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**EVALUATION STUDY
OF THE
MUONG PHIENG CLUSTER AREA**

Prepared for
THE USAID MISSION TO LAOS
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FOREWORD

This evaluation of one of the USAID-Laos "Cluster" development programs was originally reproduced in a limited number of copies for use within the Laos mission. The demand for the study was great enough to warrant publishing the study and its two annexes to provide wider distribution within the Mission in Laos. A few copies will be sent to organizations and persons who have a professional interest in the economic and social development of Laos and in the methods employed therein by this Mission.

The "Cluster" concept arose out of a need that existed in Laos during the early 1960's for a series of carefully distributed centers or nuclei of rural development. Each cluster was located in an undeveloped area that had a reasonable potential for development by virtue of its physical and human resources. The few clusters that we could start, given limited aid resources, were spaced so that each sub-region in Laos had at least one, thereby also providing a practical and accessible demonstration project for inspection by persons from other villages in the sub-region.

In the case of the Muong Phieng Cluster, it was decided to install the extensive Nam Tan Irrigation System (by far the largest in Laos) almost three years after the start of the cluster program. It is probable that this system would not have been considered had not the development work in the cluster illuminated the possibilities for development of the relatively sophisticated Nam Tan system. Less than half of the system had been constructed when this evaluation study was concluded. However, the study has raised some issues and pointed out some possible dangers concerning the development of the system which we are now investigating more intensively. The study was also used by the Evaluation and Program Management Division of USAID-Laos in designing the Program Management Information (PMI) System, a computerized system which, in part, analyzes and controls the progress of our development projects in rural areas.

We have felt fortunate in having Paul Maynard and his assistant, Polachart Kraiboon available to perform this study. Mr. Maynard had worked in Laos for the Agency for International Development from 1960 to 1963 in a number of capacities, the last of which was that of Program Officer for the USAID Mission. He then spent some five years working for research organizations in Thailand, where he established an effective working relationship with Mr. Polachart.

The scope of work under this research contract only called for the evaluation study and the chronological history (Annex I). Since the village data had to be collected for the evaluation study, the authors offered to put the village data in presentable order for baseline use (Annex II) although the contract allowed only five months for completion of all work herein presented. Because of the short time in which the study was produced, we feel that minor inconsistencies can be overlooked, given the utility to this Mission of the overall product.

CHARLES A. MANN
Director, USAID-Laos

ACKNOWLEDGEMENT

This evaluation study of the Muong Phieng Cluster area was initiated by Mr. Charles A. Mann, Director of the U.S. Agency for International Development Mission to Laos (USAID-LAOS) in the desire to reconstruct the five-year series of events which constituted the implementation of the Cluster program and to extract, through analysis of these events, guidance for planning and executing similar programs. The study received his unstinting support.

Many other persons, both in the Royal Lao Government (RLG) and the U.S. Government, and especially the villagers of the Cluster area contributed to the supply of data. Special acknowledgement must be made to Tiao Ratana Panya, Governor of the Province of Sayaboury, to Nai Kheme Saysanavongsay, Nai Dan of the Dan of Muong Phieng, and to Maha Bouarith Khampouvong, USAID Manager of the Cluster. Each of the Nai Bans, (local village leaders), and their respective Village Development Committees graciously took time from their planting and other duties to respond to the questioning of the field team.

The USAID Rural Development Division proved to be hospitable and efficient hosts, providing all possible support. We are especially grateful for their assignment of Mr. Pradith Vongpakdi to the field team, and for the devoted and expert help provided by the USAID secretary, Mrs. Judy De Metre.

Assistance, advice and insight were only part of the contributions of Mr. George Ridenour, Provincial Coordinator of Sayaboury Province and former Cluster Manager at Muong Phieng. His continuing desire to have an objective and penetrating analysis of the Cluster was a constant spur and source of encouragement. The many informal discussions with Mr. James B. Chandler, Deputy Director of USAID-LAOS served, we hope, to keep the study from being too parochial.

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**EVALUATION STUDY
OF THE
MUONG PHIENG CLUSTER DEVELOPMENT PROGRAM**

SUMMARY

The five-plus years of Cluster development have brought the Muong Phieng area into the fringes of the monetized sector of the Lao economy through creating marketable surpluses of rice and livestock. The impelling factors have been road construction, irrigation development, and the general leaven given to the area by the Cluster program. Supplementary factors have been an element of competition introduced by a resettled group of approximately 1,500 Meo and the market support provided by the Agricultural Development Organization (ADO).

The Cluster concept played a number of roles. First, by applying a combination of development activities relatively simultaneously to the same population, each activity had the potentiality for affecting others through changing the basic environmental conditions common to all activities. Second, while some of the projects did not fully achieve their objectives, the sense of failure was often blurred by the generally positive atmosphere created by the totality of Cluster activities. Third, the Cluster team approach made it possible to secure the maximum contribution from new, area-naive US personnel and provided essential technical and psychological support for the often poorly-trained RLG personnel. Fourth, the Cluster program provided an acceptable and positive reason for maintaining the presence of RLG and USAID personnel in an area where a continuing presence was believed desirable.



The Nam Tan Dam, with the start of the right bank main canal shown on the left. The dam is located near the village of Na Bouam.

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EVALUATION STUDY
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MUONG PHIENG CLUSTER DEVELOPMENT PROGRAM

I. INTRODUCTION

A. Purpose of the Research

The objectives of the research were to provide a complete historical record of all USAID-RLG projects and inputs to the Muong Phieng Cluster since the Cluster's initiation as an area for intensive developmental efforts; to reconstruct the initial political, social, economic, military and educational objectives of the Cluster Program; to evaluate the degree to which the initial objectives have been attained or are being attained; and to determine why certain programs were or were not effective.

The Muong Phieng Cluster Development Program was started in early 1964, in a 60 square-kilometer valley near the center of Sayaboury Province in Laos. The stated objectives were:

- “A. Through the development of effective community organizations:
1. Raise the general standard of living of the inhabitants.
 2. Promote the health and welfare of the inhabitants.
 3. Develop motivational and attitudinal changes conducive to the realization of the aims of the Government of National Union.”
- “B. Through planning, work and mutual cooperation of the villagers at the local level, to develop at least minimal social institutions necessary to the healthy development and the welfare of the inhabitants and their offspring.”⁽¹⁾

The program has been carried on continuously since that time. The area has had a minimum amount of disruption caused by Pathet Lao dissidence although it has not been untouched. The general impression has been created that the Cluster development concept has had as fair a chance of demonstrating its value at Muong Phieng as could be found in Laos.

The general objectives of the USAID Cluster program as a whole have been stated as follows:

- “1. To develop a series of village centers of RLG-US activity where it is deemed important to consolidate or extend RLG services and influences.”

⁽¹⁾ “Cluster Plan”. Document addressed to Tiao Ratana Panya, Chai Khoueng of Sayaboury Province, dated February 9, 1964.

- “2. To provide and develop a series of RLG services and facilities designed to ameliorate village life though without necessarily immediately raising the cash income or increasing the participation of the population in the monetized economy, (schools, dispensaries, home gardens to increase home consumption, wells, etc.)”
- “3. To a limited extent, provide a series of services and basic commodities, particularly in the agricultural, livestock and irrigation fields, designed to increase participation in the market economy, and raise cash income. For isolated areas, the development of intra-cluster roads, plus all-weather road connections to the main highways, are essential elements.”
- “4. Provide an organization and a concentrated receptive audience to conduct the information programs designed to increase the identification of villagers with the RLG.”
- “5. Provide a training ground for agricultural and veterinary extension agents, fundamental education workers and primary school inspectors. The Cluster area programs constitute basis for increasing the competence of the workers assigned to other areas.”
- “6. Through involvement of the Chao Khouangs, Chao Muongs, Tassengs and Nai Bans, increase the participation of local officials in village affairs and in the process strengthen local government.”
- “7. Provide opportunities for effective civic action programs and closer identification between military and local police forces and civilian population.”⁽²⁾

These objectives have provided guidance throughout the development of the Cluster. Their interpretations have changed, however, in accordance with the status of the fluctuating political-security conditions in Laos. Early in the Cluster's history, emphasis was being placed on direct response to the wide range of basic human needs — improved diet, better medical attention, increased mobility, and general improvements in agricultural practices — as the best way to express the RLG concern for its people, and thus ultimately to consolidate their support for their Government.

In 1966-67, during a lull in security conditions, the focus sharpened on rice production as providing the means for stimulating the economy and thereby strengthening local support for the RLG. The Muong Phieng Cluster fitted into this new pattern since it had originally been chosen as a Cluster site over other candidates in Sayaboury Province on the basis of its long-range irrigation development potential.

The Cluster area has also demonstrated a form of economic-social versatility by absorbing a large group of Meo refugees and, presumably, transforming them from hill tribesmen into lowland, wet-rice farmers. By 1969, two major irrigation projects were being constructed, introducing strong forces for change.

⁽²⁾ Memo from Peter Cody, Deputy Director, USAID, To Area Coordinators, Subject, “Mu Ban Samaki Program”, date 20 April 1965.

The Royal Lao Government (RLG) and the U.S.A.I.D. Mission to Laos (USAID) decided that a case study of the Cluster developmental efforts over the past five-plus years could provide insights to and understanding of the Cluster approach as well as guidance for future planning at Muong Phieng and at other locations in Laos.

They requested the preparation of a complete historical record of all RLG-USAID projects and inputs since the Cluster's initiation. This record was to be used to reconstruct the initial political, social, economic, military and educational objectives and to evaluate the degree to which the objectives had been or were being attained. An attempt was to be made to determine why programs were or were not effective.

In the broadest sense, the purpose is to measure the changes which occurred in the area during that time and to estimate the effects of these changes on the joint RLG/US interests in the area. This objective is of direct interest to the U.S. and to USAID management because virtually all influences for physical environmental, economic, social, political and attitudinal change introduced into the area were initiated by USAID or were generated as a result of USAID activities.

B. Method

Information about the Cluster activities was available in the form of documents, personal observations in the Cluster area, and aerial photographs, and through the personal knowledge, impressions and opinions of participants of the Cluster Program as elicited through interview.

The formal structure of the Cluster was delineated through analysis of the contractual documents which established the initial Cluster organization, and through analysis of the Activity Plans (AP), and Small Rural Development Projects plans (SRDP) which committed USAID, RLG and village resources to the attainment of specified (or sometimes, unspecified) objectives. Current operations were reported in monthly reports by some of the technicians and administrators, and in ad hoc correspondence between various participants in the program.

Personal observations included orientation overflights of the area, visits to all villages and to project installations. Photographs of retail and industrial establishments were taken along with intensive local surveys.

A highly fortuitous combination of vertical aerial photography became available during the last days of the project, necessitating an extension of time in order to use the information for Cluster evaluation purposes. Three sorties, dated January 1959 (scale, 1:45,000), January 1967 (scale, 1:26,300); and July 1969 (scale, 1:9,500 to 1:10,000) were used. It is conjectured that the conditions depicted on the 1959 photography are nearly identical with the conditions just before the start of the Cluster in early 1964. The 1967 photography records the conditions after three years of Cluster operation, while the 1969 photography affords an accurate record of the

changes to the countryside resulting from the first two irrigation projects (Muong Phieng No. 1, and Hia Nakok).

All Nai Bans and Tassengs, and most of the members of the newly constituted Village Development Committees (Kommakhan Muban) were interviewed at least twice. US and Lao Cluster personnel, RLG officials concerned with the program and other US personnel were also interviewed. A special series of interviews of all Nai Bans and ex-Nai Bans of the many Meo villages now regrouped at Nam Hia, Nam Pang and Nam Phoui was conducted.

The documentary data was assembled in chronological order by subject matter in order to reconstitute the many series of events which occurred. Gaps or problems were identified and explanations sought through interview or directed documentary search.

Field interviews with the villagers and local officials were carried out by a team consisting of one Thai research analyst, who has performed considerable field-work with the Thai-Lao of northeast Thailand, and a Lao information specialist. Interviews were unstructured. The team know what information it wanted, but let the respondents set the pace; only limited guidance as to major subject areas was supplied by the team during the course of any interview. Participation of the US analyst at the village level was limited to periodic conferences with the team to review finding and to direct new areas of inquiry.

C. Conclusions

1. The objectives stated in the original Cluster Plan provided direction for the program but did not set a goal. Significant improvements in the general standard of living, and in the health and welfare of the inhabitants, were achieved, mainly by working through the existing RLG structure. New local institutions which were introduced by the Cluster were Village Development Committees in each village and a public-relation, information-disseminating activity. A new national institution, the Agricultural Development Organization, made important contributions.

2. The villagers felt that the most important changes that the Cluster brought were better roads and access to markets, the generation of friendliness and tolerance between villagers, the reduction of thievery and physical conflict, and the transformation of their Bouns (merit-making ceremonies) from solemn occasions into highly enjoyable inter-village festivals. Concern was expressed at the loss of game, fish, and forest plant, because of clearing of the forests.

3. The Activity Plans were found to be useful documents. Improvements are suggested with regard to:

- a. relating project objectives to larger goals;

- b. allowing more time for two-way communication with RLG officials and villagers;
- c. establishing internal bench-marks or mile-posts so that past progress and future project commitments can be estimated periodically during project implementation;
- d. revising progress reporting format to fit each project's operations, and
- e. establishing project monitors to make current evaluations of progress.

4. The Cluster approach involves the compounding of multiple development activities within a defined area. In Muong Phieng this approach probably resulted in a higher return for the total development effort than would have been the case if the same total effort had been divided among separated villages. The potentialities inherent in the compounding or mutual reinforcement principle, however, were not fully realized.

5. An annoying problem has been the uncooperativeness of the villagers of Muong Phieng Village. The hypothesis is presented that this may be due to more sharp economic stratification within the village than had been suspected.

6. The irrigation activities at the Cluster area dominate the economy and the society. Unresolved problems at each of the three systems will require thought and action by the RLG, assisted by USAID.

The problem at the Muong Phieng No. 1 system is one of unrealized potential because of the inability to secure the cooperation of a limited number of villagers.

The Hia-Nakok system should have no problems. However, the imperative need for direction and guidance in organizing the water users does not appear to be considered seriously by the RLG, who have not assigned adequate personnel to carry on the professional groundwork performed by a USAID American irrigation technician.

The Nam Tan project is the largest in Laos to date. There are four basic problems, all relating to the villager water user; obtaining ownership of the land; regulating the use of the water; determining the most gainful use of the land during the period of land debt repayment; and eliminating the possibility of ethnic conflict.

The problems are complex and require continuing assistance from RLG and USAID agriculture and irrigation experts.

7. Development of the Cluster area has reached the stage where transfer of responsibility to the RLG for its management and support is being considered. Current USAID support measures and some of the alternative take-over arrangements are described.

II. BACKGROUND

A. Location:

Muong Phieng valley is one of the most fertile areas in Sayaboury Province. The northern head of the valley lies about 25 kilometers southwest of Sayaboury, the capital of Sayaboury Province. The valley extends about 21 kilometers south ending at the small village of Houei Oum. The valley is formed by the Nam Phieng River which enters the valley from the northwest, proceeds south and enters the Nam Phoui River about two kilometers south of Houei Oum. The valley is about five kilometers wide at the widest point.

The center of the valley is approximately 170 kilometers NW of Vientiane, 118 kilometers SSW of Luang Prabang, and 85 kilometers ENE of Muong Nan, Thailand. (see Figure 1)

Road access to the valley is gained only from the north. The road extending north goes to Sayaboury, which lies about 25 kilometers to the northeast, and continues 25 kilometers north to Thadeua, the port on the Mekong for northern Sayaboury Province. To the south, an as-yet undeveloped road goes to Ban Na Le and thence to Pak Lay and Khene Thao. Trails lead into the mountains to the west, where the Thai border lies about 28 kilometers to the west. In earlier days these trails were used for commerce with the Thai province of Nan. There is little access eastward from the valley. On this side of the valley the mountains rise rather abruptly, after which the drainage is eastward toward the Mekong River.

The main streams entering the valley all come from the west. They are the Nam Phieng, the Nam Hia and the Nam Tan. The valley was formed predominantly by the meanderings of the Nam Phieng River which enters from the northwest and traverses the valley from north to south essentially along the eastern edge. (see Figure 2)

B. Administration:

Prior to 1967, the northern half of the valley was part of Tasseng Muong Phieng and the southern half of the valley was part of Tasseng Na Kheme. In addition to the villages in the valley, each of these Tassengs contained mountain villages lying to the east and to the west of the valley. The essential unity of the villages lying in the valley was recognized by the formation of a "Dan" which comprised only the villages in the valley, but necessarily included villages lying in the two tassengs. Thus the Dan overlaps the existing tasseng structure. In 1967, four villages in the center of the valley were pulled out of their respective tassengs to form a new tasseng, that of Na Tane. The Dan of Muong Phieng now consists of parts of three tassengs.

