diên cao-su trong công-tác khai-quang bằng hoa-chất.

... 3



English translation (Figure 3a)

REPUBLIC OF VIETNAM
MINISTRY OF AGRICULTURE

Saigon, May 26, 1967
No. 3460-BCN/KH/2.D

Subject: Effects of chemical defoliants and the damage caused to rubber trees, subsidiary crops, and fruit trees

Sir,

The Ministry respectfully submits the following information concerning the effects of chemical defoliants and the damage caused to rubber trees, subsidiary crops, and fruit trees.

1. Characteristics of chemical defoliants, their chemical properties, and their effects on plants

The chemical defoliants currently in use include 2,4-D (2,4-dichlorophenoxyacetic acid) and 2,4,5-T (2,4,5-trichlorophenoxyacetic acid), which affect the growth and development of plants.

2,4-D and 2,4,5-T are readily absorbed through plant leaves and translocated to other parts of the plant, disrupting normal physiological development and causing an imbalance that may eventually result in the death of the plant.

In recent years, 2,4-D and 2,4,5-T have been used in defoliation operations in densely vegetated areas. When aerial spraying is carried out from too great a height above the ground, particularly under strong-wind conditions, the chemicals may fail to fall directly onto the intended area and may instead drift several kilometres or farther, causing damage to crops.

2. Effects of chemical defoliants

a. Damage to rubber plantations

According to information supplied by the Rubber Research Institute of Vietnam (IRCV), more than 20,000 mẫu¹ of rubber plantations had been seriously affected by chemical defoliants.

According to information available to the Ministry, reported damage caused by defoliation operations in rubber plantations amounted to 7,190 hectares, not including smaller Vietnamese-owned plantations in insecure areas for which no reports had been submitted.

In addition to damage caused by defoliation, the requisition or occupation of plantation areas by military forces had also resulted in damage to rubber trees and created further difficulties for plantation operations

Possible future consequences

a. Rubber trees exposed to the chemicals may lose all their leaves and develop dry and cracked trunks. Tapping must then be temporarily suspended to allow the trees to recover.

b. Where exposure is severe, the trees may die, reducing the area available for production.

¹ “mẫu” is a historical Vietnamese unit of land area; no conversion has been introduced. The monetary amount 79,980,506\$00 is reproduced in the notation used in the original document.

Inadequate compensation for such losses could discourage those who had been willing to develop rubber cultivation, which the Government had previously encouraged through loans and other support.

If defoliation operations are not reduced, the extent of the resulting material losses will be difficult to estimate.

b. Effects on subsidiary crops and fruit trees

Vegetables and legumes, cassava, sweet potatoes, star apple, jackfruit, and papaya were among the crops reported to be most seriously affected, followed by coconut, guava, custard apple, and other fruit trees. The degree of damage varied according to the amount of chemical exposure and whether the plants were located within the treated area or in surrounding areas.

Perennial trees exposed only once may recover and produce new shoots. In some cases, however, the new growth may remain weak and fail to develop, or the trees may die. The initial damage may therefore be followed by substantial effects on subsequent production: fruit yields may decline, fruit may fall prematurely, or fruit may grow without ripening. The effects may continue for several years.

Damage to trees and subsidiary crops recorded through meetings of the Interministerial Compensation Committee and through compensation claims submitted since 1963 involved 6,028 affected property or crop owners, with estimated losses amounting to 79,980,506\$00.

These figures did not include cases that were not considered or for which no claims had been filed, such as defoliation operations conducted in areas with poor security conditions.

More recently, by Letter No. 1,140-HP/KT dated April 22, 1967, the Office of the Chairman requested the Ministry of National Defense to instruct the responsible authorities to make every effort to avoid damage to rubber plantations during chemical defoliation operations.

In addition, the Ministry of Labor raised the issue with the United States Embassy. Following intervention by the U.S. Embassy with General Westmoreland, he reportedly undertook to exercise the greatest possible caution in conducting defoliation operations.

Respectfully,
LAM VAN TAI
Commissioner of Agriculture

Figure 3b. "Secret-Urgent" memorandum of the Ministry of Land Reform and Agriculture concerning the use of chemical defoliants in Vietnam, January 27, 1968.

Source: National Archives Center II, Office of the Prime Minister of the Republic of Vietnam Fonds, File 25488.