The Dan of Muong Phieng is headed by a Nai Dan. He occupies a position intermediary between the tasseng chief and the Chao Muong. Because of the equivalence

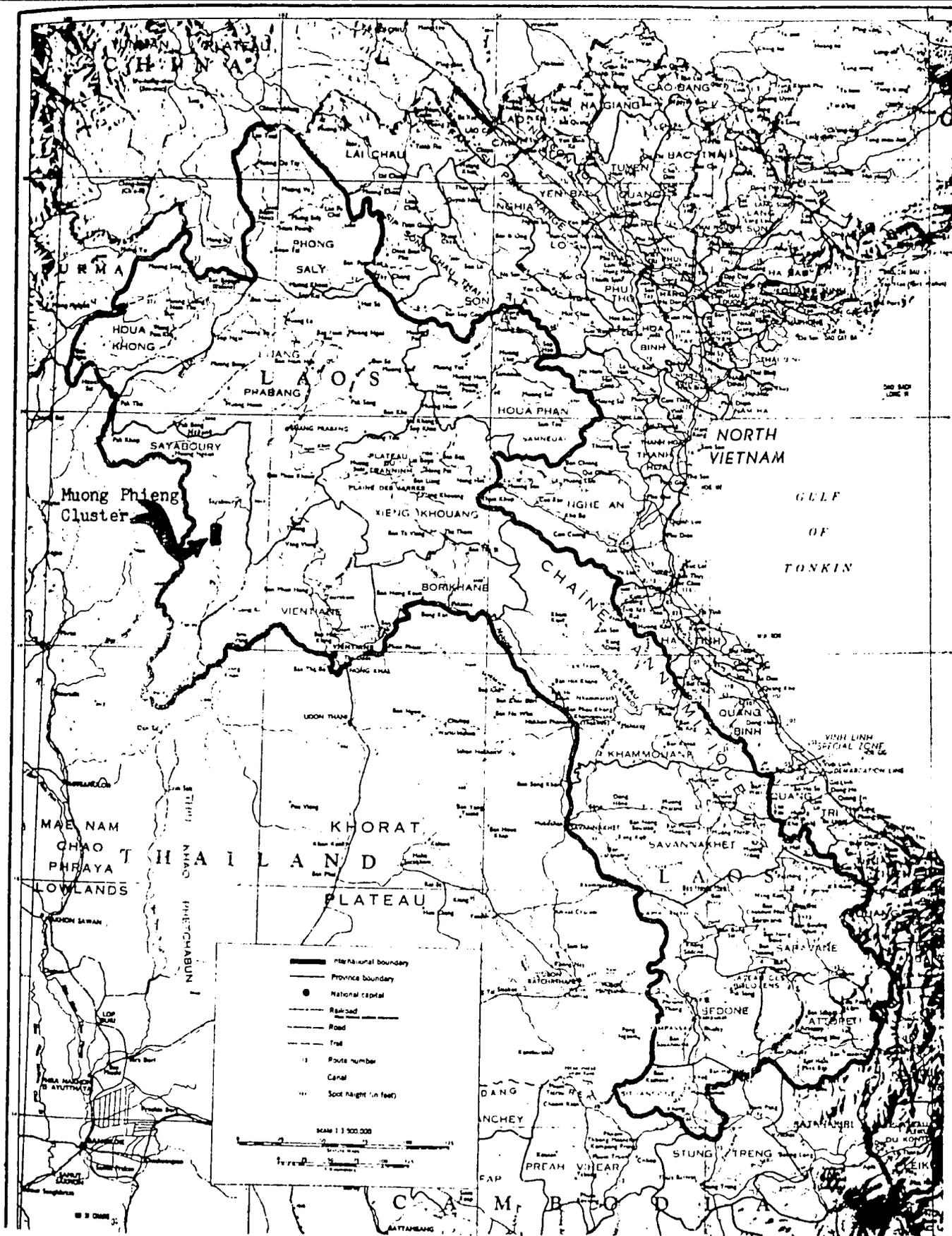


Figure 1

1

MUONG PHIENG CLUSTER

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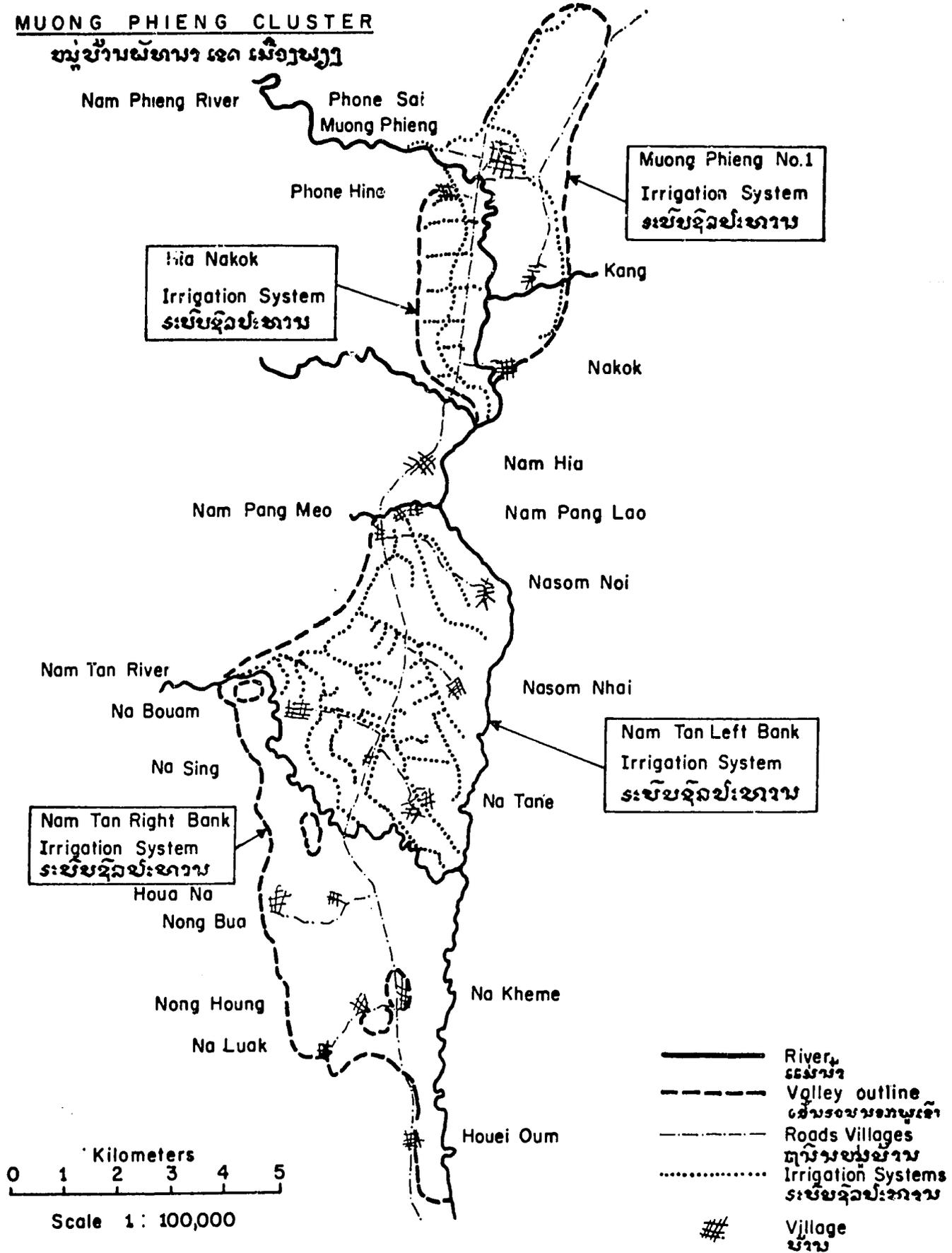


Figure 2

of the Dan area with the Cluster area, the Nai Dan is the RLG counterpart of the USAID Cluster Manager.

Ten villages of Tasseng Muong Phieng lie within the Cluster area. The administrative center consists of the twin villages of Muong Phieng and Phone Sai. The boundary between these villages is indistinguishable to any but the inhabitants. Throughout the USAID literature dealing with the Muong Phieng Cluster, the term Muong Phieng village has been used to describe both villages; only rarely has Phone Sai been identified separately. However the RLG makes a clear distinction between the two and all census figures and other official documents recognize the distinction.

Adjacent to these twin villages is the small village of Nong Ngua, which was established in 1962 as a village for retired soldiers. Other towns in the tasseng are; Phone Hine, Kang, Nakok, Nam Hai, Nasom Noi, Nam Pang Meo, and Nam Pang Lao. Another small community in the tasseng is Nong Bua, a small satellite village of Nasom Noi. It is often confused with the Nong Bua which is a satellite village of the more southern village, Houa Na.

Villages in Tasseng Na Tane are; Na Tane, Na Bouam, Na Sing, and Nasom Nhai.

The villages in Tasseng Na Kheme are; Na Kheme, Nong Houng, Na Luak, Houei Oum, and Houa Na and its satellite village Nong Bua.

South of Houei Oum and clustered around the confluence of the Nam Phieng with the Nam Phoui River are a series of new Meo, Yao and Lao Theung villages occupied by refugees. Although some of the villages lie across the Nam Phoui River and are in Muong Paklay, they are administered from Muong Phieng because of the inaccessibility of Paklay.

There have been continual rumors that the Dan of Muong Phieng will be raised to the status of muong, with a Chao Muong as the top RLG official. This would bring the Muong Phieng Cluster more formally within the evolutionary administrative development envisioned by Royal Decree No. 127 of 13 May 1968.

This Decree establishes the status of the personnel in the Commission for Rural Affairs (CRA). The position of Agent Cadre (or Supervisory Agent) is intended to operate at the muong level, with the responsibility for guiding and advising the CRA Rural Agents in their rural development activities in accordance with the desires of the Chao Muong. The Agent Cadre is intended to fill the role now performed by the USAID Cluster Manager.

C. Economy:

1. Resources:

The main resources of the Cluster area are arable land, moderate amounts of water

for farming, manpower and the capital infrastructure. Where applicable in the following paragraphs, comparisons are made between the conditions existing prior to the start of the Cluster and present conditions. Table 4 summarizes these comparisons.

a. Land

The most valuable arable land is the lowland paddy for wet-rice culture. Upland rice is also grown by Cluster inhabitants.

Total paddy-land planted or cleared totaled approximately 1,610 hectares in 1959. There was probably little change between 1959 and 1964, the start of the Cluster. By 1967, the total had increased to 1,750 hectares.

By 1969 this total had risen to 1,890 hectares, not counting 340 hectares cleared but not yet ready for planting in the Nam Tan left bank irrigation area. An additional 350 hectares on the left bank and 900 hectares (maximum) on the Nam Tan right bank are still to be cleared.

Total area within the edges of the valley floor totals approximately 5,880 hectares or approximately 59 square kilometers. This area is comprised as follows (See Table 1 for breakdown by irrigation areas):

Total planted or cleared	1,890	hectares	
Newly cleared, Nam Tan left bank	340	„	
Still to be cleared Nam Tan left bank	350	„	(max)
Still to be cleared Nam Tan right bank	900	„	(max)
Village area (all villages)	345	„	
Roads	35	„	
Canals	135	„	(min)
Swamp, too low, too high or too rough to be arable without extensive work.	1,885	„	
Total	5,880	„	

The valley soils are mainly reddish-brown latosols similar to those classified in Thailand at the series level as Roi Et and Chiang Mai. They are moderately fertile.

The surrounding hills and mountains are thickly spotted with upland rice areas currently in crop or scarred from previous use. Local villagers report going as far as four kilometers to upland (hai) plots. Since there are mountain villages at about this distance or a little further, it is impossible to tell how much of the existing upland area within this range is worked by Cluster villagers. Almost all of the villages have had to supplement their paddy fields with upland rice fields.

TABLE 1
Land Use in Muong Phieng Cluster Area⁽¹⁾
(in Hectares)

	Muong Phieng No. 1 System	Hia- Nakok System	Nam Tan Left Bank (Wet Rice)	Nam Tan Right Bank (Wet Rice)	Left Bank Nam Phieng (not W. Rice)	Right Bank Nam Phieng (not W. Rice)	Total
<i>Agricultural Use</i>							
Planted, 1959	471	94	244	410	91	25	1,335
Cleared, not planted	32	—	154	76	—	11	273
Total, 1959	503	94	398	486	91	36	1,608
Planted, 1967	476	101	256	411	98	26	1,368
Cleared, not planted	32	1	194	86	16	53	382
Total, 1967	508	102	450	497	114	79	1,750
Planted, 1969	483 ⁽²⁾	206	340	413	102	26	1,570
Cleared, not planted	32	—	455	94	16	62	659
To be cleared	—	151	365	893 (high est.)	—	—	1409
Total 1969, only	515	357	1,160	1,400	118	88	3,638
<i>Other Use, 1969</i>							
Village area	84	17	146	63	11	26	347
Roads	3	6	11	10	—	—	30
Canals	8	8	62	62 (est.)	—	—	140
Hills Uncleared	—	—	—	177	—	—	177
Arability unknown	269	185	464	73 (low est.)	321	236	1,548
Total	364	216	683	385	332	262	2,242
GROSS AREA (1969)	879	573	1,843	1,785	450	350	5,880

(1) Source of data is aerial photography dated 1959, 1967 and 1969.

(2) Includes 80 hectares not adequately irrigated.

b. Water

Rainfall in the Muong Phieng area, which averages 130 cm. per year,⁽¹⁾ is marginal for rice production. Diversion of surface flow is necessary for reasonable assurance of good crops in the wet season throughout the valley.

Enough water is believed available for second-cropping approximately 1,000 hectares in the Nam Tan irrigation area and, assuming minimal use of Nam Phieng water in the Muong Phieng No. 1 system, possible as much as 200 hectares in the Hia-Nakok area. The maximum water supply for a second crop occurs in January, indicating that early

(1) Public Works Activity Plan No. 18, signed 29 June 1968; P. 2.

planting is required. Planting schedules which require heavy water supplies in March or April are considered risky.

c. Manpower

Three main categories of manpower have directly participated in the Cluster program; the villagers, RLG officials, and USAID employees. The latter have included Filipinos working under the Operations Brotherhood contract (five persons, total 95 man-months), American International Voluntary Services (IVS) volunteers (15 persons, total 140 man-months), American USAID technicians (two persons, 26 man-months), many Thai and Lao technicians, and Lao skilled, semiskilled and unskilled labor.

RLG officials from the Chao Khoueng down have participated in the Cluster program with varying degrees of enthusiasm. The Chao Khoueng, however, after having been convinced of the RLG/USAID desire to achieve substantial development of the Cluster area, has been a constant and strong supporter. Other provincial-level officers whose cooperation has been important were the chiefs of agriculture, medicine and public works (Travaux Publics).

The most intimate participation was provided by the RLG field workers in Fundamental Education, agriculture extension, home economics, irrigation, health and sanitation, and public works, as well as the Commission for Rural Affairs agents who were assigned to work in the Cluster. The total numbers of these persons assigned to the Cluster ranged from 10 to 20 at any given time.

The villagers provided the vast majority of man-power. As of 1963, the working ages 16 to 50 years comprised 45.0 percent of the population (2,749 persons), of whom 47 percent were male and 53 percent were female. In 1968, these ages comprised 44.4 percent of the population (3,873 persons). The sex disproportion was even greater, with 45.4 percent (1,758 persons) male, and 54.6 percent (2,115 persons) female. Table 2⁽¹⁾ shows the population of each village, by sex, while Table 3 shows the 16 - 50 year age component, by sex, for each village.

Assuming that an equivalent of half the women were engaged in child-bearing, home duties, etc., there were approximately 2,000 persons in the labor force in 1963 and 2,800 persons in 1968. It should be noted that much work is also performed by children under 16 years of age. However, the marked increase in school attendance in the last five years has reduced the size of this labor source.

d. Capital Infrastructure

The five-plus years of Cluster operations have given the Muong Phieng area a somewhat advanced infrastructure, which is still growing: (See Table 4 for comparative list)

(1) Source of all population data is the Office of the Nai Dan, Dan of Muong Phieng.

TABLE 2
Whole Population, Muong Phieng Cluster

	1963			1968		
	Male	Female	Total	Male	Female	Total
Muong Phieng	289	411	700	481	492	973
Phone Sai	311	324	635	444	453	897
Kang	251	243	494	282	295	577
Nakok	165	192	357	176	208	384
Nam Hia	(121) ⁽¹⁾	(147)	268	(432)	(527)	959
Nam Pang Meo	—	—	—	112	133	245
Nam Pang Lao	—	—	—	28	29	57
Nasom Noi	73	98	171	82	84	166
Nong Bua	—	—	—	36	43	79
Phone Hine	95	68	163	107	90	197
Sub-total	1,305	1,483	2,788	2,180	2,354	4,534
Na Tane	154	179	333	234	245	479
Na Bouam	257	265	522	360	366	726
Na Sing	148	135	283	163	162	325
Nasom Nhai	209	210	419	266	262	528
Sub-total	768	789	1,557	1,023	1,035	2,058
Na Kheme	325	360	685	409	454	863
Houa Na	319	344	663	387	400	787
Housi Oum	78	65	143	90	99	189
Na Luak	46	50	96	47	49	96
Nong Houng	85	90	175	98	101	199
Sub-total	853	909	1,762	1,031	1,103	2,134
TOTAL	2,926	3,181	6,107	4,234	4,492	8,726
Percentage	47.9%	52.1%	100.0%	48.5%	51.5%	100.0%

(1) Figures in parentheses estimated.

(1) Road System

The system includes the all-weather road to the province capital, Sayaboury, and which continues north to the port on the Mekong, Thadeua. This road consists of 25 kilometers to Sayaboury and an additional 25 kilometers to Thadeua. Within the Cluster there is a main road 25 kilometers long from which branches stem to all villages except Na Luak and Nong Houng. Completed feeder roads total about 14.7 kilometers in length; an additional 1.5 kilometers are under construction. The roads were built

TABLE 3
Population, Age 16-50

	1963			1968		
	Male	Female	Total	Male	Female	Total
Muong Phieng	145	172	317	205	240	445
Phone Sai	128	154	282	196	221	417
Kang	114	114	228	125	150	275
Nakok	76	104	180	91	123	214
Nam Hia	(41) ⁽¹⁾	(46)	87	(185)	(221)	406
Nam Pang Meo	—	—	—	54	64	118
Nam Pang Lao	—	—	—	8	15	23
Nasom Noi	37	29	66	29	36	65
Nong Bua	—	—	—	12	17	29
Phone Hine	43	34	77	40	42	82
Sub-Total	584	653	1,237	945	1,129	2,074
Na Tane	66	78	144	91	121	212
Na Bouam	126	123	249	158	168	326
Na Sing	72	76	148	52	72	124
Nasom Nhai	79	87	166	103	112	215
Sub-Total	343	364	707	404	473	877
Na Khome	139	169	308	158	189	347
Houa Na	135	162	297	155	196	351
Houei Oum	31	37	68	37	47	84
Na Luak	20	21	41	21	25	46
Nong Houng	40	51	91	38	56	94
Sub-Total	365	440	805	409	513	922
TOTAL	1,292	1,457	2,749	1,758	2,115	3,873
Percentage	47.0%	53.0%	100.0%	45.4%	54.6%	100.0%

(1) Figures in parentheses estimated.

and are maintained by the Sayaboury sub-division of RLG Travaux Publics. They were assisted financially and technically by the Bureau of Public Roads Division of USAID. Construction cost (excluding the road to Thadeua) is estimated at \$700,000 and annual maintenance at approximately \$7,000 a year.

Pre-Cluster roads were seasonal trails or nonexistent. There were no bridges that could survive wet-season stream flow.

TABLE 4
Resources, 1963 and 1969

	UNIT	1963	1969
Wet-Rice Paddy Land	Hectares	1,650	1,890
Labor Force	Persons	2,000	2,800
Roads all-weather	Kilometers	—	—
Intra-Cluster	" "	0	43
Connect Sayaboury	" "	0	25
Irrigation System	Hectares		
In operation	" "	200 (est.)	610
Under construction	" "	—	2,560
Airfields	—	0	1
Sanitary Wells	Wells in use		
Dug (lined)	" "	0	24
Drilled	" "	0	5
Medical Facilities			
Clinics	—	2	6
Police Stations		2	3
Telephone System	Villages served	0	9
Rice Mills	—	0	8
Retail Stores	—	7	38
Radios	—	?	228
Bicycles	—	?	103
Sewing Machines	—	?	41
Schools	(see Table 5)		
Wats	—	17	18
Monks	—	18	11
Churches (Christian)	—	—	2

In 1964, there were approximately 20 commercial vehicles in Sayaboury. One or two a day ventured to Muong Phieng in the dry season - none in the wet-season. There are now over 110 taxis and trucks in the Sayaboury-Muong Phieng area, in addition to the official (including USAID) vehicles. They make an estimated 30-35 round trips between the Muong Phieng area and Sayaboury each day with slightly fewer on some wet days. Twenty to 25 trips are made between Sayaboury and Thadeua each day.

(2) Irrigation Systems

The next most important capital assets are the three systems for distributing water for agricultural use; the Muong Phieng No. 1 System, serving approximately 400 hectares

but with a maximum capacity to serve 500 hectares; the Hia-Nakok System, now serving about 200 hectares but with a potential of over 350 hectares; and the Nam Tan left and right bank systems, with a potential of approximately 2, 560 hectares.

The Muong Phieng Dam and a canal leading to the edge of the irrigated area were constructed by RLG-USAID prior to the start of the Cluster. All other irrigation developments are related to Cluster activity.

(3) Airfields

There is one airfield located in the Cluster area near the site of the Nam Tan Dam. The field is 2,100 feet long by 80 feet wide, with a laterite surface. It can be used all weather by small planes. There was no airfield pre-Cluster.

(4) Potable Water

Because of the Cluster's location on the valley floor sub-surface water is generally easily available to most villages. Only the village of Houei Oum has no wells. The demand for wells is not critical, although water can become scarce at the end of the dry season. Most villages contain a number of unlined, non-sanitary wells dug in the traditional manner. In addition, a total of 39 wells were dug by the Cluster, of which 24 are in use. Eleven wells were drilled; five of these are in use. The locations in each village of all Cluster wells are shown on the village maps included in Annex II.

(5) Medical Facilities

The main medical facility is the clinic at Muong Phieng. It has one bed available for transient patients. There is no refrigerator; The refrigerator in the Center guest kitchen is used to store the small supply of vaccines. Two medics are on duty. The third assigned here spends his day at the clinic at Nam Tan - returning here at night.

Other clinics are located at Nam Hia, Na Tane, Na Kheme, the Nam Tan construction site, and at Nam Phoui. The common complaints are malaria, gastro-intestinal and upper respiratory infections, undernourishment and skin disease.

Prior to the Cluster there were small dispensaries at Muong Phieng and Na Kheme. A mobile team of Operations Brotherhood doctors and nurses made periodic tours through the villages to which access could be gained by vehicle. This sharply limited or precluded visits during the rainy season.

(6) Police Stations

There are police stations and personnel at Muong Phieng (four policemen), Nam Hia (two policemen), and Na Kheme (three policemen). The station at Muong Phieng is also the control point for the telephone system.

(7) Telephone System

The telephone system was constructed from surplus US military communications equipment received through USAID, and poles supplied by the villagers. The central is located at the police station in Muong Phieng. At present the system serves Phone Sai, Kang, Nakok, Phone Hine, Nam Hia, Na Tane, Nasom Nhai and Na Kheme.

(8) Rice Mills

There are eight rice mills in the Cluster area; one in Muong Phieng, rated at 15 horse power; three in Phone Sai, rated at 8, 10 and 12 hp.; and one each at Nam Hia (10 hp.), Na Sing (15 hp.) Na Kheme (16 hp.) and Kang (8 hp.).

Five of the owners are from Sayaboury - of these two also own stores and one operates two taxis. Two of the locally owned mills are run by farmers. The other owner, in Na Kheme, also runs a store.

All raise pigs on the rice bran by-product of the milling. The miller in Na Sing raises the largest number averaging 50-60 head. A total of approximately 240 pigs are raised by all millers.

The miller at Muong Phieng seems to have the largest milling volume. He reports using 400 litres of gasoline a month at his 15 hp. mill. Three millers report 200 litres a month as the next largest gasoline consumption. All use family labor except the mill at Na Kheme, which also hires a boy at 3,000 kips per month.

All of these mills were installed recently - one in 1966, three in 1967, and two each in 1968 and 1969. Prior to 1966, all milling was done at home using hand-operated mills for subsistence supplies. It was only with the opening of roads to markets that volume surpluses could be grown and sold - necessitating power milling.

(9) Retail Stores

There are now 38 retail stores in the Cluster area, (including Nam Phoui) as compared with seven stores pre-Cluster. All are located on or near the main highway except for the four located in Kang. Nine are in Muong Phieng, two in Phone Sai, four in Kang, five in Nam Hia, five in Phone Hine, four in Na Sing, three in Na Kheme, one in Houei Oum, and five in Nam Phoui.

Pre-Cluster, three stores were in Muong Phieng, and one each in Phone Sai, Kang, Na Kheme and Houei Oum.

Thirty-three of the 38 stores sell cloth; 32 stores sell soap, monosodium glutamate (Piang Noua), canned milk, medicines such as aspirin, and matches; 25 to 31 of the stores sell candles, fish sauce (nam pa), "zorries", cigarettes, candy, dry batteries, salt, and ball point pens; 15 to 24 stores sell blankets, dresses, hats, pots, kerosene, pails, whiskey and beer, leaf tobacco, belts, "pasalong", cigarette lighters, sugar, string and rope,

envelopes and writing paper, soft drinks, fishing line and spoons. Approximately 20 other items are sold at less than 15 of the stores. A relatively wide range of agricultural tools is sold only in one store in Phone Hine, which is an agency for ADO.

Six of the store owners were elected as members of the Village Development Committees. Nineteen of the 38 are migrants from Sayaboury town or beyond. One of the owners is an Indian, one is a "Haw" from Ban Houei Sai, seven are Lao Theung, and all others are ethnic Lao.

The only stores which engage in barter to any extent are the five in the refugee village at Nam Phoui, which barter some goods for rice. Some of the rice may be refugee rice, while some may come from upland fields worked by Meo villages in the adjacent mountain area.

(10) Personal Equipment

Numbers of radios, sewing machines, bicycles and motorcycles were reported for all towns except Nam Hia, Houa Na, and the two Nam Pangs. There were a total of 228 radios, with the largest numbers in Muong Phieme, Na Bouam, Na Kheme, Phone Sai, Kang, Nakok and Na Tane. Na Kheme reported the largest number of sewing machines, (10), followed by Na Tane, Na Sing and Muong Phieng (41 for the entire Cluster).

The total of 103 bicycles were distributed among all villages except Na Luak and Nong Houng, which villages also had no sewing machines. Although there are a number of official motorcycles in the Cluster, there are only three that are privately owned - one in Na Tane and two in Na Kheme.

(11) Schools

All villages have schools except Na Luak (21 families), Nong Houng (35 families), Nam Pang Lao (82 families) and the two satellites of Nasom Noi and Houa Na, each called Nong Bua (19 and 15 families respectively). Except for Na Luak, all are within 1.5 kilometer of a school in a nearby village.

In 1963 all schools in the Cluster held classes only in grades 1 through 3 except for the school in Muong Phieng village, which held classes in grades 1 through 6. In 1968, three schools held classes in grades 1 through 6. Table 5 compares school facilities and school attendance in 1963 and 1968. Particularly noteworthy is the increase in school attendance in grades 4 through 6. Over 450 additional persons in the cluster will be better equipped to build their economy and society.

This increase is not simply a function of increased educational facilities. Children could be more easily spared from home and field duties because of the strengthened economy. Access to the three Groups Scolaire from other villages became feasible with the better road net, whereas previously the many necessary crossings of sometimes dangerous water courses had stopped parents from sending their children to other villages.

TABLE 5
School and School Attendance
(Primary Schools)

	1962-3	1968
TOTAL POPULATION	6,107	8,726
SCHOOL AGE CHILDREN (6-14 years)	1,564	2,397
Per Cent of Total Pop.	26%	27.5%
SCHOOL ATTENDANCE	537	1,505
Per Cent of School Age	34%	63%
GRADES 1 - 3	506	1,020
Per Cent of School Age	32%	42%
GRADES 4 - 6	31	485
Per Cent of School Age	2%	21%
SCHOOLS	12	17
SCHOOL ROOMS	16	39
TEACHERS	17	39
STUDENTS PER CLASSROOM	33.6	38.6

Both the desire and the ability to send children to school has outstripped the increase in school rooms, as is suggested by the increase in number of students per classroom.

(12) Wats and Churches

There are 18 Buddhist wats and two Christian churches in the Cluster. All villages have wats (Na Kheme has two wats) except Nam Pang Meo and Nam Pang Lao, Nong Ngua, and the Houa Na satellite, Nong Bua. However, only nine of the wats have resident monks, although those which lack them (Kang, Nakok, Na Sing, Na Luak, and Nong Houng) are trying to recruit.

A total of 58 novices are in residence (August, 1969) including ten at Nasom Nhai, seven at Nakok, six each at Na Tane and Na Kheme, with the others scattered.

Prior to the Cluster there were 18 monks in residence - only Nakok was without one. However, while there has been continuing difficulty in securing dedicated resident monks, the role of the wat in village life has also changed. As will be discussed later under "Village Perceptions" the religious aspect of wat activities is tending to take second place in comparison with the secular. The Wat "Bouns" or religious festivals given by a given village are now attended by many members of other villages, thereby increasing the charitable contributions but also, more importantly, serving to enhance villager interaction and mutual tolerance.

Both Christian churches are in the Meo village, Nam Hia. One is Protestant and the other is Catholic. The Protestant group has the longer tradition, but both groups receive significant guidance and assistance from their respective churches. The Nam Pang Meo "Houei Sec" group, who are mainly Catholic, have cooperatively purchased a tractor and are working closely as a community to clear land on the Nam Tan project.

(13) Residential Structures

Over 1850 residential and related structures have been identified and plotted (by use of aerial photography) on the village maps (See Annex II), in addition to the schools, wats, clinics, rice mills, ADO warehouses and police stations which were identified by ground survey in combination with aerial photography. Many of the houses built since 1959 have been recognized and marked as such.

Comparisons of the distributions of houses have shown that villages have expanded in size when adjacent forest area was available. No expansion at the expense of paddy land, however, was noted. In cases where village growth was constricted by paddy or swamp and river bottom, satellite villages were created. These are, Nasom Noi's Nong Bua, Houa Na's Nong Bua, Na Kheme's Houei Omn, and Na Luak's Nong Houng. In other cases, the entire village (or most of it) picked up and moved - Na Sing and Phone Hine.

In the case of Phone Hine, much if not most of the village is relocating itself in a strip development along the main Cluster road, just south of Muong Phieng. The new houses being built are well-constructed and tend to follow the style of the houses built by USAID for the IVS in Muong Phieng. Five new stores are in this area. Some of the inhabitants are a group of Thai Dam (or Phu Thai) who moved themselves into Phone Hine within the last year. The Nai Dan, who also lives in this settlement, is seeking permission to have it recognized as a new village to be called Phone Thai.

2. Resource Utilization:

a. Rice Production

There are no official statistics relating to Muong Phieng area rice production. In 1969, the Commission for Rural Affairs (CRA) workers started compiling data on number of paddy fields and upland fields worked per family and on the rice production per family in terms of "kalongs" (five-gallon kerosene cans with the tops cut off - the standard bulk measure in the area). Since the rice figures tend to be rounded in hundreds of kalong, they only show rough approximations of actual production. Furthermore, these figures are now only available for a few villages.

Certain production estimates can be made on the basis of known facts and probable averages. The basic pattern of wet-rice production supplemented by upland growing is said to have started seven or eight years ago, when a drought so reduced the rice crop that famine was averted only by receipt of emergency supplies from the RLG. Today all villages report varying proportions of upland to paddy production.

Average wet rice production is reported at 300 kalongs (one kalong holds approximately 10 kilograms of paddy rice) per each family that works paddy in Muong Phieng Tasseng. Production is approximately 225 kalongs per family in Natane Tasseng and approximately 200 kalongs per family in Tasseng Nakheme. Upland rice per family who engage in this production is said to range from 100 to 200 kalongs - and may average approximately 150 kalongs.⁽¹⁾

Holdings of paddy land in Tasseng Muong Phieng are reported by the Nai Bans to average approximately two hectares of paddy per family. A more realistic figure is probably 1.7 hectares. In Tasseng Na Tane, holdings on the left bank of the Nam Tan Irrigation system average 1.50 hectares, according to the Rural Development Division surveyors. Paddy holdings in Tasseng Nakheme probably average about the same.

The minimum subsistence requirement per person per year is estimated at 0.33 ton of paddy per year or 200 kilos of milled rice (based on 550 grams per day per person and a milling recovery rate of 60 per cent for home-use rice). One ton of paddy will feed three persons per year. With a 1968-69 population of 9,000 persons, the subsistence base for the Cluster was approximately 3,000 tons per year.

In 1968, the 4,600 person population of Tasseng Muong Phieng probably planted approximately 700 hectares of paddy yielding 1,120 tons (at 1.6 tons per hectare). Unless average yields are underestimated, the shortfall of 410 tons from their base subsistence requirement of 1,530 tons was made up by upland rice. It is believed that at least 130 Meo families from Nam Hia and Nam Pand Meo engaged in upland farming for their total rice production which was a minimum 2.0 tons per family, or 260 tons. The remaining 150 tons would require upland production by only 100 Lao families, which is well within acceptable probabilities.

In the two other Tassengs, approximately 800 hectares of paddy should have produced a maximum 1,200 tons, or 270 tons short of the 1,470 ton subsistence requirement for its 4,400 persons. The village reports suggest that more than half of the 600 plus families in these two Tassengs raised upland rice, or a minimum 450 tons (at 1.5 tons per family).

The estimate of 550 grams of rice per person per day, although it is low in comparison with the rice-heavy diet for the Lao military, may overestimate the rice portion of a more balanced diet. The per capita rice subsistence requirements for Thailand⁽²⁾ as a whole are estimated at 125 kilograms per year by the Thai Ministry of Agriculture. The Thai National Economic Development Board uses an estimate of 154.3 kilograms in their national income accounts. The Thai National Statistical Office, in 1962, estimated the national average at 168 kilograms. The averages for the Northeast and North (188 and 185 kilograms respectively) were higher than the Center (166 kg.) and the South (160 kg.). This would support the fact that a reduction of total rice in the diet occurs as the diet becomes more diversified.

(1) Estimates based on production as reported during interviews with village leaders.

(2) Data on Thailand supplied by Mr. Peter Gajewsky, Program Economist, USOM Thailand.

As the economy of the Cluster becomes richer in vegetables and other foods, the rice surplus may receive a further augmentation through reduced local demand. It is possible that this has already occurred, and may be one of the reasons for the increased surpluses of the last two years.

The importance assumed by upland rice in the Cluster emphasizes the marginal reliability of rainfall. Dependence on upland rice will probably continue for some time, possibly to the detriment of work on the newly-irrigable lands in the Nam Tan system, until the ability of the Nam Tan River to provide adequate water is demonstrated.

There has been little recognition by the Cluster or by RLG Agriculture of the role played by upland rice. The Nai Ban of Nakheme said that they get plenty of advice about paddy farming but nobody helps with their upland farming.

Paddy farming has changed in two ways since the Cluster started. Earlier, no rice was planted by any farmer until the religiously auspicious day had been determined by the elders and the monks. The first Cluster agriculturist determined that the date always resulted in planting that was too late for the area, and contributed to the generally low productivity. This procedure was dropped.

The local farmers had also followed the practice of transferring the two-week-old rice seedlings to a new bed, where they were allowed to recover and produce a bigger stem for 20 days. After this, they were again pulled up for their final planting. This practise was also shown to be unnecessary.

Power milling of rice has increased greatly since 1966. If the figures cited by the mill owners as their through-put during the harvest season can be accepted as a measure of maximum capacity (see Table 6), it will be seen that the daily milling capacity of 55 kalongs in 1966 rose to 205 kalongs in 1967, 340 kalongs in 1968, and 535 kalongs as of today. Present capacity can be estimated at approximately 5.5 tons of paddy a day.

A good deal of milling is still performed on primitive hand-operated mills at home. Probably all surplus rice is powermilled, while money received from these sales may well be applied to the payment for power milling for subsistence rice. The standard rate is 25 kip per kalong if the farmer takes the rice bran, 20 kip if he leaves it with the miller.

It is unfortunate that better estimates of total rice production, amounts milled, subsistence requirements and milling recovery rates are not available. The installation of milling equipment is a clear response of local private enterprise to the increasing surpluses generated by the total Cluster program. Better information might provide insights into the character of the incentives which made these millers decide to make these investments. The burgeoning of retail sales outlets is a similar case.

b. Livestock Production

Livestock raised in the Cluster include buffaloes, pigs, ducks, chickens and fish. A

TABLE 6
Rice Mills

Place & Owner	Horse Power	Date Esta.	Daily Milling		Month ly Gaso- line Con- sump. (liters)	Hogs Raised
			Harv. Season (kalong)	other		
Muong Phieng Ay Vong	15	1969	150	60	400	25
Phone Sai Ay Phim	10	1966	55	20	100	15
Ay Lom	8	1967	45	23	200	15
Thit Daeng	12	1969	45	25	100	25
Nam Hia Ay Chan	10	1967	55	30	150	35
Na Sang Ay Pheng	15	1968	50	15	200	55
Na Kheme Xieng Si Phan Sao Pao	16	1968 (out of commission, beyond repair?)	85	25	200	40
Kang Xieng Tong Dee	8	1967	50	15	100	25
TOTAL	94		535	213	1,450	235

number of censuses of the first four have been taken. Their results are so divergent that no attempt will be made to use them in this report.

(1) Buffalo

There were enough buffaloes in the area in 1962, prior to the Cluster, so that some of the villages were able to sell as many as 30 buffaloes each to a group of merchants from Luang Prabang said to represent the military.

The merchants offered such high prices that the villagers sold more than they should have, and have regretted their avidity. They have recovered enough to be able to sell,

last year, a total of about 110 buffaloes, mainly to Sayaboury traders. The going price is around 50,000 kip. The largest sellers were Nakheme (25-30 head), Na Bouam (20-head) and Na Som Nhai (10-15 head).

At present, concern is being expressed at the necessity for using the buffalo for the double-cropping which is now being promoted by the RLG. The dry, hot weather of the dry months is felt to be too physically wearing for the buffalo, who normally use this period to rest and forage. Double-cropping has also introduced another problem concerning the buffaloes. During the wet season, local custom has tight controls over the buffaloes' wandering and strict accountability for damage caused to neighboring planting areas. These controls have not yet developed for dry season planting, forcing the relatively few double-croppers to either build fences around their paddy areas or maintain continuous personal guard.