PC (KITE) + o. Chan
M 2/1

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VIỆT - NAM CỘNG - HOÀ
BỘ CẢI-CÁCH ĐIỀN-ĐỊA
VÀ CANH-NÔNG

Saigon, ngày 27 tháng 01 năm 1968
Số 136 - BCCĐCN/
KH/211/M

MẬT
KHAN

TỔNG-TRƯỞNG CẢI-CÁCH ĐIỀN-ĐỊA VÀ CANH-NÔNG

Kính gửi : Ông BỘ-TRƯỞNG PHỦ THỦ-TƯỚNG
S a i g o n

Trích-yếu : V/v sử-dụng thuốc khai quang tại
Việt-Nam

Thưa Ông Bộ-Trưởng,

Trong vấn-đề khai-quang, Bộ tôi có một vài nhận
xét sau đây :

- Các hóa-chất như Sodium cacodylate, Dimethyl
arsetnic acid thuộc nguồn gốc thạch tín, rất độc và có hại
đối với người và gia-súc.
- Loại chất "Stérilisant" có tác-dụng hủy-diệt tất
cả thảo-mộc còn xanh tươi và làm hư-hại đất-đai. Nếu sử-dụng
ở những nơi quá khô-khan, có thể gây cháy và nổ.
- Các chất 2, 4-D và 2, 4, 5-T có gốc "Ester" là loại
kích-thích có ảnh-hưởng rất mạnh đối với thảo-mộc thuộc nhóm
"dicotylédones" và có thể hủy-diệt tất cả hoa-màu, mùa-màng
theo nồng độ 1 o/o 2, 4-D và 2 o/o 2, 4, 5-T hiện đang được
áp-dụng tại Việt-Nam.

Do đó, Bộ tôi trân trọng xin quý Phủ vui lòng cho
ghi vào mục Linh-Tinh trong một phiên họp tối của Hội-Đồng
Nội-Các, về vấn-đề thuốc khai-quang :

1. Yêu-cầu các cơ-quan Hoa-kỳ và Bộ Quốc-Phòng đình-
chỉ sử-dụng các loại thuốc khai-quang thuộc nguồn
gốc thạch tín.
2. Yêu-cầu bỏ việc dùng các loại thuốc "Stérilisant"
và các loại thuốc 2, 4-D, 2, 4, 5-T bốc hơi làm
hư-hại mùa-màng rất xa vùng bốc hơi ./-

Nay kính,

TÔN-THẤT-TRÌNH

VIỆT-NAM CỘNG-HÒA
NHA PHÁP CHẾ
CÔNG-VĂN ĐẾN
Số 522
Ngày 2/2

VIỆT-NAM CỘNG-HÒA
PHỦ THỦ-TƯỚNG
CÁN-SỰ MẬT
Tặng 27.1.1968
Ghi vào sổ số 216 M

TỔNG-TRƯỞNG
BỘ CẢI-CÁCH ĐIỀN-ĐỊA VÀ CANH-NÔNG

English translation (Figure 3b):

REPUBLIC OF VIETNAM
MINISTRY OF LAND REFORM AND AGRICULTURE

SECRET
URGENT

Saigon, January 27, 1968

THE MINISTER OF LAND REFORM AND AGRICULTURE

To: The Minister, Office of the Prime Minister
Saigon

Subject: Use of chemical defoliants in Vietnam

Sir,

With regard to defoliation activities, this Ministry wishes to submit the following observations:

- Chemicals such as sodium cacodylate and dimethylarsinic acid (cacodylic acid) are arsenic-based compounds. They are highly toxic and harmful to humans and livestock.
- Substances described as “stérilisants” [soil sterilants] destroy green vegetation and may damage the soil. If used under excessively dry conditions, they may also create risks of fire and explosion.
- 2,4-D and 2,4,5-T in ester formulations are growth-regulating substances with particularly strong effects on dicotyledonous plants and may destroy crops, depending on concentration. Concentrations of 1% 2,4-D and 2% 2,4,5-T were reported as being in use in Vietnam.

Accordingly, this Ministry respectfully requests that the Government place the question of chemical defoliants under the miscellaneous items for discussion at a forthcoming meeting of the Council of Ministers, with the following proposals:

1. Request that the relevant United States agencies and the Ministry of National Defense discontinue the use of arsenic-based chemical defoliants.
2. Request the Ministry of National Defense to discontinue the use of “stérilisant” chemicals and volatile formulations of 2,4-D and 2,4,5-T, which through volatilization may damage crops at considerable distances from the areas in which they are used.