(2) Pigs

One of the first Cluster development projects attempted to introduce raising of pure-bred Yorkshire hogs into a culture which had been raising local pigs for many years. (see AP-2)

Consumption and marketing patterns for the local hogs were constrained by the limited number of established procedures for disposing of the large amount of highly-perishable pork resulting from the slaughter of only one hog and by the lack of either refrigeration or standard meat preservative procedures. No established market for fresh pork meat existed so that the local slaughterer had to depend on the good will of his immediate neighbors for sale of the meat. Local slaughter only became economically feasible when the market for immediate consumption of the entire carcass was guaranteed by the assembly of a suitable number of immediate consumers, such as at a ceremony or party, and where the donor or donors of the ceremony underwrote the total cost.

Export outside the cluster area prior to Cluster development only occurred on the limited number of occasions during the dry season when vehicles traveled from Sayaboury. Completion of the all-weather road system has greatly expanded the marketing of hogs, which totalled approximately 395 during the past year. Muong Phieng sold 70-80, Na Bouam 55, and Houa Na 45, as the largest exporters. The markets are Sayaboury, the construction camp at the Nam Tan Irrigation System, and the market at Muong Phieng.

An important incentive in hog-raising has been the accumulation of bulk supplies of rice bran at mills. Reference to Table 6 will show that the millers are raising approximately 235 hogs at present. Individual farmers may also reclaim their own rice bran for this purpose.

(3) Ducks

Ducks are important suppliers of animal protein in the local diet. The total duck population in 1964 is estimated by the RLG veterinary agent at approximately 4,000.

The local ducks produce about 50 eggs a year. The Cluster introduced 488 Taiwan ducks in 1964 which produce over 200 eggs a year. These have now interbred with local ducks. The mixed breed is said to retain most of the characteristics of the Taiwan duck.

The local ducks are preferred for eating, since they are said to taste better. This is reflected in the price, which is 500 kip for a local duck and 400 kip for a Taiwan duck. Eggs sell for 20 kip a piece. (see AP No. 5)

(4) Chickens

The censuses of chickens seem particularly aberrant. They range from over 40,000 for the Cluster in 1966 to 12,000 in 1969. The latter figure is the estimate made by the RLG Veterinary Agent. Regardless of the present size of the chicken population, it seems apparent that chickens are a main source of animal proteins in the Cluster. In northeast Thailand, there is consistently approximately one chicken per person in all changwats,⁽¹⁾ and somewhat less in north Thailand. There are approximately 9,000 persons in the Cluster

An epidemic of disease fatal to chickens is said by most informants to have persisted since about 1966. However, the Nai Ban of Houa Na said that chickens have been dying of disease since before the Cluster. Most of the villagers who commented on the disease blamed the building of the new roads and the presence of automobiles. It is interesting to note that the only village that says it has not been affected by the chicken disease, Na Lrak, does not have a new access road nor has it accepted the new Taiwan ducks.

A major new market for poultry, and especially chickens, is the Nam Tan irrigation system construction camp. Poultry are also used as items for barter with the traveling merchants from Sayaboury.

D. Security:

The province of Sayaboury has been considered to be one of the most secure in Lao although it has had periodic loss of the sense of security. In May, 1961, the Operation Brotherhood medical team at Sayaboury town felt constrained to devise an escape plan. Since it said that Hong Sa and Paklay were dangerous, the team proposed walking to the Thai border.

In May, 1964, a few months after the start of the Cluster, a band of PL were reported camped south of Houei Oum. They engaged in propaganda against Americans, Philipines and Thai in the villages in the southern part of the Cluster. They said that the PL would insure that the Cluster Center at Muong Phieng would never be finished.

Two weeks earlier, an opium dealer had been shot near Ban Houei Sec, 15 kilometers north of Muong Phieng, possibly by PL but also possibly by competitors.

⁽¹⁾ *Statistical Yearbook, Thailand*. No. 23, 1966. National Statistical Office, Bangkok, Thailand.

In August, 1964, an RLG patrol was attacked near Muong Phieng. Mr. Yetley, IVS at the Cluster, reported the following comment from the RLG officer "I think the PL would like to take Muong Phieng. However, I don't think they will. The people here would resist because of the AID program."

By April, 1966, security had again deteriorated. The Chao Khoueng ordered that American women and children should not stay in the Cluster overnight. No Americans were allowed to go south of Nam Hia during that emergency period.

In March, 1969, an attack was made on the Nam Tan irrigation system construction camp. Since that time, although there have been no violent incidents, security has continually tightened. As of September any Americans who spend the night in the Cluster area must stay at the Nam Tan camp site, where there are FAR soldiers and protected housing.

III. PROGRAM IMPLEMENTATION

A. General:

The only overall plan for the Muong Phieng Cluster is a "Cluster Plan", dated February 9, 1964, which was prepared for inspection and ratification by the Chao Khoueng (Governor) of Sayaboury Khoueng (Province). After a short introduction describing the general relationships between RLG and US personnel, the Plan cites the geographic scope of the project, the objectives, the means for obtaining objectives, the program content, and evaluation procedures. It is skeletal in form, and contains neither base data on the Cluster area nor quantitative goals.

The goals pertain to general advances in health and welfare and to the development of social institutions and political motivation in support of the Government of National Union, as follows:

II. Objectives of the Plan

"A. Through the development of effective community organization;

1. Raise the general standards of living of the inhabitants.
2. Promote the health and welfare of the inhabitants.
3. Develop motivational and attitudinal changes conducive to the realization of the aims of the Government of National Union."

"B. Through planning, work, and mutual cooperation of the villagers at the local level, to develop at least minimal social institutions necessary to the healthy development and the welfare of the inhabitants and their offspring."

The section dealing with program content also seems non-specific to the Muong Phieng area, and consists of standard rural development activities. Analysis of the 29 Activity Plans promulgated during the Cluster's operations and which comprise the bulk of the cluster program shows that most of the planned actions fall under one of another of the "Program Content" categories anticipated in this plan. The program content categories or sectors as cited in the Cluster Plan are listed below: (Parenthesized notes refer to the number of the Activity Plan which was or is designed to attack the program area. Table No. 7⁽¹⁾ lists the Activity Plan numbers and titles, and Section IV of this report discusses the achievements of these activities.)

"A. Agriculture

1. Improved rice production (AP-12, AP-20, ADO)
2. Secondary crop development
 - a. Animal feed production (AP-2)
 - b. Vegetable production (AP-3, AP-7, AP-12, AP-20)

¹ Discussion of "Response Categories" and "Performance Ratings" follows under sub-section B, *Implementation Analysis*.

3. Home garden plots (AP-12)
4. Fruit tree propagation (AP-12)
5. Swine raising (AP-2, AP-19)
6. Poultry raising (AP-5, AP-19)
7. Cattle raising (AP-19)
8. Fish propagation (AP-6, AP-19, AP-20)
9. Dam and irrigation systems (AP-20, plus the Muong Phieng No. 1, Hia-Nakok and Nam Tan projects)"

"B. Community Organization

1. Muong Planning Council
2. Samaki (Cluster Planning Council)
3. Village Planning Council (AP-17, AP-25)
4. Participant Training Program
5. Local Evaluation Panels"

"C. Education

1. Construction of village schools (AP-14, AP-21, AP-22, AP-23, AP-27)
2. Literacy classes (attempted but no Activity Plan approved)
3. Recreation activities (AP-8)
4. Community activities (AP-1, AP-13, AP-15, AP-16, AP-25)
5. Curriculum development (attempted but no Activity Plan approved)
6. Local evaluation panels
7. Garden (AP-10, AP-12, Sanitary facilities (AP-10) and wells (AP-26) at schools"

"D. Health and Sanitation

1. Hospital and satellite dispensaries (AP-4, AP-28, AP-29)
2. Improved sanitation
 - a. Construction of sanitary toilets (AP-9)
 - b. Blind drainage system (AP-9)
 - c. Proper garbage disposal (AP-9)
 - d. Yard and garden maintenance (AP-12)
3. Development and maintenance of good water supply
 - a. Wells (AP-9 with amendments, AP-26)
 - b. Storage
4. Immunization against communicable disease (AP-11)
5. Health education classes
 - a. Maternal and child care (AP-11)
 - b. First Aid classes (AP-11)

- c. Nutritional guidance for mothers (AP-11)
- d. Study and control of communicable diseases (AP-11)
- e. Midwifery (AP-11)"

"E. Transportation and Communication

- 1. Airfield (Public Works Division activities, the Nam Tan Project)
- 2. Roads, bridges and culverts (RLG Travaux Public and US Bureau of Public Roads)
- 3. Local information services (AP-18)
- 4. Mass media dissemination (AP-18)"

All of the Activity Plans and other formal activities undertaken by the Cluster can be shown to attack one or more of the sub-categories. Inspection of the above list will show that all of the sub-categories received formal attention except the following:

"B. Community Organization

- 1. Muong Planning Council; 2. Samaki (Cluster) Planning Council; and 5. Local Evaluation Panels"

"C. Education

- 2. Literacy classes; 5. Curriculum development; and 6. Local evaluation panels"

"D. Health and Sanitation

- 3. Development and maintenance of good water supply
 - b. Storage"

Informal but unsuccessful attempts were made to start literacy classes in 1965. Introduction of a major change in the curriculum at the Muong Phieng Groupe Scolaire was attempted in 1964 but failed (see discussion of education sector, following). Physiographic conditions are not favorable for water storage dams.

B. Implementation Analysis:

- 1. Villager Response Categories.

Annex I. comprises the detailed chronological history of the implementation of the program. For purposes of this analysis, the history can be divided into two major periods. The first period starts with the planning of the Cluster in late 1963, and continues to the departure of Mr. Orinico (Nick) Bustamante as Cluster Manager in November, 1965.

The second period starts in November, 1965, with the installation of Mr. George Ridenour as Cluster Manager, and continues to the present time. Although Mr. Ridenour

was succeeded by Mr. Bouarith Kamphouvong as Cluster Manager in January, 1968, Mr. Ridenour's influence deriving from his role as Provincial Coordinator, Sayaboury Province, has continued to dominate Cluster planning and operations.

During the initial period, which covered approximately two years, attempts were made to start activities in the maximum number of program content categories. The first 17 Activity Plans were conceived and started in this period. Reference to the program content categories listed before will show that the AP numbers below 18 have the widest spread of subject coverage. This also illustrates the weakness of the early program — too much work in too many categories for too few people.

Projects started during the second period were more selective, tending to concentrate on school construction and training.

Inspection of the Activity Plans will show another difference between the projects started in the two periods. This difference is based upon the kind of response required to be performed by the villager.

The following kinds of villager response⁽¹⁾ were called for:

1. Work-response: Normal self-help construction of schools and community buildings, digging of wells or related activities where the villager merely supplies labor in lieu of money but has not gained new skills that he can employ by himself. Success of these projects is measured by the number and kind of capital assets created or improved.

2. Change-response: Activities requiring that the villager adopt a new way of doing something he previously did in another way, or learning and applying new actions. This usually involves abandoning a former habit or work procedure or revising his work schedule to adjust to continuing, completely new habits or work procedures. An integral part of each project is the furnishing or designation of physical objects which are to be multiplied in number or physically changed in measurable dimensions or qualities during the implementation of the project. Success is measured not only by the degree to which the villager changes his habits and work procedures but also by measuring the physical output in terms of the work objects (number of pure-bred hogs raised and sold, active membership in youth organizations, amount of garlic raised, etc.)

3. Training-response: Activities requiring the villager to devote time and attention to a formal or informal regimen of instruction. Success as usually measured by the fact of physical presence of the trainees at the training sessions and by examinations to measure the extent to which the courses were comprehended, facts remembered, etc.

(1) The response categories are established entirely on the basis of kinds of projects occurring at the Muong Phieng Cluster and make no attempt to encompass all kinds of development projects.

4. Service (no-response): Medical or technical (could also include legal in a more structured society) assistance to alleviate an unsatisfactory personal condition; or the force account provision of facilities or services, such as buildings or drilled wells. Success is measured by the degree to which the services or facilities are used by the villagers.

All of these categories of response carry the implication that the villagers' ultimate responses to the improvements in their economy, health, and welfare will be feelings of gratitude to the RLG and the development or strengthening of loyalty toward the RLG. It is also assumed that their resistance to the enemies of the RLG will be fortified.

The first 17 projects (plus the first amendment to AP-9), all of which were performed during the first Cluster period, are categorized as follows:

- 3 —Work-response (Nos. 4, 14 and 15)
- 9 —Change-response (Nos. 2, 3, 5, 6, 7, 8, 9, 10, 12)
- 2 —Training (Nos. 16 and 17)
- 4 —Service (Nos. 1, amendment No. 1 of No. 9, 11 and 13)

The last 12 projects (plus the second amendment to AP No. 9) were performed in the second Cluster period and are categorized as follows:

- 8 —Work-response (Nos. amendment 2 of No. 9, 22, 23, 26, 27, 28, 29)
- 1 —Change-response (No. 25)
- 3 —Training (Nos. 19, 20 and 24)
- 1 —Service (No. 18)

It will be noted that there is a strong shift from change-response projects in the first period, to work-response and training in the second.

The change-response projects were the most difficult to accomplish. Neither the project designers, the project implementers, nor the village participants at Muong Phieng during the first period foresaw the tenacity with which old practises persist unless subjected to strong motivations for change or unless the underlying conditions to which the old practises were a functionally efficient response are changed.

Neither of these methods for promoting the acceptance of change (i. e., offering strong motivations or affecting change of the underlying conditions) were used by the early Cluster operators in implementing their heavy load of nine change-response projects. No provision was made in the Activity Plans for studying the existing habits of the villagers or their value systems. Time was allocated for only superficial explanations of the project and its objectives to the villagers. Implementation of most of these projects fell short of the objectives. Details are set forth in the following section "Activity Plan Evaluation".

Planning for the solitary change-response project in the second period was handled better. Much time of one IVS volunteer was spent on the Village Development Committee program in gathering background material and in careful preparation of the plan and the training materials. This project is still on-going, and has far-reaching possibilities for improving rural administration in Laos.

Implementation of work-response projects is primarily technical in nature. They are usually simple to perform. This kind of project is also considered important to rural development because it requires a physical input of labor (or equivalent) by the villager, thereby ratifying his acceptance of the need for modernization.

A factor which has relevance to the impact that a work-response project makes on the local people is the time required to perform a self-help project. Village self-help commitments are made by the villagers after discussion of the construction schedule. The needs for timely allocation and clearing of building sites by the villagers, as well as their contributions of sand, gravel, lumber and other commodities are emphasized by the cluster managers, as well as the need for careful phasing with the labor contribution of USAID skilled carpenters and masons. The villagers' labor contribution must also be phased with his agricultural or other duties.

When any elements of these inputs are not timely, the entire project suffers. If the villagers' initial inputs are on time and the RLG's or USAID's are not, then it is reasonable to conclude that the villagers are disappointed. While this may be more than outweighed by the positive fact that the school (or whatever) is actually being built, it would be better if the latter impression were uncluttered by a sense of disappointment or frustration.

Many lags are caused by villagers. Serious conflicts with crop growing schedules can be caused by minor slippages which push the work requirement into the planting season. Internal conflicts over other issues can cause the villagers to reject or chastise their Nai Ban by holding back their participation in projects for which the Nai Ban is held responsible by the Tasseng, Nai Dan and the Cluster management. The recent refusal of the Meo villagers of Nam Hia to supply labor for construction of the new dispensary is uncharacteristic; the reason may lie in some external factor.

Reluctance to participate may also occur because of the manner in which the self-help project was generated. One of the CRA workers says that villagers felt forced to sign recent agreements to dig certain wells; their subsequent performance was poor.

However, to expect all villagers to perform all self-help contributions without prodding is like expecting Americans to pay their taxes without complaining or without trying to evade some of them. Unfortunate repercussions may arise, however, if the work slippages create lags which are so long and obvious that the villagers become reluctant to participate in further projects. If PL agitators are present, the physical evidences of unfulfilled promises are convenient tools of his trade.

2. Activity Plan Ratings.

The rating of Activity Plans shown in Figure 3 should not be considered to be solely a rating of Cluster management effectiveness. The rating reflects both the original planning, which is often a joint RLG/USAID operation, as well as the combinations of unexpected events which are characteristic of Laos.

The ratings have two elements; quality of performance is indicated by "S" for "satisfactory", "U" for "unsatisfactory", and "A" for "ambiguous" performance. "A" is applied if part of a plan was completed satisfactorily but another part was not, or if the objectives as stated in the Activity Plan were not attained but other positive objectives were achieved.

The second element, separated from the first by a slash (/), is a rough indicator of the degree to which the Activity Plan met its own time schedule. It is derived by dividing (a) the total number of months starting with the planned start of operations and continuing to completion to the degree specified in the Activity Plan, by (b) the number of months the Activity Plan stated would be required for implementation. A plan that called for completion in four months but required 12 months, but which was otherwise considered to be satisfactory, would have the rating "S/3".

The Activity Plans and their performance ratings are summarized in Figure 3 in terms of their response categories and by program sector.

The figure is not complete in that the three irrigation projects should also be listed under "change-response" and "training". This would even more effectively demonstrate the dominant role that these projects play and have played in the development of the Cluster. Because of the unusual influence of the irrigation projects their implementation will be discussed more fully in the following sub-section.

C. Sector Analysis:

Inspection of Figure 3 shows that the only unsatisfactory projects are in the change-response category, and that they occur in all sectors for which there were C-R projects. The question arises: did these failures have a negative effect on the development of the Cluster area and on the achievement of RLG-USAID objectives? Further inspection of Figure 3 will also show that although the work-response projects achieved their stated objectives, the performance times seem unduly long in some cases. A further question; did these delays in any way negate the positive effects of the projects?

Answers to these questions are complex and can be best exposed through examination of the larger question: What were the contributions of the projects and activities in each sector to the total development of the Cluster area? Examination of this problem can be assisted by considering each sector in terms of :

- (a) its maximum potential for development within the Cluster,

FIGURE 3
Activity Ratings

	Work Response	Change Response	Training	Service
Agriculture	Muong Phieng Irrigation A/na	(2) U/na (3) S/na (5) S/na	(19) A/na	Muong Phieng Irrigation A/na
	Hia Nakok Irrigation S/na	(6) S/1 (7) U/na (10) U/na	(20) A/na	Hia-Nakok Irrigation S/na
	Nam Tan Irrigation A/na	(12) U/na	(24) A/na	Nam Tan Irrigation A/na
Community Organization	(15) S/4	(8) U/na (25) S/na	(16) A/na (17) A/na (25) S/na	(1) S/6
Education	(14) S/3 (21) S/6 (22) S/4 (23) S/3 (27) Inc			(13) S/2
Health and Sanitation	(4) S/1 (Am.2, No.9)S/na (26) Inc (28) Inc (29) Inc	(9) AU/na	(11) S/na	(Am.1, No.9) A/na (11) S/na
Transportation and Communication				(18) S/na Roads S/na Telephone S/na Airfield S/na

S/ Satisfactory / (number) The number to the right of the slash is derived by dividing the total number of months to complete the project by the number of months planned for completion,
 U/ Unsatisfactory / na Not applicable
 A/ Ambiguous
 Inc Incomplete

- (b) development assistance project goals which move in the direction of the maximum potential but which are limited to getting the activity over the threshold above which local initiative can carry further development;
- (c) current level of development relative to the maximum potential and the project goals; and
- (d) level of development before the start of the Cluster.

1. Agriculture

Prior to the Cluster, the Muong Phieng valley operated an agricultural, subsistence economy. Some sales of buffaloes were made to itinerant traders from the areas south of the valley, who drove herds of increasing size northward to Luang Prabang. Wet-rice production was marginal in meeting subsistence needs, forcing reliance on upland planting.

Since that time, production of rice, livestock and other foods has increased enough to push the valley into extensive use of money in sales and for purchase of services and commodities. The increased production has been accomplished through the clearing of some new land but probably principally through better use of existing cleared land.

Much new cleared land will be put into production when all of the Hia-Nakok and Nam Tan land is cleared. However, since 1959 probably not more than 300 new hectares have been placed in productive use. This would meet only half of the 200 kilograms per year milled rice subsistence requirement of each of the 3,000 persons added to the Cluster population since that time.

Much of the increase must therefore be attributed to better, more intensive use of the available land. The early agricultural "change response" projects, even though they failed to achieve their own objectives, probably awakened many farmers to the fact that there were other procedures than the traditional ways. Furthermore, he saw that his actions could change the future - that at least as far as growing crops was concerned, he was not bound by fatalism. There is also some form of analogy with the Western Electric experiments of Roethlisberger and Mayo. There, under closely controlled conditions, they found that the mere fact that someone was interested in what they were doing caused the workers to continue to increase production even when subjected to supposedly adverse stimuli.

Current paddy yields per hectare are estimated at 1.6 tons for Tasseng Muong Phieng and at 1.3 in the rest of the Cluster. These estimates may be low, since they are based on statements of villagers who may not want to be thought too wealthy. The national average in Thailand in 1965⁽¹⁾ was 2.6 tons (assuming 62 per cent milling recovery) and was 3.3 tons for North Thailand. A maximum development potential might fall in the order of 2.6 tons for the Cluster area, (see table 8).

(1) "Statistical Yearbook, Thailand" No. 27, 1966. National Statistical Office, Bangkok, Thailand. pp. 162-4.

Current projects (except for the Nam Tan irrigation project) do not specify quantitative production goals. An intermediate goal such as "ten per cent of the families in each village to achieve 3.0 tons production in two years" might have given more specific direction to the projects. In achieving this, enough other farmers would be involved so that a wider base for generally expanded production would develop.

The general augmentation in agricultural production extended to vegetables for home use. The Muong Phieng diet has gained but, except for the area around the Nam Tan construction camp, there is little commerce in vegetables.

As discussed earlier, all kinds of livestock have increased except horses and elephants. Before the Cluster, all villages had horses for transport purposes. With the new roads, they have been completely discarded; virtually all have now been sold. Only two farmers raise horses to sell to the Meo, who use them to carry supplies to mountain villages.

Elephants are still used for hauling logs from the forest and for other major hauling jobs. Only a few are left in the Cluster.

2. Irrigation

The three irrigation projects, the Muong Phieng No. 1 project, the Hia-Nakok system, and the Nam Tan system, are the backbone of the Cluster area. Without them, the valley would be a marginal rice producer, in danger of crop failure in any given year.

The Muong Phieng No. 1 project was started pre-Cluster and has had little development after an early period of canal building. The Hia-Nakok irrigation project was started in the first Cluster period and the Nam Tan irrigation project in the second. Both of the latter are carried as Agricultural Division projects rather than Rural Development Division Cluster projects. Both are so large in scope that they transcend any single project response category. Their realization requires elements of all categories. However, the dominant category is change-response, since the success of both ventures depends upon the degree to which the villagers accept the changes imposed on their lives by the need to share water.

The Muong Phieng Valley is served by three relatively large rivers, and a number of smaller ones. The concept of diverting the seasonal flow of the water from its normal channels onto the rice paddys has been present in the valley for many years. Small dams have been placed on all of these rivers, either by the villagers themselves or in the early days by the French Government. The first fairly large dam was built on the Nam Phieng River about fifty yards north of the site of the present dam on the Upper Nam Phieng. The French supplied the engineering and the initiative, and the villagers supplied all of the labor free of charge. The French also had a small dam built on the Nam Luak, a small stream entering the Nam Phieng, south of the Nam Tan. This dam served a relatively few families in the village of Na Luak. When the dam washed

out, eight of the families, who had been best served by the dam, got together and repaired it themselves, and have maintained it since that time. Service is limited to these eight families.

A diversion dam was also placed on the Nam Tome, and served the villages of Kang and Nakok. The area served by this dam is now the area that should be served by the furthest extension of the Nam Phieng low-line canal. For a number of reasons, very little water reaches the lower end of this canal, and both villages have continually suggested that the old dam be replaced. A dam had also existed, for a very short time, near the location of the present Hia-Nakok dam.

a. Muong Phieng No. 1 System:

The present concrete dam on the upper Nam Phieng, which is called Muong Phieng No. 1, was built between the years 1957-59 by USAID. A canal was built on the left bank of the Nam Phieng River, extending from the dam to the edge of the paddy fields northwest of the village of Muong Phieng. At this point the water flowed by natural drainage over the paddy area. In 1963, the Tasseng of Muong Phieng said that 164 families got water from the dam, whereas 63 families received no water at all from the dam.

There are conflicting stories as to the sources of labor for construction of the dam in 1957-59. The work was said to have been completed by Vietnamese laborers from Tonkin State who were hired by USAID and who returned home upon completion of the dam. Another version says that the dam was constructed through a contract between USAID and a private contractor. The contractor hired local villagers but absconded without paying them. It is also said that USAID constructed the dam, and hired local villagers. This version, which was the one preferred by Cluster personnel, also says that there was no self-help input to the dam at that time. At present, Cluster personnel blame the current "uncooperative attitude of the villagers of Muong Phieng" on the fact that they were given this dam without being required to expend any of their own efforts. This belief has tended to color the attitudes and relationships between Cluster personnel and the villagers of Muong Phieng.

When construction of the high-line and the low-line canals for Muong Phieng No. 1 dam was proposed in November, 1963, a subproject agreement was drafted. The water users, "all farmers who will receive irrigation water from the project" had three obligations. The first was to contribute or provide ten man-days labor during construction for each two hectares of land or fraction that they controlled. Second, after, construction each water-user was to contribute ten man-days for maintenance of the irrigation facilities. Thirdly, water-users were to accept any change in the location of existing canals, and to allow the new canals to be built through and around their lands, as located by the Project Engineer. USAID agreed to provide over 2,000,000 kip worth of labor on the project. This was to be in addition to the self-help labor. The kip exchange rate was then 80 kip to the dollar.

After completion of the canals, the RLG did not supply a qualified irrigation technician to direct the further development of an organization of users of the canals, and to establish rules for use of the system. Mr. Nhia, Agriculture Zone Chief for Muong Phieng was a specialist in crops and soils and in agricultural extension, but knew very little about irrigation. He was given the responsibility for managing the system. His other duties tied him down completely, and he had no time for irrigation activities. However, he hired four local people whose duties were; (1) to control water flow into the main canal at the diversion dam; (2) to divert water to farmers' fields; (3) to repair damage to canals, and (4) to prevent digging in canals. They had had no training to prepare them for these duties.

Organization and maintenance of this system has been completely unstructured since that time. There have been sporadic attempts by various technicians, IVS and USAID, to introduce an element of organization into the users, but efforts have been fruitless. In spite of the lack of organization, the area is fortunate in having enough water to supply many of the fields during the rainy seasons, although some fields still receive only marginal supplies.

There has been a surge of interest in irrigation throughout the Muong Phieng Valley now that the Nam Tan system has started to take shape. Supplemented by the successful double-cropping in the Hia-Nakok systems, interest in developing the Muong Phieng system into a more workable entity seems to be rising. In general, this area has had the most stable history of production; the villagers probably have the most capital resources available for investment in production improvement.

The development potential is probably well over 500 hectares. This area could achieve a markedly high yield per hectare through better control of water and through improved production techniques.

b. The Hia-Nakok Irrigation System:

While the Muong Phieng No. 1 dam served the left bank of the Nam Phieng River, with its total of approximately 500 hectares of arable land, there was no diversion of water from the Nam Phieng into the area on the right bank. The irrigable area lying between Phone Hine and Nam Hia, along the right bank, totaled about 350 hectares. About 100 hectares of this was under cultivation. The northern part of the area was cultivated by people from Phone Hine, and the central and southern part by villagers from Kang. The uncleared land lay along the road, and between the river and the presently cultivated land. It was thought that this area might be suitable for resettling the Meo who are living in Nam Hia, and who as yet had no paddy land. A survey of the area was started in late 1964, and was completed by January 1965.

Actual work started in February, 1966, under the Agriculture Division Activity Plan No. 2.

Except for the inevitable conflicts every year at rice planting time, the self-help input to this project was excellent. The project was dedicated on June 29, 1967.

The number of Meo families who had contributed labor to the construction of the Nam Hia project was 77. It became necessary, in April, 1967, to make firm decisions as to how many of these would attempt to plant paddy rice on their land. At this time 22 of the families decided that they would attempt this, for all three hectares of their plots. It was then decided that the bulldozer which had been working this project could be used for clearing and leveling the land for these 22 farmers. It was believed that, with effort, land could be cleared for a paddy crop in 1967.

The reason why the other 55 Meo families did not want to try paddy farming this year were:

- (1) some of the lots were so thickly covered with trees and brush that they did not believe they could get them satisfactorily cleared in time for ploughing this year;
- (2) some of the families intended to plant hill rice, until they could get the land cleared later, and
- (3) most of the families had already started upland fields, and were unwilling to try both in one year.

These 22 families in the Hia-Nakok system were pioneers in Laos. Since their success or failure might have an effect on further efforts by Meo to adjust to lowland culture, it was felt necessary to help them insofar as was possible. It was determined that 17 buffalo would be needed, as well as plows, spades and hoes for clearing, and rice seed, fertilizer and insecticides. In addition, it was felt that farmers should have constant "on the paddy" technical advice throughout the time of land preparation and through most of the rice-growing season.

All of these requirements were anticipated by Mr. Ridenour and his staff. They received full support from the Vientiane headquarters in all of their requests for support for this group.

Much effort had to be devoted to providing at least one hectare of land for all of the families who finally decided to grow paddy this year. The total of 22 was reduced to 16. The buffalo-loan plan was established, whereby 17 of the Meo bought buffalo at a price averaging something around 40,000 kip. They were also permitted to buy fertilizer on credit, but were required to pay the fertilizer loan at the end of the harvest period. The first year's crop was not too successful - it had been started too late. The Meo were not discouraged, and have since had successful crops during both wet and dry seasons.

Mr. Robert McClymonds, US contract hire employee and a Water Utilization Advisor, was assigned to the Muong Phieng Cluster in 1968. His main duties were to supervise and to advise in the formation of organization and maintenance procedures at the Hia-Nakok system. He was given collateral duties to assist in the same manner in the Muong Phieng system. When he completed his tour in July, 1969, his Lao counterpart was re-assigned to another province, leaving no-one to continue his work.

A total of 141 families were awarded land in the Hia-Nakok when the final awards had been made by November, 1968. Twenty-eight families were from the village of Phone Hine; 27 from the village of Kang; and 86 from Nam Hia. Of those from Nam Hia, 64 have plots that can be supplied water, whereas 22 of the plots are felt to be marginal or impossible for irrigation water to be received. Although some land has yet to be cleared, this system will be in full operation when community procedures for organization and maintenance of the system are instituted. This project is reaching its maximum potential for irrigated paddy. Yields, however, could be improved.

c. The Nam Tan Irrigation System:

The people of Na Bouam can claim credit for having started the reconsideration of the Nam Tan River as the site for irrigation activities. Early in 1965, they suggested to the Chao Khoueng that they would like to have a dam to divert water to their paddy. In March of 1965, the site was visited by the Chao Khoueng, in company with the Chief of RLG Agriculture, Tiao Somsavath; the Director of RLG Irrigation, Mr. Savady, and Mr. L. C. Mathews of USAID Irrigation. On the basis of their preliminary survey, they put crews of technical people to work on examining the possibilities for building a dam in this area.

By August, 1967, the full potentialities of the Nam Tan area had been thoroughly explored by Irrigation personnel and a plan was created. The plan called for the maximum exploitation of the irrigation potential on both banks of the Nam Tan River. The optimum development of the area was found to require a considerable construction effort.

At a meeting held by the USAID Director, Mr. Mendenhall, on August 26, 1967, "It was agreed in principle that Public Works Division would undertake the complete construction of the larger irrigation projects in a manner similar to a contractor relationship, whereby the Irrigation Branch would provide the investigations, designs, plans, quantity estimates, and specifications; and PWD perform the construction".⁽¹⁾ The details of the agreement that was worked out are spelled out in a Memorandum of Understanding, dated August 31, 1967.

It was later determined that this dual arrangement for the construction of the Nam Tan project was insufficient. A very heavy workload was encountered in outlining, measuring and identifying the holdings of the present occupiers of paddy within the entire Nam Tan area. In addition to this, the lands to be cleared and placed under irrigation had to be measured and plotted, so that they could be allocated to

- (1) refugees,
- (2) existing occupants of the area who were entitled to additional land; and
- (3) applicants from the area who had held no land previously.

The full responsibility for all of these latter operations was placed on the USAID Rural Development Division, and more specifically upon the Refugee Relief and Resettlement Activity of that Division.

⁽¹⁾ Memo of conversation, dated 28 August, 1967, Agriculture Division, USAID.

Construction of the system met a number of non-routine crises, such as floods, unexpected soil conditions, and elusive bedrock. They were met in a routinely effective manner by PWD and USAID Agriculture. The area of operations that caused the most concern was trying to phase in the surveying of the final plots with the construction operations. Surveying and identification of ownership of new plots was necessary before commitments to clear those plots could be accepted by the contractor whose responsibility it was to remove the trees and stumps from the area. Also, when ownership was identified, the future owners became willing to devote their own effort to preliminary clearing.

There were two causes for this disruption. The first were the construction crews of PWD. When not closely supervised, they were liable to make the canal structures wider than had been planned, or to place waste earth on good paddy land. Secondly, irrigation engineers often found it necessary to realign laterals or sublaterals after they had been staked out and released for survey by the Rural Development Surveyors.

The important and the critical problems, however, are not technical. They all involve the accommodation of the farmer to the newly irrigable land that he will occupy.

He has four basic problems;

- (1) how to obtain ownership of the land;
- (2) how to regulate the use of the water;
- (3) how to determine the most gainful use of the land, once he has it;
- (4) how to keep ethnic conflict at a minimum.

Each of these basic problems is quite complex and is discussed later under "Conclusions and Recommendations".

3. Community Organization

A new and possibly important element of community organization, the Village Development Committees, has been introduced into the Cluster area by the Cluster program. At least as significant has been the creation of a sense of community where little had previously existed.

Pre-Cluster, the Muong Phieng valley contained a scattered group of villages, with weak political focusses fixed on the two tasseng centers, Muong Phieng and Na Kheme. The tasseng chiefs rarely visited the villages. The higher echelon officials, the Nai Dan, Chao Muong, and Chao Khoueng visited them less often. Village organization was traditional: an elected Nai Ban with an assistant and possibly also a samien (clerk). Village decisions were made by the Nai Ban, sometimes assisted by respected elders. The rare serious disputes which could not be settled within the village were taken to the Tasseng.

The only other organizational influences were the wat and, sporadically, the local defense requirements. A lay manager of wat affairs, the "salawat", was elected (actually

selected by the Nai Ban or elders and confirmed by the equivalent of a show of hands). Merit-making ceremonies, "bouns" were serious religious occasions, with attendance limited to one village. No more than one a year was held in any one village. Just prior to the start of the Cluster, the Muong Phieng valley had a government-supported local defense unit consisting of 28 men from various villages. The group was based alternatively at Muong Phieng village and at Na Kheme. It was de-activated in 1962. Some of the members were absorbed into the army and others, principally at Na Kheme, maintained an ad hoc organization.

The villagers' life centered on his own village and with minimum of intercourse with other villages. That which existed was based on family ties resulting from out-migration or village bifurcation, or upon casual meeting in the fields where paddy areas overlapped. Probably the first area to developed was the northern plain, which supported Muong Phieng, Phone Sai, Phone Hine, Kang and Nakok. Early migrations, said to be from the Luang Prabang area, settled Na Tane and Na Kheme. When Na Tane became too big, Nasom Nhai was founded; Nasom Noi is an offshoot of Nasom Nhai. Na Kheme was the parent of Houei Oum and Na Luak, while Nong Houng claims descent from Na Luak. Na Bouam, Na Sing and Houa Na may have been settled by in-migration after Na Tane and Na Kheme. The establishment of Nam Hia and the two Nam Pangs occurred during the Cluster period.

In spite of these ties, each village was an isolated self-sufficient community. Neighboring villages seem to have been fair game for pilferage and theft; persons from other villages tended to be looked upon with suspicion. Roads were non-existent, and the only police were in Muong Phieng village.

One of the most striking reactions of the villagers who comment on the changes that have occurred since the start of the cluster has been statement that "people like each other better". They say that people are more tolerant. Whereas previously the men carried knives or other weapons when they left their villages, this is no longer done. Theft has been reduced. Conflicts, which were usually of a physical nature, now tend to involve property.

The development of this "sense of community" has resulted from a number of conditions. There is easy access between villages by virtue of all-weather roads. The village bouns are now attended by persons from many villages. Children from other villages now meet at the three Groupes Scolaire. Seven rice mills and 39 retail stores now provide points of personal contact. The Cluster newspaper tells the villagers about people and activities in other villages as well as about the larger aspects of national life. RLG and USAID technicians move throughout the area, providing points of reference for discussion and understanding of common problems. The five clinics serve all villages and bring patients together for meeting under sympathetic conditions. The now-developing irrigation systems will, hopefully, also provide the basis for cooperation among the water users.

The maximum potential for the development of community organization by RLG/USAID development assistance is defined by the legal structure of the government of Laos. The new institution of community organization that was introduced under the Cluster, the village development committees, is authorized under Royal Ordinance No. 254, dated August 24, 1966, "Organization and Administration of the Rural Society, Tasseng and Ban". The ordinance established a meeting body called "krommakan" for each village and specifies the number of members in terms of the village population. This element of the ordinance was the basis for Activity Plan No. 25, Village Development Committee Training Program.