Respectfully,
TON THAT TRINH
Minister of Land Reform and Agriculture

Figure 4. Document dated May 16, 1973, concerning information on dioxin in fish and shrimp in Vietnam.

Source: National Archives Center II, Office of the Prime Minister of the Republic of Vietnam
Fonds, File 27092.

VIỆT-NAM CỘNG-HÒA
BỘ PHÁT-TRIỂN NÔNG-NGHIỆP
VÀ ĐIỆN-ĐI

PC2
17/5/73
CKL/lkd
Trung tâm Lưu trữ Quốc gia II
02/10/2026: 16:57:18: +07:00
16 Th. 5. 1973
Saigon, ngày tháng 05 năm 1973

Số 4508 PTNNĐĐ/KT.3

TRƯỞNG KHỐI KẾ-HOẠCH VÀ KỸ-THUẬT
BỘ PHÁT-TRIỂN NÔNG-NGHIỆP VÀ ĐIỆN-ĐI

Kính gửi : Ông TÔNG THƠ-KÝ PHỦ THỦ-TƯỚNG
S a i g o n

Trích-yếu: V/v Độc tố Dioxine tìm thấy trong
cá tôm ở Việt-Nam

HỎA-TỐC

Thưa Ông Tông Thơ-Ký,

Bộ tôi trân trọng kính trình quý Phủ về nguồn tin cho rằng có độc-tổ Dioxine tìm thấy trong cá tôm ở Việt-Nam như sau :

Gần đây 2 Giáo-Sư Meselson và Baughman ở Viện Đại-Học Harvard Huê-Kỳ đã trình bày, tại một hội-nghị về chất Dioxine ở North-Carolina, kết-quả về công-trình tìm và định lượng chất này trong cá tôm lưới được ở lưu-vực sông Đồng-Nai trong năm 1970 (Chất Dioxine là một chất bán gấp trong thuốc khai-quang "Orange"). Tin này đã được Giáo-Sư Phạm-hoàng-Hộ, thuộc trường Đại-Học Khoa-Học Saigon tường thuật lại trên báo-chí. Sau đó, có tin Chánh-Phủ Nhật tạm giữ không cho xuất kho 24 Tấn tôm đông lạnh nhập-cảng từ Việt-Nam để chờ phân chất lại để quyết-định sau. Một số báo-chí đã suy diễn rộng ra và cho rằng nền kinh-tế hậu-chiến của V.N. sẽ bị ảnh hưởng nặng nề vì thủy-sản là nguồn tài-nguyên quan-trọng. Nhưng sau đó, Giáo-Sư Hộ có cho đăng tại 1 bài báo khác theo độ thi sự khai-quang với chất "Orange" đã chánh thức ngưng sử-dụng tại V.N. từ năm 1969, đồng thời lưu ý rằng tin-tức ghi nhận sự hiện-diện của Dioxine trước đây chỉ là kết-quả tìm gặp ở vài mẫu (échantillon) tôm cá lưới được năm 1970 trong một vài địa-diểm thuộc khu-vực sông Đồng-Nai. Theo Giáo-Sư Hộ thì có lẽ đến bây giờ tất cả Dioxine đã được rửa đi mất và tin rằng cá tôm dầu ở Sông Đồng-Nai hiện tại cũng không còn chất này nữa.

X X X

VIỆT-NAM CỘNG-HÒA
BỘ PHÁT-TRIỂN NÔNG-NGHIỆP VÀ ĐIỆN-ĐI
CÔNG-VAN BẾN
Số 1398/ĐK
Ngày 18-5-73

.....2

27092/41

Bộ tôi cũng tin là dù trước đây trong thời kỳ khai-quang mạnh mẽ, có thể có một số lượng nhỏ chất Dioxine trong tôm cá ở vài khu-vực thì hiện nay sau 4 năm ngưng khai-quang có lẽ chất Dioxine không còn tồn tại ở Sông Ngòi V.N. nữa vì mỗi năm sau những tháng mưa mùa, độc-tố này có thể đã bị nước cuốn loãng trôi đi hết. Hơn nữa, dù có cá tôm nào lúc trước ăn phải chất này thì việc truyền độc cũng không còn quan trọng vì chu kỳ sinh-sản của nhiều loại thủy-sản thường ngắn (trong vòng 1 năm) do đó, cá tôm sinh sản trong những năm sau này bắt được ở lưu-vực sông Đồng-Nai có thể không còn Dioxine nữa.