The plan has two parts. The first indoctrinates the villagers in the concept of the village development committees, secures candidates for the positions, and carries through to the election of the members. The second part of the plan provides for formal training of the elected members and for follow-up on-the-job training and assistance for an initial period of a year.

The program got an excellent start. Some committees are functioning better than others, but the idea has taken root. Many villagers discuss problems that are brought into view by the operation of the committee. Probably the strongest effect has been upon the Nai Bans and the new committee members. The training course included instruction in the identification and solving of problems. Many committee members now look at their village life in an inquiring and critical light, whereas previously they had accepted their condition as more or less inevitable.

Conflicts have arisen between the Nai Bans and committee members in some villages, while in others the Nai Ban has used the committees to assist him in making decisions and in making the decisions stick.

The original program called for the presence of an IVS advisor throughout the period of evaluation and on-the-job training. The recent cut-back in IVS participation in certain areas in Laos resulted in the reduction of IVS assistance to this program. This is regrettable, since close observation, documentation and analysis of the developmental problems of this program at the Cluster may lay the groundwork for national application of the program. It should then become possible to consider applying all provisions of the Royal Ordinance, including those that specify the creation of named sub-committees to take cognizance of sectoral problems.

4. Education

One of the most marked advances in the Cluster has been in education. The rate of increase in primary school attendance in the Cluster over the past five years has been significantly larger than the national rate.

In 1963, 34 per cent of the 1,564 school-age children (6-14 years) were in school; in 1968, 63 per cent of 2,397 school age children were in attendance. Possibly even more

significant is the fact that while 2 per cent of the school age children attended the 4th, 5th, 6th grades in 1963, this percentage had increased to 21 per cent in 1968.

Although no professional education people were on the Cluster staff, all necessary educational advice was available when required either from the USAID regional officer in Luang Prabang or the national office in Vientiane. Because all USAID professional educators are found most effective when counterparted to RLG Ministry of Education personnel, they must also adopt the national, the regional, or the Khoueng perspective. In general, for them a Cluster area does not justify special attention at the expense of other towns or villages in a Khoueng.

The educational curriculum in the Cluster area does not differ from the national standard. There are, however, more classrooms per children of school age in the Cluster than in the nation as a whole. There is one classroom for each 61 children of school age, or for 39 children in school while the respective national averages are 95 and 40. While the availability of classrooms has increased, the availability of school-age children who can attend school has increased even faster.

This supports the position that the increased school attendance is dependent on factors other than availability of classrooms and teachers. The excellent road system in the Cluster has made it possible for children of any village to go to a Groupe Scolaire if other conditions permit. This was not possible before the Cluster started. At that time, with no roads, and in a valley that was cut by many small streams which were subject to flash flooding during the rainy season, movement of children across land from village to village was sharply restricted. Now lack of mobility is no longer an inhibition against going to another village to attend the fourth, fifth or sixth grades.

Furthermore with the general improvement of the economy in the Cluster, families now find it possible to spare the younger children for school. With life more open and with a greater awareness of what is going on and who is doing what, not only within their own village but also in other villages, there are probably strong pressures on families to allow their children to get more education. The net result is many more children with a better chance for filling their roles more competently in Lao society.

One early attempt was made to improve the local curriculum. In July, 1964, Mr. Bustamante submitted an Activity Plan for vocational training in Muong Phieng. The objective of this Plan was "to develop amongst students, skills which will enable them to improve their standard of living and/or find better jobs and thereby increase their income". This was to be achieved by adding certain subjects to the Groupe Scolaire curriculum. These were; carpentry, metal working, animal husbandry, gardening, sewing, knitting, weaving, and pottery. The project would start with carpentry sewing and knitting. The plan called for additional teachers, both US and RLG.

The plan was discussed by both RLG and USAID personnel. Its primary defect was the fact that it would have caused a major change in the curriculum of the Groupe

Scolaire. Since this curriculum is standard throughout the country, a change of the magnitude implied by this program would have had to have been approved by the Minister of Education. The plan had been handled awkwardly in securing concurrences in the right order. The plan was dropped.

Sporadic attempts were made to have Fundamental Educators assigned to youth activities, since there had been no work in this area since middle 1964. Nothing further has been done. The lack of youth activities is felt by this analyst to have been a major defect of the program, especially in the light of the excellent initial progress.

The maximum development potential of primary education is clearly defined - all school-age children to be in school for 6 grades. The constraints are now lack of school rooms and teachers. Two villages that have no schools still lack a road - further reducing the likelihood of their children receiving schooling. Although it may be difficult to get the last 35 per cent of school-age children away from their homes, the pupil-class room ratio suggests that more rooms and teachers be added before other measures are resorted to.

In spite of the delays in completing work-response school self-help projects, the value obviously placed on school attendance has probably dissipated any negative effects. However, the recent difficulties encountered in completing the dispensaries at Nam Hia and Nakheme, plus the reluctance to dig school wells under AP-26 suggests that the cumulative effect of self-help work on the big irrigation projects plus many small projects, plus the recent heavy conscriptions of prime labor force for the army may be tightening the labor supply.

5. Health and Sanitation

Health and sanitation activities have included the construction and operation of clinics, training in maternal and child care, home obstetrical service and post-partum care at Muong Phieng and Phone Sai, training in home sanitation practises, well-baby clinics, limited dental and medical examinations and inoculations at schools, immunization, de-worming and limited house-spraying, an attempt to introduce water-seal toilets, digging and drilling of wells for potable water, assistance with sewage disposal, construction of a crematorium, and the training of villagers to construct well linings and dig their own wells.

Operation of the clinics has been a continuing process since before the Cluster, when two small clinics were being operated at Muong Phieng and Nam Hia. The utility and service of all clinics has expanded as the growth of the road system has made it possible for villagers to readily visit the four villages (plus the Nam Tan construction camp) where the clinics are located. The Cluster management often sends one jeep or truck a day to the Filipino-operated OB hospital in Sayaboury, filled with persons seriously ill. Table 8 summarizes the service provided by the main clinics during 1968, a representative year.

TABLE 8
Clinic Service 1968

Kind of Service	Muong Phieng	Nam Hia	Na Tane	Na Khome	Total
Clinic patients	3,487	3,666	3,559	3,929	14,641
Follow-up	292	1,057	1,221	434	3,004
Home visits	207	0	0	0	207
Home calls	151	98	60	74	383
Referrals	179	72	22	32	305
Pre-natal care	118	14	38	8	178
Deliveries	59	20	21	17	117
Post-partum care	71	18	33	25	147
Total	4,564	4,945	4,954	4,519	18,982
Average per capita per tasseng	(2.1)		2.4	2.1	

Source: Monthly Reports of Thao Thong Phanh Sirivathana, Chief Nurse, Muong Phieng, January through December, 1968.

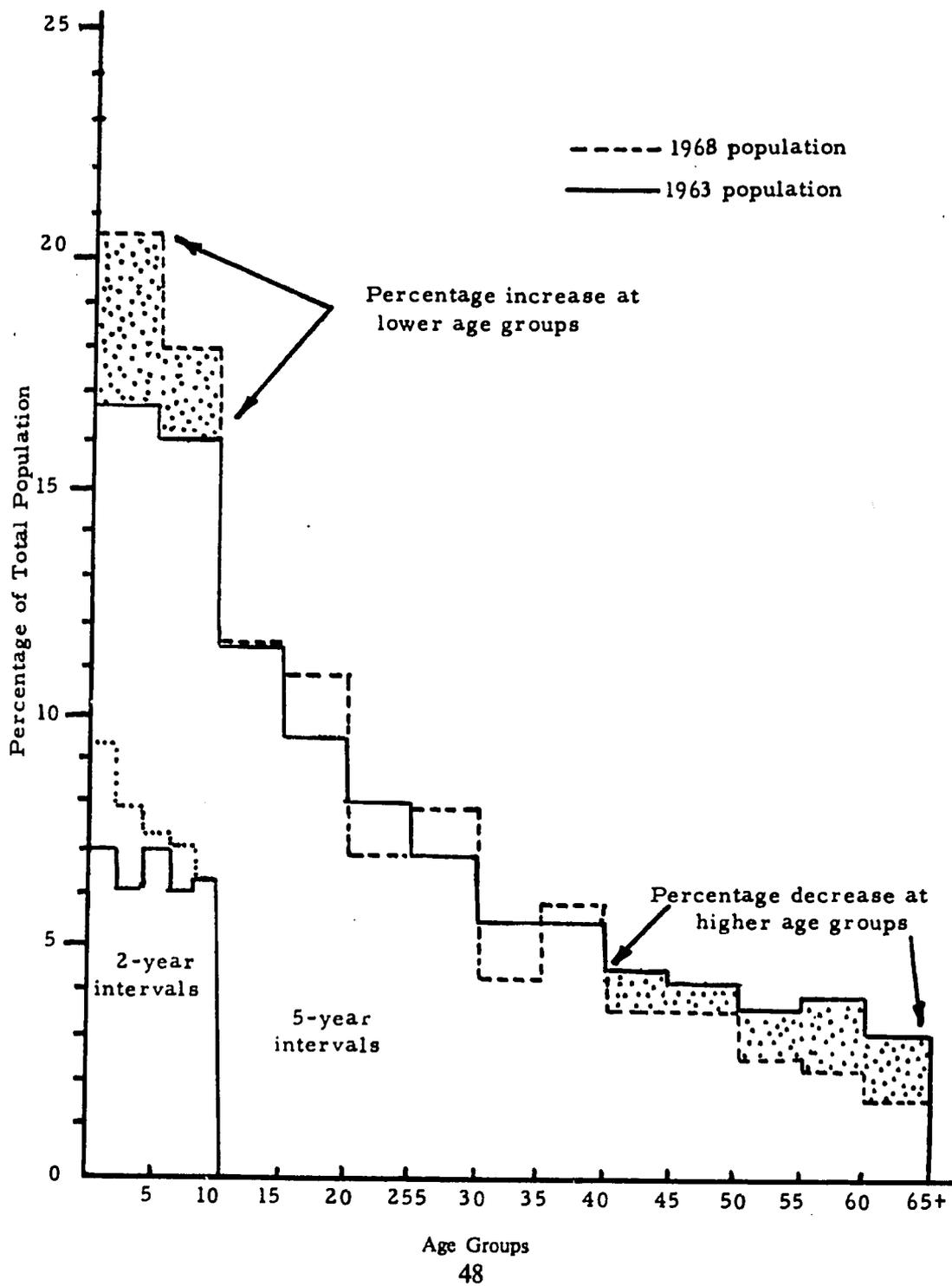
Household sanitation training has not been as successful as hoped. Few families boil water, and there is little evidence that the rate of intestinal infection has markedly diminished. A few of the sanitary dug and drilled wells have been abandoned in favor of the traditional holes in the ground or streams. Sanitary toilets had made no headway at all until the forests were cleared for the irrigation projects, eliminating traditional toilet areas. There is now much interest in constructing some kind of toilet facilities.

Treatment at all clinics has been symptomatic. No attack on the sources or carriers of malaria has been made, although malaria seems to be increasing as a killer or debilitator.

Rabies is said to be more prevalent in the area than in any other part of Laos. The area also had to cope with a high rate of sickness among some 3,000 Meo refugees who arrived in abysmally poor physical health during the past six years (includes at least 1,500 Meo at Nam Phoui).

The maximum potential for development can be measured in terms of facilities and services provided per capita, or in terms of the reduction of disease and malnutrition. Although the Cluster area still has far to go, tangible progress has been made in reducing infant and child mortality and possibly in increasing the birthrate. Figure 4 compares the age group structure of the pre-Cluster population in 1963 with that of 1968. While 32.8 per cent of the population was 10 years and under in 1963, by 1968 the proportion in this group had risen to 38.1 per cent. It was not possible to develop objective measures of changes in the general health of the older groups. The percentage reduction in the ages over 40 years reflects the proportionate position of this relatively stable group in the increased total population in 1968.

Figure 4
 COMPARISON OF 1963 POPULATION WITH 1968 POPULATION



The Meo have been the most prolific portion of the population. Figure 5 compares the Meo population of Nam Hia (Nam Pang was not included because the group has arrived only recently) with the Lao population of the Cluster. Forty-four per cent of the Meo are under 10 years, as opposed to slightly less than 38 per cent for the Lao. The two-year age-group breakdown of the first ten years, as shown in the lower left part of the figure, suggests that the birthrate and infant survival have responded positively to the increased physical and economic security of the last three or four years.

On the other hand, this configuration could be illustrative of the findings of Doctors Weldon and Mac Cready regarding child-birth among the Meo in their hill habitat.⁽¹⁾ They found that every Meo woman has, on the average, 18 pregnancies. An average of six of the pregnancies cease, for one reason or another, before parturition. Six of the infants die before approximately 10 years of age, and the remaining six survive as adults. If the same pregnancy rate continues, concomittant with increases in infant and child survival, the Meo will increase much more rapidly than the Lao in the Cluster area. It is probable that this is already occurring.

Local project goals are to serve as many people as possible, given the limitations; numbers of clinic, supplies of medicine, and availability of medical personnel. The clinics are well placed. Medicines have often been in short supply, however, and the clinics are not operated if the assigned medic is on leave or is sick. The program has had effective and wide impact because it is highly visible and because so many villagers have received service in one form or another.

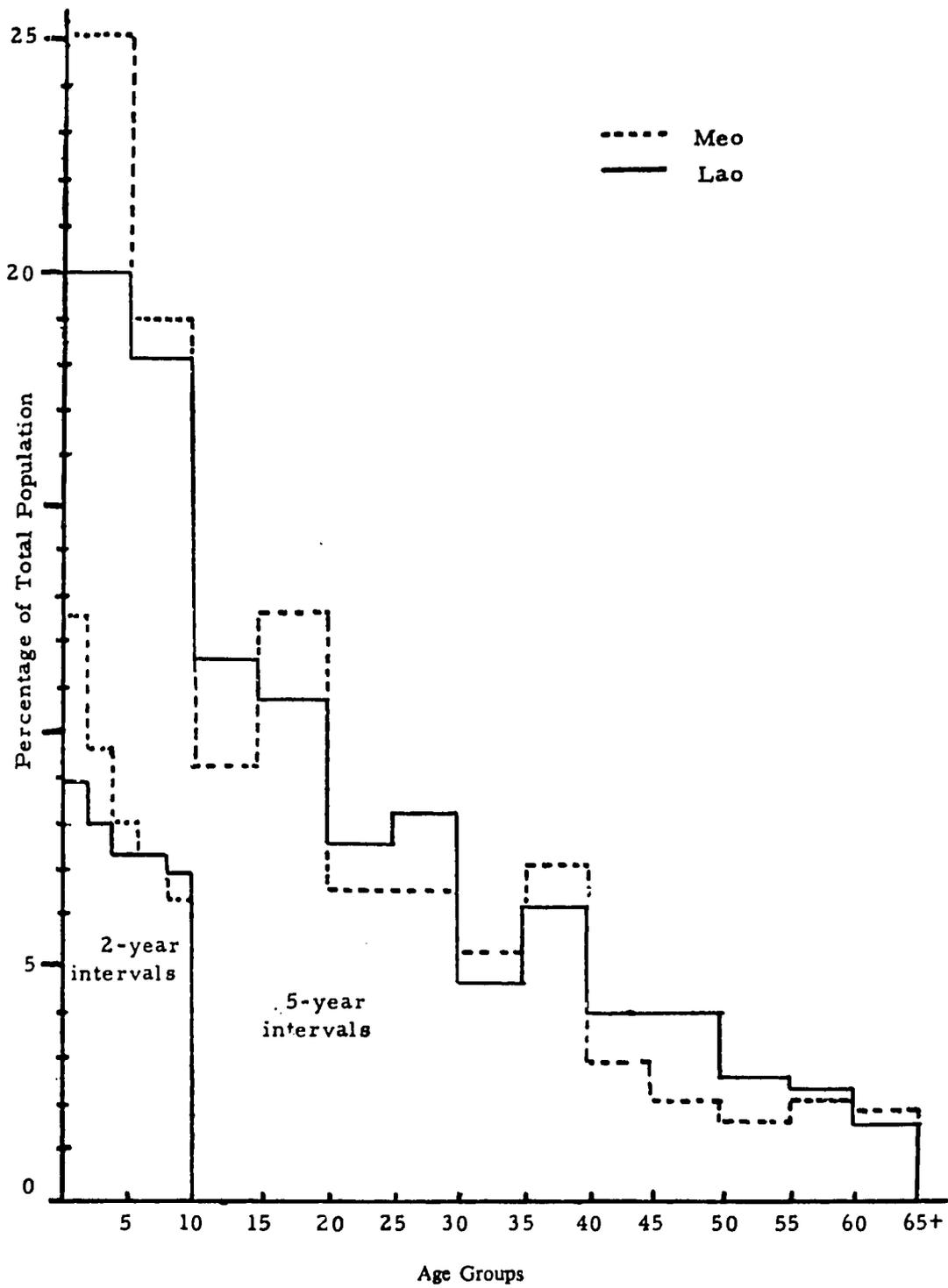
6. Transportation and Communications

a. Roads

This has been the single most important influence for development. The effects of road access have been felt in all activities, bar none. Increase in school attendance from adjacent villages in grades 4 through 6 at the Groupes Scolaire depended heavily on safe and facile access; the small number of clinics that the Cluster could afford were able to provide Clusterwide service because of road access; production and sale of rice surpluses was greatly encouraged by the accessibility of extra-Cluster markets; production and sale of pigs was augmented through increased availability of rice bran from the surplus rice and by the ability of Sayaboury traders to canvas all villages and to transport the pigs by the greatly enlarged transport capability - which was also a direct result of the good roads; village "bouns" or religious ceremonies have become inter-village events because of access in terms of minutes instead of hours as well as because of the broader, more lively scope of activities at the bouns; small retail establishments have proliferated, partly because of better availability of supplies from Sayaboury and beyond and easier access to the stores from all villages; better mobility has encouraged visits to the villages by RLG officials as well as visits to the Cluster and other RLG offices by the villagers; and police and military personnel can reach any inhabited point in the Cluster area (assuming completion of the road to Na Luak and Nong Houng) in a matter of minutes.

⁽¹⁾ Personal communication from Dr. Weldon, Chief, USAID Public Health Division.

Figure 5
COMPARISON OF LAO POPULATION WITH MEO POPULATION



The full development potential in the current cycle of development has almost been reached. Access roads are still needed for Na Luak and Nong Houng, and some of the villages have complained about the condition of their access roads.

All road work, with the exception of some roads within the Nam Tan irrigation area, was performed by the Sayaboury sub-division of RLG Travaux Publics (Public Works). Maintenance operations are based at Phone Hine. Equipment includes one bulldozer, one motor roller, two dump trucks, one jeep, one leveler and one Case Loader - all supplied by USAID.

All personnel are Lao except for an American equipment specialist, based in Sayaboury, and his Filipino assistants. The road to Sayaboury is hilly and has many bridges. In very rainy weather care must be exercised to keep from sliding off some of the hilly or canted roads. Otherwise, the road bed is good and well maintained.

Most of the present roads were built or in the last stages of construction during 1966. Before then, the Cluster management maintained a stable of horses to carry visitors and supplies over the last 16 kilometers of road from Sayaboury to Muong Phieng.

b. Airfields

The airfield at Sayaboury was used by residents of the Muong Phieng valley prior to the Cluster Development. When the Nam Hia Meo were being settled in 1962, 1963 and 1964, rice and supplies were air-dropped to them and a small seasonal landing strip was constructed on paddy land lying between Nam Hia and Nasom Noi. The strip was replaced in 1969 by a new strip located at the Nam Tan dam site. This strip was constructed by the Nam Tan construction crew when their equipment could not perform canal or road construction because of the weather. It has proven very valuable in assisting construction of the Nam Tan irrigation system and in providing transport communications for the entire Cluster.

c. Tele-communications

A field telephone system constructed from surplus military equipment secured by USAID and using poles supplied by the villagers serves key villages. Normally one phone is located in each village. It is still possible, however, to see laundry hung on pieces of telephone line that have been appropriated by some of the villagers. Repair is a continuing problem.

The Cluster headquarters in Muong Phieng village, the construction site at Nam Tan, and the Provincial Headquarters at Sayaboury are interconnected by single-side-band radio. This net, in turn, is connected with the national USAID system centered on Vientiane. Some of the Cluster vehicles are equipped with transceiver equipment, permitting communication between vehicles and with the local headquarters.

d. Mass media

As discussed under Activity Plan No. 18, following, the Cluster is served by a monthly newspaper, a library with a mobile service, and, as required, generators, amplifiers, movies, and mohlam teams for use at bouns or other ceremonies.

IV. ACTIVITY PLAN EVALUATION

This section will examine the extent to which the objectives set forth in each Activity Plan have been achieved. The feasibility of each plan of action will also be assessed, where applicable, from the points of view of its inherent practicality and its actual success or failure. A summary of identifiable costs is also included.

A. Activity Plans

Each AP will be discussed in numerical order.

Activity Plan No. 1—Training and Demonstration Center

Response Category: Service

Evaluation: Satisfactory/6

Objectives:

“Constructed for the following purposes.”

“1. Housing quarters for the members of the Cluster team including IVS personnel.”

“2. Training and Demonstration Center for the population of the Cluster.”

“3. Upon departure of USAID, these facilities will be turned over to the RLG for use as a hospital-dispensary.”

Although the Center building was planned to supply housing for the Cluster team by June, 1964, the team moved into plumbing-less quarters only in November. Housing proved uncomfortable and inadequate for married couples. Separate houses were built for IVS personnel and occupied in mid-1966. The Center building ultimately housed the Nai Dan's and Cluster Manager's office, the radio room, a guest room and kitchen, the library, information project office, clinic and storage areas. Despite small disappointments, the building has been extremely useful.

A separate building was later added for training and demonstration (See Activity Plan No. 13).

Activity Plan No. 2—Livestock Development (Swine)

Response Category: Change

Evaluation: Unsatisfactory/na

Objective:

“The purpose of this activity is to raise the protein intake and levels of income of Cluster families by increasing the number and improving the quality of the local swine population available for both consumption and sale, thereby contributing to a general rise in the standard of living of Cluster families.”

This objective makes an assumption that is open to question: that it would be possible to raise the protein intake by increasing the number of swine in the Cluster. In actuality, the habits with regard to eating swine are constrained by logistic problems, as discussed earlier. In the recent period where there has been an increase in swine raising, there does not appear to have been an equivalent increase in the consumption of pork. General practice, which is to slaughter a hog when there is a marriage, when a house is being dedicated, or for some other very important ceremony, still determines the slaughter rate of hogs. If the sole purpose of this activity plan had been to increase the protein intake, it might have been accomplished by increasing the number of occasions in the Cluster where all the meat from a hog could be distributed and consumed quickly.

It is possible that a collateral effect of the irrigation project may have increased the incentive to slaughter hogs. Prior to the irrigation project, the cluster families had depended upon wild game for their animal proteins. With the clearing of the forests, the cluster families have complained about the absence of game. If there is an increase in the eating of pork in the Cluster, this may be a contributing factor, although it is more likely that consumption of poultry has taken up the slack.

Although the hog censuses do not appear to be reliable, there probably has been an increased number of hogs in the Cluster. More of these hogs have been sold, and there has been an increase in the level of income of Cluster families deriving from these sales. It has not, however, been due to the hogs introduced under Activity Plan No. 2. The increase is due to:

- (1) the better road conditions which permit merchants from Sayaboury to scout all the villages for hogs to purchase;
- (2) an active market at the Nam Tan irrigation site where a number of workmen depend upon the local area for their food supplies;
- (3) the improved ability to raise hogs resulting from the course in livestock production given under Activity Plan No. 19 - "Livestock training", and greatly assisted by periodic visits of the RLG Livestock Agents.

"Improving the quality" of the local swine population was not accomplished. The care and upkeep of purebred hogs required too many changes in the existing ways of doing things and too much extra effort for the foreseeable gains. The Yorkshire hogs were very susceptible to disease. Mr. Batto had, at the beginning of the Cluster, warned against this specific breed on the basis of experience in Thailand. No provision was made for the storage of critically needed medicines and vaccines until three years after the start of the program. These animals could not be allowed to forage for themselves: they had to be kept in raised pens. They had to be fed every day, and the food in many cases had to be cooked. Special feed had to be grown or purchased. The degree of care required was generally more than the average farm family gave their own children.

An IVS report of July 1, 1965, quotes one of the Lao veterinary agents; "One reason that some of the villagers aren't taking care of the pigs is that they didn't want them in the first place, and this might be the way of expressing their feelings. In these instances it might be better to recall the pigs." He also quotes, "In the future I will not request any more Yorkshires. Too many have been sick, and also they are similar to the white buffalo".

The plan of action called for the proper actions but not enough of them. In addition, a great many of the planned actions were not performed. Only a part of the projected amounts of seeds for feed crops were distributed. Of this, a relatively small proportion was actually grown for feed. There were no stores of feed crops when the pigs arrived. Lectures were to have been given on housing construction, feeding methods, sanitation, veterinary techniques, control and prevention of disease, and improved breeding. Because of the unfortunate lack of any livestock training personnel at the Cluster during the months proceeding and during the distribution of the pigs, practically none of this teaching was performed.

Lack of training of the village cooperators, their reluctance to perform the necessary actions even if they had been adequately trained, the unsuitability of bringing in rather delicate purebred animals into the highly unsanitary wilds of Muong Phieng, and failure to appreciate the depth of technological change required, accounted for the failure of this project.

Activity Plan No. 3 — Vegetable Production (wet season)

Response Category: Change

Evaluation: S/na

Objective:

"To increase vegetable production in the Cluster area through the introduction of better varieties of vegetables, and improved methods of their culture in order to increase income and improve the vegetable element in Cluster family diets."

There seems little doubt that vegetable production has increased. The Cluster Home Garden was an early activity of Mr. Guieb, who tended it with care. The demonstration garden was also used for propagation of seed-stock although it did not fill its training function. Almost all houses at Nam Hia have home gardens, while the next highest numbers are at Muong Phieng and Nasom Nhai.

Except in the area near the Nam Tan irrigation project, the growing of vegetables has not materially increased the income of the average Cluster resident. In 1964 and 1965, the Meo at Nam Hia had grown quite a number of cabbages and squashes which they took to Sayaboury to sell. The money they made was not enough to cover the cost of the trips and the amount of work that went into growing the vegetables. They have

since reduced the level of their home gardening to only subsistence for themselves. The vegetable element in the Cluster family diets, however, has almost certainly been improved.

The plan of action as outlined in the Activity Plan was not followed very well. Demonstration centers were not established in a number of villages. Had they been established, there would have been no one available to run the centers, which would have required the teaching of soil preparation, use of fertilizers and a number of other techniques. The seeds were not, as stated in the plan, distributed only to farmers who had properly prepared their land. Seeds were given to the Nai Ban, and the Nai Ban gave the seeds to whoever he thought deserved them. The Action Plan says that "depending on the enthusiasm of the vegetable growers, an agriculture fair may be organized". This fair was never organized.

In spite of the difficulties and high cost involved in keeping the demonstration garden going, it probably performed a positive function by showing what the new vegetables looked like and how they were grown. There have been increases in both the number of home gardens and in the varieties of vegetables planted. Continuing visits of the RLG Agriculture Extension Agents are helpful.

Activity Plan No. 4 — Village Dispensaries

Response Category: Work-Service

Evaluation: Satisfactory-I

Objective:

"To establish and maintain two village dispensaries in addition to the two currently in operation in the Cluster which will:

- (1) provide symptomatic treatment to the villagers in the Cluster area and;
- (2) improve the general health conditions of the people."

Both were opened on schedule on 5 July 1964. Staffed by Lao medics, they have continued to serve their areas since that time. They have been one of the most effective elements of the Cluster operations. They are supported by a non-Cluster activity, the Village Health Program of USAID Public Health Division. They have undoubtedly "improved the general health".

Activity Plan No. 5 — Livestock Development (Ducks)

Response Category: Change

Evaluation: Satisfactory/na

Objective:

"The purpose of this activity is to supplement the protein intake and increase the

incomes of Cluster families through the introduction of an improved breed of ducks for consumption, and to increase Cluster family income through the sale of ducks.”

All of the objectives were met. A new breed, Taiwan ducks was introduced. They were immediately accepted because they produced at least 200 eggs per duck per year, whereas the Lao duck produced only about 50 eggs per year.

Although the original plan had been that eggs or ducklings would be returned to the Cluster management for distribution to other families who had not received them initially, very few were brought to the Cluster Headquarters. However, it wasn't long before families all over the Cluster had received the ducklings or the eggs from their neighbors. The ducks as well as the eggs were both sold and eaten. Lao ducks are still preferred for eating over the Taiwan ducks. This is reflected in the price. The price of a Lao duck is approximately 500 kip, while that for a Taiwan duck is 400 kip. The ducks are known in the Cluster as “Phet’Ka”-“Phet” means duck, “Ka” is short for “Amerika”.

Activity Plan No. 6 — Fish Ponds

Response Category: Change

Evaluation: Satisfactory/1

Objective:

“To provide a cheap, readily available source of protein and calcium for both human and animal consumption.”

The objectives of this program were achieved. However, two unforeseen difficulties resulted in the destruction of the project as originally conceived:

- (1) the impossibility of running a community fish pond, and
- (2) the presence of predators which killed all of the original stock of fish.

Construction of two ponds of 2,000 and 3,000 square meters capacity was performed on schedule and stocked on schedule.

However, the plan called for the “Villagers to form a responsible committee which would enforce the rules governing the size and number of fish to be taken per week per family, the removal of undesirable debris, and the maintenance of adequate food supply in the pond, and necessary maintenance”. The villagers did not do their part to form such a committee. It is believed that the Cluster made no further effort to help create such a committee.

The presence of the predators, under conditions as they are found here in Laos, had not been foreseen by the Cluster personnel. Catfish and snakes were the worst enemies. Catfish were distributed almost everywhere where there was flooding, and during the recession of the flood they tended to bury in the mud and to stay alive for long periods

of time. With reflooding they might well be swept into the pool, if banks around the pool were not high enough. The only protection against swimming snakes was to make the pool deep enough so that the fish could keep out of reach of the snakes.

Interest in fish continued, however, even in the absence of an Activity Plan. Smaller ponds, where the total responsibility for maintenance as well as for controlling the fish take remained with one family, became very successful. Although a few ponds were built here and there between 1965 and 1963, a major impetus to the fish pond program was introduced with the arrival of Mr. Sanith, an IVS local-hire fish expert. Just before his departure for Thailand for an intensive course in fish culture in August 1969, Mr. Sanith had participated in the building of over 50 individual ponds in the Muong Phieng/Phone Sai twin village area.

Two pond owners in Muong Phieng had large pools and were actively engaged in selling fingerlings and fish to other farmers who wanted to start their own ponds.

In addition, the RLG has very greatly increased its ability to support the starting of small ponds throughout Laos. It has put into operation three fish-breeding stations, with an ultimate capacity of two and one-half million fingerlings per year. As of the end of FY-69, the current total had reached 650,000 fingerlings produced at the three stations.

Activity Plan No. 7 — Experimental Crop Rotation

Response Category: Change

Evaluation: Unsatisfactory/na

Objective:

“To demonstrate the profitability of crop rotation, increase the income of farmer cooperators, and afford them and other villagers an opportunity to broaden their agricultural knowledge.”

This program, which concentrated on garlic and mung beans, did not demonstrate the profitability of either of those crops. The Village Development Committee of Muong Phieng said that the villagers were advised by the Cluster to grow garlic four years ago. They did so for three years but they were continually unsuccessful. They gave up last year. Many people invested in this business, some as much as 10,000 kip. The project was also to afford the villagers of Muong Phieng and other villages an opportunity to broaden their agricultural knowledge. However, if we are to believe the report of the USAID agricultural technician who visited in March 1967, the project was poorly planned and did not tell the villagers how to raise garlic correctly.

The plan was simple and appeared sound. The weakness seems to have been in the timing. Not enough time was allowed for the few qualified personnel on hand to adequately indoctrinate and train the users. Also the plan called for planting in

December and January, whereas qualified technical advice says the proper time is November and that January is much too late. The problem of water also needed close control. This was not adequately understood by Cluster personnel. Lastly it was the USAID responsibility to supply the garlic cloves. Fully half of the first shipment were dried out and useless.

Activity Plan No. 8 — Youth Activities

Response Category: Change

Evaluation: Unsatisfactory/na

Objective:

“To promote physical fitness and civil consciousness; provide a form (forum?) for citizenship and leadership training and character building for the young people of the community.”

This ambitious plan was scheduled to be the responsibility of Mr. Manny Galera, who had already successfully organized a Boy Scout Troop and a Jamboree. The entire activity died in February, 1965, when Mr. Galera resigned.

There was a brief re-awakening of interest in March, 1966, when Mr. R. Candea, IVS, took an interest in locating sporting equipment. Later, (mid-1968) when Mr. Tom Xerri, IVS, was assigned to the Cluster, he was tentatively assigned to this activity, pending clarification of the RLG's desires and its plans for its new Rural Youth Division. A provincial-level official was assigned to Sayaboury but nothing was done in the Cluster.

Activity Plan No. 9 — Environmental Sanitation Program

Response Category: Change

Evaluation: Ambiguous-unsatisfactory

Objective:

“To improve village health conditions and minimize the recurrence of preventable diseases.”

The objectives were clear but broad and completely open-ended. The degrees of “improvement” and “minimization” actually achieved were less than were implied by the amounts of work specified in the Activity Plan. The short-fall was caused by the following factors: the work-load scheduled for the personnel was more than they could handle; the need to train the Lao counterparts was underestimated and their contributions were over-estimated; and no attempt was made to estimate or understand the villager's susceptibility to change of their sanitary procedures.

The proposal consists of five related activities. The first two, latrine construction and wells, are the most important. Each contains a quantitative goal.

(1) Latrine Construction:

The latrine construction program aimed to produce 200 water-seal toilets in the Cluster villages in the period through June, 1965, a total of nine months. There are no other alternatives presented - it was water-seal toilets or else. No time was provided in the program for analysis of the existing latrine habits, nor to inquire into the desires of the villagers with regard to this particular kind of toilet. The program was established for demonstrating these toilets to villagers - if they like them, they can have them.

Essential requirements in the use of this kind of toilet are a water supply and a reasonably dissolvable toilet paper. There is no evidence that a study was made of the various villages to determine which villages had the best water supply and therefore might be those more amenable to accepting this kind of toilet. Villages that were selected were those closest at hand to the Cluster Center. The only paper available was too stiff to be flushed readily through the toilets.

Three Fundamental Educators were given the training course run by the World Health Organization in Vientiane. Field work for Activity Plan No. 9 was focused on putting these toilets into individual home compounds, although communal use was suggested in the Activity Plan. These toilets are found in only two of the 17 schools in the Cluster area, and are the only toilets of any kind constructed at schools. It is suggested that the plan to improve sanitary toilet conditions in the area should have used the strong indoctrinational leverage exerted immediately and in the future by school children.

The practices at the time were to relieve one's self at the nearest place in the forest. This was felt to be adequate by most villagers. When the irrigation activities forced the clearing of large amounts of forest, the villagers began asking for some other form of toilet. Thus, one of the unplanned effects of a collateral program (irrigation) was the increased probability that an unrelated program, in this case, toilets, would succeed. This kind of complementary influence is a productive aspect of the "Cluster" approach.

Although many of the water-seal toilets that were built are not in use, the program had an educational effect which probably will pay off when an acceptable toilet becomes available.

(2) Sanitary Wells:

The objective of this program was to dig new wells, complete with concrete well rings, and possibly to improve old dug wells, also by introducing well rings. No indoctrinational problems were anticipated since there was thought to be unlimited demand for the wells. Twenty-one of the 28 dug wells which were completed or started in the Cluster are currently in use. More and better water is now available, and the need for reducing contamination is starting to be understood.

(3) Sewage Disposal:

This program was to consist of digging drainage ditches or kitchen drains, garbage pits, and the elimination of stagnant water so as to reduce breeding places of flies and other disease-carrying insects. Indoctrination and demonstrations were to be the responsibility of two Home Economics girls. It was assumed that these girls had had sufficient early training to be able to carry out these duties. There was no provision, as there had been in the latrine construction element, for further training. It soon became apparent that the girls were too young and inexperienced to command the respect of the village women.

(4) Extension Education:

According to Mr. Chatiketu's report on the conditions at Muong Phieng, the educational aspect of environmental sanitation programs was very important. This section of the Activity Plan says the right words, but there is no evidence that there was any follow-through for the procurement of movies, film strips, posters or other available media, as stated in the Activity Plan. The Fundamental Educators and the Home Economics girls gave a limited number of indoctrination lectures and held meetings at villages. None of this was supported by a visual or audio education devices.

(5) Training:

This section called for the village committees to recommend one person to work as assistant or apprentice to the Environmental Sanitation workers and to whom the purpose, rationale and techniques of the projects would be imparted. This person would work with the Cluster sanitation worker only when the latter was working in his village.

There were no village committees at that time, however, and no thought was given as to what would be required to motivate a local villager to want to work with the sanitation workers. Work of this kind would require extra effort and would put the candidate into a position of prominence or high visibility with regard to his fellow villagers, which is not usually desired by a Lao villager. It is difficult to see what change in status or what other motivation was anticipated which could overcome the probably strong inhibitions against working in this capacity. The idea was a good one, and it was unfortunate that it wasn't thought out a little more thoroughly. (see discussion of Activity Plan No. 25 for a way in which this might now be accomplished).