Tóm lại, vấn đề này nếu ít ảnh hưởng về mặt quốc-nội vì dân chúng không bị nhiễm độc và Giáo-Sư Hộ đã đăng báo đính chánh, thì trái lại có thể gây khó khăn về mặt ngoại-thương. Các nước đang nhập-cảng thủy-sản V.N. có thể sẽ tạm đình-chỉ không mua trong 1 thời-gian để chờ kết-quả rõ rệt của công cuộc tái phân tích. Về điểm sau này, Bộ tôi được biết tính đến nay, số lượng tôm đông lạnh V.N. xuất-cảng sang Nhật bị tạm niêm-phong đã lên đến 49 Tấn và Chánh-Phủ Nhật đang cho phân tích các mẫu hàng này trước khi có quyết-dịnh về số tôm đông lạnh này.

Bộ tôi cũng đã yêu cầu các nhà Doanh-Thương Ngư-Nghiệp ở trong nước trích lấy một số mẫu tôm cá để gửi sang Viện Đại-Học Harvard nhờ phân tích thêm, và sau khi có kết-quả phân tích này Bộ tôi sẽ tái trình quý Phủ ./-

Nay kính,



LƯU-ẢNH CHỮ CHỮ

English translation (Figure 4):

REPUBLIC OF VIETNAM

MINISTRY OF AGRICULTURAL DEVELOPMENT AND LAND REFORM

Saigon, May 16, 1973

No. 4508/PTNNĐĐ/KT.3

HEAD OF THE PLANNING AND TECHNICAL DIVISION

MINISTRY OF AGRICULTURAL DEVELOPMENT AND LAND REFORM

To: The Secretary-General, Office of the Prime Minister
Saigon

Subject: Reports of dioxin detected in fish and shrimp in Vietnam

Dear Mr. Secretary-General,

This Ministry respectfully submits to the Office of the Prime Minister the following information concerning reports that dioxin has been detected in fish and shrimp in Vietnam:

Recently, Professors Meselson and Baughman of Harvard University in the United States, at a conference on dioxin in North Carolina, presented the results of their work on the detection and quantitative determination of this substance in fish and shrimp caught in the Dong Nai River basin in 1970. (*Dioxin is a contaminant present in the defoliant “Orange.”*)

This information was subsequently reported in the press by Professor Pham Hoang Ho of the Faculty of Science, University of Saigon.

Thereafter, reports appeared that the Japanese Government had temporarily withheld from release 24 metric tons of frozen shrimp imported from Vietnam, pending further analysis before a decision would be made.

Some newspapers then drew broader conclusions from the issue, suggesting that Vietnam's postwar economy might be seriously affected because fisheries constituted an important national resource.

Professor Ho subsequently published another article stating that the use of the defoliant “Orange” had officially ceased in Vietnam in 1969. He also emphasized that the reported presence of dioxin had thus far resulted only from its detection in a few samples (*échantillons*) of fish and shrimp caught in 1970 at several locations in the Dong Nai River basin.

According to Professor Ho, it was possible that by the present time the dioxin had been washed away and that fish and shrimp currently found in the Dong Nai River no longer contained this substance.

This Ministry likewise believes that, even if small quantities of dioxin may previously have been present in fish and shrimp in certain areas during the period of intensive defoliation, it is likely that, after four years without defoliation operations, dioxin no longer remains in Vietnam's rivers and waterways. Following the annual rainy season, the toxin may have been diluted and carried away by water.

Furthermore, even if some fish or shrimp had previously ingested the substance, the transmission of contamination would no longer be considered significant because the reproductive cycles

of many aquatic species are relatively short—often within one year. Fish and shrimp of subsequent generations now caught in the Dong Nai River basin may therefore no longer contain dioxin.

In summary, although this issue may have limited domestic impact because the population has not been poisoned and Professor Ho has already published a correction in the press, it could nevertheless create difficulties for foreign trade.

Countries importing Vietnamese fisheries products may temporarily suspend purchases while awaiting clearer results from renewed analyses.

In this regard, the Ministry has learned that, as of the present time, the quantity of Vietnamese frozen shrimp exported to Japan and placed under temporary hold has increased to 49 metric tons. The Japanese Government is analyzing samples from these consignments before deciding how the frozen shrimp should be handled.

This Ministry has also requested domestic fisheries businesses to collect a number of fish and shrimp samples for shipment to Harvard University for further analysis. Once the results of these analyses are available, the Ministry will submit a further report to the Office of the Prime Minister.

Respectfully,

LUONG SI QUANG

Head of the Planning and Technical Division

Figure 5. Selected records concerning Professors Le Van Thoi and Pham Hoang Ho's participation in meetings of the Committee on the Effects of Herbicides in Vietnam in Washington, D.C., June–July 1973.

Figure 5a. Submission memorandum concerning Professors Le Van Thoi and Pham Hoang Ho's participation in the Committee meeting in Washington, D.C., June 9–11, 1973. Source: National Archives Center II, International Affairs Directorate Fonds, File 2255.

VIỆT-NAM CỘNG-HÒA
BỘ GIÁO-DỤC
NHÀ CÔNG-TÁC QUỐC-TẾ

Trung tâm Lưu trữ quốc gia II
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PHIẾU TRÌNH

06

Số: 4018-GD/QTQT/
HNQT/Q.

ĐỀ-MỤC: V/v Phiên-họp của Ủy-ban Nghiên-cứu Ảnh-Hưởng chất khai-quang tại Việt-Nam tổ-chức tại Washington từ 9.6 đến 11.6.1973.

ÔNG TỔNG-TRƯỞNG GIÁO-DỤC

HỎA TỐC

Tham-chiếu:- Phở-bản văn-thư đề ngày 18.5.1973 của Giáo-sư Lê-văn-Thối (Nhà Công-Tác Quốc-Tế không nhận được Giác-thư đề ngày 10.5.1973).
- Công-diện số Washington 27/25211454 của Ban Tổ-chức (do chính Giáo-sư Phạm-Hoàng-Hộ gửi đến Nhà Công-Tác Quốc-Tế).

SƠ-LƯỢC :

1.- Do thư đề ngày 18.5.1973, Giáo-sư Lê-văn-Thối có chuyển 1: phóng-ảnh Giác-thư đề ngày 10.5.73 đến Bộ Giáo-Dục để thông-báo việc Ủy-Ban Nghiên-cứu Ảnh-Hưởng chất khai-quang tại Việt-Nam tổ-chức Phiên-họp tất-cả Hội-viên tại Washington: từ 11.6 đến 13.6.73 và mời Giáo-sư LÊ-VĂN-THỐI, Đồng Chủ-Tịch Hội-Đồng Quốc-Gia Khảo-cứu Khoa-Học, Đồng Chủ-tịch Ủy-Ban Nghiên-cứu Ảnh-Hưởng chất khai quang tại Việt-Nam và Giáo-sư Phạm-Hoàng-Hộ, Hội-viên Hội-Đồng Quốc-Gia Khảo-cứu Khoa-Học, Hội-viên Ủy-Ban Nghiên-cứu Ảnh-hưởng chất khai-quang tại Việt-Nam, tham-dự Phiên-họp này.

2.- Ngày 24.5.1973, Giáo-sư PHẠM-HOÀNG-HỘ có chuyển đến Nhà Công-Tác Quốc-Tế công-diện của Ban Tổ-chức thông-báo Phiên họp dân-thượng được dời lại từ 9.6 đến 11.6.73 thay vì 11.6 đến 13.6.73.

NHẬN-XÉT VÀ ĐỀ-NGHI :

Vì đây là phiên-họp toàn-thể các Hội-viên của Ủy-Ban Nghiên Cứu Ảnh-Hưởng chất khai-quang tại Việt-Nam thuộc Hàn-Lâm-Viện Quốc-Gia Hoa-Kỳ. Kính trình Ông Tổng-Trưởng chấp-thuận cho 2 Giáo-sư LÊ-VĂN-THỐI và PHẠM-HOÀNG-HỘ được phép xuất-ngoại tham-dự Phiên-họp dân-thượng tại Washington từ 9.6 đến 11.6.73. Trong trường hợp Ông Tổng-Trưởng xét chấp-thuận kính xin Ông Đồng-Lý duyệt-ký dự-thảo văn-thư đính-hậu.

Kính trình,

Saigon, ngày 28 tháng 5 năm 1973
Giám-Đốc Nhà Công-Tác Quốc-Tế

Kính trình với hạo y;
28/05

Thánh đế thánh
Ủy-Trưởng chấp-thuận
B, 28/5

Hoàng COT
D. Tổng đã ph
Thư của Ban
Chánh cơ văn
của Gp Thối rồi
Viu lla B. B. Thoi
r. lly-
28/5

VIỆT-NAM CỘNG-HÒA
BỘ GIÁO-DỤC
NHÀ CÔNG-TÁC QUỐC-TẾ

GIÁM ĐỐC

Bà SỰ-THỊ-LAM

English translation (Figure 5a):

REPUBLIC OF VIETNAM
MINISTRY OF EDUCATION
DIRECTORATE OF INTERNATIONAL AFFAIRS

No. 1618-GD/CTQT

SUBMISSION MEMORANDUM

To: The Minister of Education

Subject: Meeting of the Committee on the Effects of Herbicides in Vietnam to be held in Washington from June 9 to June 11, 1973

References:

- Copy of the letter dated May 18, 1973, from Professor Le Van Thoi. (The Directorate of International Affairs did not receive the invitation dated May 10, 1973.)
- Washington telegram No. 27/25211454 from the Organizing Committee, forwarded to the Directorate of International Affairs by Professor Pham Hoang Ho.

SUMMARY

1. By his letter dated May 18, 1973, Professor Le Van Thoi forwarded to the Ministry of Education a photocopy of the memorandum dated May 10, 1973, informing the Ministry that the Committee on the Effects of Herbicides in Vietnam would hold a meeting of all its members in Washington from June 11 to June 13, 1973.

The Committee invited Professor Le Van Thoi, Co-Chairman of the National Council for Scientific Research and Co-Chairman of the Committee on the Effects of Herbicides in Vietnam, and Professor Pham Hoang Ho, a member of the National Council for Scientific Research and a member of the Committee on the Effects of Herbicides in Vietnam, to attend the meeting.

2. On May 24, 1973, Professor Pham Hoang Ho forwarded to the Directorate of International Affairs a telegram from the Organizing Committee stating that the meeting had been rescheduled for June 9–11, 1973, instead of June 11–13, 1973.

COMMENTS AND RECOMMENDATION

As this was to be a plenary meeting of the members of the Committee on the Effects of Herbicides in Vietnam under the U.S. National Academy of Sciences, approval is respectfully requested for Professors Le Van Thoi and Pham Hoang Ho to travel abroad to attend the meeting in Washington from June 9 to June 11, 1973.

Should the Minister approve, it is respectfully requested that he sign the attached draft correspondence.

Respectfully submitted.

Saigon, May 24, 1973

Director, Directorate of International Affairs

[Routing stamps, handwritten annotations, and internal approval notes omitted.]

Figure 5b. Report by Professor Pham Hoang Ho on the Committee meeting in Washington, D.C., July 11-13, 1973, including preliminary information on dioxin in fish from Vietnam.

Source: National Archives Center II, International Affairs Directorate Fonds, File 2255.

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VIỆN ĐẠI-HỌC SAIGON
UNIVERSITÉ DE SAIGON
KHOA-HỌC ĐẠI-HỌC ĐƯỜNG
FACULTÉ DES SCIENCES
SAIGON
B.T. 91.095 - 91.097 - H.T. 56 A-2
Số

PHÚC-TRÌNH VỀ CUỘC-HỘI
của ỦY-BAN KHẢO-CỨU TÁC-ĐỘNG CHẤT KHAI-QUANG
ở VIỆT-NAM
tại Washington từ 11 - 13/VII/1973

Do Nhiệm-vụ-lệnh số 095 ngày 6.7.1973, Tổng-Trưởng Văn-hóa Giáo-Dục và Thanh-niên đã đề-cử Giáo-sư LÊ-VĂN-THỐI (Trưởng phái-đoàn) và tôi đi dự cuộc hội nói trên.

Mục-đích của cuộc Hội : Đức-kết bản phúc-trình tóm-lược cho Hàn-lâm-viện Hoa-kỳ về các cuộc khảo-cứu ở Việt-nam.

Kết-quả các buổi làm việc :

Tất cả Hội-viên của Ủy-ban đã duyệt phần-lớn bản phúc-trình dày vào 200 trang. Bản phúc-trình này là tóm-lược của bản phúc-trình đề-nghị mà buổi họp tháng VI/73 đã duyệt qua.

Phần còn lại của bản phúc-trình gồm những chương :

- Thiệt-hại ở rừng và thiệt-hại về sinh-môi-học. Ủy-ban chưa hoàn-toàn đồng-ý về các chương này vì còn phân-chia về việc giải-thích các không-ảnh.

Một buổi hội khảo-cứu khác đang được triệu-tập ở Seattle để giải-quyết vấn-đề giữa các chuyên-viên về Rừng bình-nguyên.(tôi đã được mời tham-dự cuộc hội này).

Kết-quả bên lề cuộc Hội .-

Trong một cuộc họp mặt để bàn-cải về vấn-đề "Thiệt-hại ở Rừng", Giáo-sư Meselson, trong Ủy-ban duyệt phúc-trình (Report Review Committee) đã cho biết kết-quả sơ-khởi về cuộc định-lượng Dioxin ở cá, lưới năm 1973 tại Tân-Uyên : Cá còn chứa vào 200 ppt dioxin.

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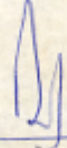
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Nếu kết-quả này có thể suy-rộng ra thì cả vùng sông
Đồng-Nai và liên-hệ còn chứa vào khoảng $1/3 - 1/4$ nồng-lượng
dioxin tìm gặp năm 1970. Sự việc này thật ra hợp với điều đã
biết về sự tồn-tại của dioxin trong đất.

Tưởng cùng cần nhắc lại rằng nồng-lượng chết (lethal dose
50) của dioxin ở Bọ (Cobaye) là 600 ppt mà thôi.

Giáo-sư Meselson hứa sẽ hoàn-tất sự định-lượng dioxin
ở Tôm (lưới năm 1973) vào cuối tháng VIII này.

Saigon, ngày 23 tháng 7 năm 1973


Gs. PHẠM-HOÀNG HỘ

English translation (Figure 5b):

UNIVERSITY OF SAIGON
FACULTY OF SCIENCES
Saigon

REPORT ON THE MEETING
OF THE COMMITTEE ON THE EFFECTS OF HERBICIDES IN VIETNAM
held in Washington, July 11–13, 1973

Under Mission Order No. 095 dated July 6, 1973, the Minister of Culture, Education and Youth appointed Professor Le Van Thoi (head of the delegation) and myself to attend the above-mentioned meeting. Purpose of the meeting:

To finalize the summary report for the U.S. National Academy of Sciences concerning the studies conducted in Vietnam.

Results of the meeting

All members of the Committee reviewed most of the report, which was approximately 200 pages in length. This report constituted a summary of the proposed report that had been reviewed and approved at the June 1973 meeting.

The remaining parts of the report concerned the following chapters:

- Forest damage and ecological damage.

The Committee had not yet reached full agreement on these chapters because differences remained concerning the interpretation of aerial photographs.

Another research meeting was being convened in Seattle in an effort to resolve the differences among specialists concerning the lowland forests. (*I was invited to attend this meeting.*)

Information obtained on the sidelines of the meeting

During a closed meeting convened to discuss the question of “forest damage,” Professor Meselson, a member of the Report Review Committee, provided preliminary information on the quantitative determination of dioxin in fish caught in 1973 at Tan Uyen:

The fish still contained approximately 200 ppt of dioxin.

If this result could be extrapolated, the Dong Nai River region and associated areas might still contain approximately one-third to one-quarter of the dioxin concentration detected in 1970. This would in fact be consistent with what was already known about the persistence of dioxin in soil.

It should also be recalled that the LD₅₀ (lethal dose 50) of dioxin in guinea pigs was reported as only 600 ppt.

Professor Meselson stated that he expected to complete the quantitative determination of dioxin in shrimp caught in 1973 by the end of August of this year.

Saigon, July 23, 1973

Professor PHAM HOANG HO

[The numerical values and units are reproduced as stated in the original archival document.]