Activity Plan No. 9 — Amendment 1

Response Category: Service

Evaluation: A/na

Objective:

Same as AP 9.

This amendment called for the construction of crematories at Muong Phieng, Na Tane, Houa Na, Nasom Nhai, and Na Kheme, and for drilling 12 wells in ten villages.

Only the crematory at Muong Phieng was constructed. Eleven wells were drilled: two each at Nam Pang Lao, Nasom Nhai, and Na Bouam; and one each at Muong Phieng, Kang, Nakok, Nasom Nai, and Na Sing. As of August, 1969, five of the wells were in use. It is the responsibility of the Sayaboury sub-division of the RLG Travaux Public to maintain the wells in good repair. As of the present, they have not responded to any requests for assistance in repairing the pumps. Some repair has been performed on an ad hoc basis by mechanics working at the Nam Tam irrigation project.

Activity Plan No. 9 — Amendment 2

Response Category: Work

Evaluation: S/2

Objective:

Same as AP 9, plus the following additional phrase, "...and provide water sources of irrigation water for home gardens".

The objectives were met. The plan called for the construction of drainage aprons, roofs, ditches and bathing areas at the wells. Wells were to be dug as follows: Muong Phieng - 6; Nasom Nhai, Kang, and Na Bouam - 2 each; and one each at Nakok and Nasom Noi. Wells are actually dug: Muong Phieng - 4; Na Bouam - 2; and one each at Nong Ngua, Kang, Nakok, Nasom Noi, Nam Pang Meo, Na Tane, Na Sing, and Houa Na. All have drainage aprons, but only six have roofs and bathing slabs.

Activity Plan No. 10 — Home Economics

Response Category: Change

Evaluation: Unsatisfactory/na

Objective:

"To organize women's groups and teach home skills."

It was not possible to organize women's groups at this early stage in the Cluster since there had been no precedent and there were not the requisite skills to plan or carry out the organizing. The action plan was unrealistic in terms of the available teaching skills of the Lao Home Economics agents.

Early attempts to organize classes in sewing and home improvement were not successful although initial interest was strong. The key factor was the inexperience, excessive youth, and lack of confidence of the RLG home economics girls. The villager women became disinterested for these reasons. This has since changed somewhat as the agents have gained assurance and experience. However, the laudable objective of energizing the Cluster women to directly assist in development programs and to encourage their families to improve sanitation and nutrition has not been very successfully attained.

Activity Plan No. 11 — Health and Sanitation Program

Response Category: Service

Evaluation: Satisfactory/na

Objective:

“To promote the general health condition and reduce or minimize the maternal and infant mortality rates in the Cluster area through disease prevention campaigns and health education.”

The infant mortality rates have clearly been reduced. In the five years of Cluster operations the per cent of children 5 years and under has increased from 16 per cent to over 20 per cent. Data is not available on maternal mortality rates, but villagers have stated that less mothers die in childbirth.

The action plan lists a large number of basic health program activities. With the assistance of the OB doctors from Sayaboury, many of these tasks were performed from the beginning of the Cluster and continue to be performed. They include pre-natal examinations, mothers' classes in proper nutrition and child care, home obstetrical service (in Muong Phieng and Phone Sai), post partum home nursing, well-baby clinics, and medical and dental examinations at schools, as well as immunization, deworming and house spraying. All activities are now carried out by the medics at the dispensaries. Their level of training is low.

As many as six dispensaries may operate at any given time, although medics are in short supply. The Lao Chief Medic at Muong Phieng is exceptionally devoted to his duties.

Activity Plan No. 12 — Agricultural Improvement Program

Response Category: Change

Evaluation: Unsatisfactory/na

Objective:

“To increase farm income, raise living levels of farmers, improve farming techniques through demonstrations, training and extension work.”

While all of the objectives listed were probably achieved to one degree or another in the Muong Phieng Cluster, it is doubtful whether this program contributed very much to any of those objectives.

This program consisted of six related activities; agriculture center; fruit tree propagation and distribution, crop rotation, school gardening; home gardens, and farmers classes. An examination of all of the operations called for in this complex of five

activities revealed a literally staggering work load. One OB agriculturalist and one IVS livestock technician were scheduled to run the entire operation. The RLG was to provide six other people. However, experience even at that time had shown that much time would have to be spent in instructing the local agents. In addition, the two persons who were to have been the backbone of this project had other responsibilities for other projects.

While the listed operations were probably more than the personnel assigned could handle, some of the operations were unrealistic. For example, the fruit tree propagation and distribution program stated that three each of seven kinds of fruit trees would be given to each village, and planted on a communal lot which the villagers would clear and fence. All of these trees were to have been marcotted or budded. For 14 villages, a total of approximately 300 trees, all relatively large, would have to be distributed at a time when there were no roads. The communal lot in each village had to be selected and the villagers had to agree to its use in this form. Someone had to convince the villagers of the value of this operation so that they would clear and fence the land. No work was done on this aspect of the Activity Plan, and little on the other aspects.

Each of the elements of the program required indoctrination, organizing, preparation of training materials, the expenditure of time for training, and following up the training. This program, laudable as its intentions were, fell under its own weight.

Activity Plan No. 13—Multipurpose Community Building and Community Center

Response Category: Service

Evaluation: Satisfactory/2

Objective:

“To provide a building for various RLG ministries and services for training Cluster population.”

The building was constructed and furnished at no cost to the villagers. It contains offices and classrooms, performing all the functions for which it was planned.

At the time of its construction in mid-1965, there was doubt as to the feasibility of its location at the northern end of the Cluster, since this discriminated against the southern villages. The question was resolved by the statement by Cluster Management that RLG officials who would perform the training would only live in Muong Phieng.

The question of the best location for the Center is still open. The southern villages have received much less assistance than the northern ones, who really needed it the least.

Activity Plan No. 14 — Repair of School Buildings (At the Groupe Scolaire at Muong Phieng and at schools at Na Bouam, Nakok, Nasom Nhai and Na Khome)

Response Category: Work

Evaluation: Satisfactory/3

Objective:

“Make available decent accommodations to the school populations of the Cluster.”

Although all repair of these schools were scheduled to be completed before the 1965 rainy season, slippage in delivery of materials pushed the work into the rainy season, at which time most work was suspended. All schools except Muong Phieng were completed by January, 1966. Muong Phieng was completed in September, 1966. Three of these schools (Na Bouam, Nakok and Na Khome) were replaced by new schools two years later.

Activity Plan No. 15—Muong Phieng Market

Response Category: Work

Evaluation: Satisfactory/4

Objective:

“To provide a permanent market center of adequate size and health standards for Muong Phieng and the surrounding Cluster villages: Ban Nakok, Ban Kang, Ban Phone Sai and Phone Hine.”

The structures as completed met these objectives.

This market had first been requested by the Chao Khoueng and the Provincial Council in October, 1964. It took a year to get assurances that the villagers would provide adequate self-help labor and to perform necessary paperwork. When the building was almost complete it was discovered that the wrong plan had been used, and that the structural beams that the villagers had been asked to supply were not strong enough for cement tiles. USAID corrected the error by furnishing asbestos tile.

Self-help labor was supplied by the villages as follows (some villages purchased lumber as their contribution instead of labor):

Phone Sai	44 days	Nam Hia	174 days
Nasom Noi	44 days	Nasom Nhai	144 days
Phone Hine	18 days		

The market is used every day for about an hour, when all produce is usually sold. Meat is the main attraction, but very little is usually available. The building is also used for meetings and large training sessions. The market has not yet been dedicated.

Activity Plan No. 16—Social Action Training

Response Category: Training

Evaluation Ambiguous/na

Objective:

“To train and develop army social action teams capable of assisting the government in the implementation of the Rural Development program.”

The extent to which the graduates of these course were used in Rural Development work is not known.

This program, which started as a request from Mr. Loren Haffner to informally train four soldiers from Xieng Lom, grew into a formal course for 24 soldiers—to be given three times between October, 1965 and April, 1966. A pre-Activity Plan course of two weeks was given to eight soldiers in July, 1965. The Activity Plan, for the first time in the Muong Phieng Cluster, made adequate allowance of time and personnel for all necessary actions, presumably because the writer, Mr. Bustamante, had been a military man and was operating on familiar ground.

One formal course for 24 (?) soldiers was given from 3 July, 1965 to 11 September, 1965. Eight soldiers graduated and were assigned to Xieng Lom to assist in Community Development work. A second course was given from 18 October, 1965 to 24 December, 1965—, when 24 soldiers completed the course.

These courses and the one for Activity Plan No. 17 “Village Leader Training”, probably utilized most of the personnel resources of the Cluster during the last half of Calendar Year 1965. This was the period when IVS was reluctant to assign volunteers to Muong Phieng.

Since virtually all of the training was given by RLG Cluster personnel, it is probable that these courses proved valuable training for the still-inexperienced agents.

Activity Plan No. 17—Village Leaders Training Course

Response Category: Training

Evaluation: Ambiguous/na

Objective:

“To conduct a one-week basic training course for Tassengs, Nai Bans and Pulong Naibans in government, agriculture, livestock, first aid, leadership techniques and environmental sanitation”.

There was no perceptible effect on the Tassengs, Nai Bans, and Pulong Nai Bans, according to Cluster personnel who were on duty following the courses.

Two one-week courses were given in October and November, 1965. The course was adapted from one used in Pakse. Instruction was mainly in English, with the aid of translators. Some of the Nai Bans in Tasseng Muong Phieng stated that they acquired an understanding of the duties and responsibilities of the RLG officials, including the representatives of ministries such as agriculture.

Activity Plan No. 18—Khet Phathanakane Information Program

Response Category: Service

Evaluation: Satisfactory/na

Objective:

“To establish a Cluster Information Program which will:

“A. Provide a greater sense of Cluster unity by informing the villagers of all existing Cluster activities;”

“B. Provide concrete examples (through pictures and words) of Cluster training programs that promote economic growth in the Muong Phieng Cluster Community.”

“C. Provide a democratic channel through which local villagers can voice their aspirations and assert their influence on Cluster affairs.”

The first two objectives have been and are continuing to be met. All villages express appreciation for the bulletin which seems to fill a need for reading matter and news.

The third objective is not being achieved. It is still difficult, if not impossible, for a Lao villager to publicly express an opinion which is in conflict with the persons in authority above him.

The overall program seems to exploit all feasible channels for reaching the people of the Cluster: Monthly newspaper, village bulletin boards, Cluster library supplemented by a mobile library, and movies shown at the villages. In addition, this project makes available sound equipment, mohlam teams, and movie equipment for festivals or bouns at any village. All personnel running the program are Lao. Nancy Ridenour, the wife of the Provincial Coordinator, provides advice.

Villages in the extreme southern end of the Cluster, which have not yet received any other Cluster project aid, express appreciation for their copies of the Bulletin.

This program has been so successful that it is a model for other Clusters, which send information personnel to Muong Phieng for training.

Activity Plan No. 19—Training Program in Livestock Production and Management

Response Category: Training

Evaluation: Ambiguous/na

Objective:

“To develop and conduct basic training programs which will teach and develop skills

in effective livestock management in the Muong Phieng Cluster area. Specific goals include the following:

- “1. To get the farmers to keep livestock production records;”
- “2. To enable farmers to detect certain diseases in their animals at an early stage, and to teach basic methods of disease control;”
- “3. To get farmers to house their animals properly, for better production and disease control;”
- “4. To get farmers to use some locally available foodstuffs in proper proportions;”
- “5. To enable farmers to effectively control insects which bother and are harmful to their livestock; and”
- “6. To more fully acquaint farmers with RLG Veterinary Agents assigned to their area.”

Two of the planned six courses (each with 15 students) were given, one each in Tassengs Na Kheme and Na Tane. None has been given in Tasseng Muong Phieng. Attempts by Cluster personnel to evaluate the effort of the training six months after the first course gave inconclusive results, but indicated that the students had attempted to follow those procedures which were not too difficult or costly.

Following are some quotes from interviews with Nai Bans and Village Development Committee members of villages which had villagers who participated in the program:

The village of Houei Oum had three students in the first class. The Nai Ban said, “Those who had gone for training did not raise more ducks or pigs when they came back, and did not teach others. They only built their enclosures for examples and for others to imitate.”

The village of Na Kheme had eight students, including the Nai Ban. The Tasseng commented, “They went twice a week to Muong Phieng. The training was useless. The people still went on their old methods, and did not teach people the new methods.”

The village of Na Bouam had three students in the second course. The Nai Ban commented. “They were trained for about seven to eight weeks, but after the course they still do the old ways. If anyone is interested enough to ask them, they will explain how to feed livestock, but the villagers feel that it is very complicated so they still do it in the old way.”

It was not possible to try to estimate the impact of the training on the individual students' production methods. From the comments received, it seems possible that the students have kept the information to themselves, rather than to impart it to their neighbors, assuming that they retained any of what they had learned. However, they did get manuals and notebooks which may have been useful to them. Also, regardless of the comments cited above, there has been improvement in animal hus-

bandry in the Cluster. Probably the RLG veterinary agents can claim major responsibility.

Since the RLG veterinary agents visited each of the students periodically after the course, it is probable that the agents got an even wider exposure within the Cluster than they might have if the course had not been given.

The plan of action as devised by Mr. Tamayo, comprised an excellent course of instruction followed by assistance to trainees in their villages. This course has been used in other locations throughout Laos.

There has been difficulty in aligning a group from Tasseng Muong Phieng. The reason for this reluctance to enter this course has not been established. However, the villages in Tasseng Muong Phieng have probably received better and more constant periodic coverage by the RLG livestock agents than the other two tassengs. There may be no felt need for personal knowledge when professional assistance is so close at hand.

Activity Plan No. 20— Training Program in Rice, Vegetable and Fish Production, and Irrigation Techniques.

Response Category: Training

Evaluation: Ambiguous/na

Objective:

Ten "objectives" are listed. Two, paragraphs 2 and 8 are actually objectives, while the other paragraphs describe means for achieving these two objectives:

"2. To raise the rice yield per hectare to 3,500 kilograms per hectare in Muong Phieng Cluster."

"8. To increase the average annual income of the farmers."

Both of these objectives are open-ended and they have been pursued in the Cluster since its beginning. This activity plan, if it had been allowed to continue, could have pushed both of those objectives to a higher level of achievement.

The eight "objectives" which are means for achieving the major objectives are:

"1. To teach villagers basis principles and skills in had preparation, planting, weeding, insect control, irrigation, harvesting and storing of crops."

"3. To increase the number and kinds of vegetables grown, harvested, and sold in Muong Phieng."

"4. To have the villagers use and maintain the irrigation facilities available for their use."

"5. To have an increased number of farmers plant rice and vegetables during the dry season."

"6. To have an increased number of farmers plant vegetables during the rainy season."

"7. To have an increased number of farmers plant improved seed varieties, use fertilizers and insecticides, and practice mulching, weeding, and row planting in their farming operations."

"9. To increase and improve the contacts between the farmers and the agriculture extension agents."

"10. To increase the number of farmers raising fish to 20."

Only one course has been given, between April and June, 1968. Instruction was entirely by the RLG Extension Agents and other agriculture personnel. Some of these people had to come from Sayaboury each day to give the course and sometimes stay over night. They objected to the fact that they were not given extra per diem and displayed little interest in the course. The course was also criticized as being too long. Fourteen weeks, three days a week was too much time from the average farmers life for a course in which some of the subjects did not interest him. No further courses were given and the activity plan has been cancelled.

The main reason for cancellation, however, was competition with a course that RLG and USAID Agriculture were forming which accomplished something of the same objectives. However, this course was much more sharply pointed. Its main objective was "to support the accelerated rice production program in Laos." The curriculum included highly specific ways of supporting the rice production and was only six days long. They contemplated giving 26 groups of ten farmer leaders each the six day training.

RLG Agricultural personnel were much more interested in participating in this latter program. Their status was completely clear and the course only tied them up for six days at a time.

At the time the Muong Phieng Cluster activity plan was being submitted there were also similar activity plans submitted from the clusters at Xieng Ngeun and Pakse. The confluence of these three documents of RLG agriculture for approval is believed to have assisted the RLG and USAID agriculture people in finalizing their courses.

Activity Plan No. 21 — Construction of a Three-Classroom school in Ban Nam Hia.

Response Category: Work

Evaluation: Satisfactory/6

Objective:

"To provide adequate educational facilities for the students in the Meo refugee resettlement village of Ban Nam Hia."

Completion was scheduled for April, 1967. The building was completed in March, 1968 and the furniture in October, 1968.

Construction was delayed because the construction plans for AP 21, 22, and 23 were modified so that all skilled carpenters could work together on each project in order to provide instruction to eleven trainees. Conflicts involving construction problems at Na Tane also delayed operations.

A second three-room school has been in the planning stages. In August, 1969, however, the people of Nam Hia tore down their old wooden school and rebuilt it next to the new school to give them the six rooms they need. It is possible that the departure of the IVS technician who had been living in their village (with no replacement in sight) made them feel that they had to take matters into their own hands.

Activity Plan No. 22 — Construction of Two-Classroom Primary Schools in Ban Muong Phieng and Ban Na Tane.

Response Category: Work

Evaluation: Satisfactory/4

Objective:

“To provide adequate and improved educational facilities for the students in the two Cluster villages of Ban Muong Phieng and Ban Na Tane.”

The objectives were met but completions were long delayed. The implementations of AP-21, this plan, and AP-23 were given a second, unstated objective: To use these construction jobs for on-the-job training of 12 local villagers to be carpenter and masons. This was a praiseworthy plan.

The original plan was to have an IVS construction specialist direct construction of AP-21, 22 and 23. Conflicts of opinion arose regarding; (1) the appropriateness of self-help contribution by villagers, and (2) the presence of absence of adequate sand and gravel in the Muong Phieng area for concrete construction.

It was then decided to assign three TCN Public Works carpenters and masons to the job. They were also to teach the 12 apprentices (later reduced to 11) both on-the-job and in daily 3-hour classes. After a short time, two of the PWD carpenters made themselves personally obnoxious and were sent away from the Cluster.

The two replacements and the remaining carpenter carried on construction and training. The construction of the school at Na Tane also employed an experimental kind of plastered bamboo wall construction that did not prove less time consuming than standard practice. Construction was completed in August, 1967- and the crew moved to Nam Hia (AP-21).

Work on the Muong Phieng school started in March, 1968, and was finished in January, 1969. Reluctance on the part of the villagers to perform their end of the bargain was encountered.

Activity Plan No. 23 — Construction of Two-Classroom Primary School in Ban Na Kheme, Ban Houa Na and Na Bouam.

Response Category: Work

Evaluation: Satisfactory/3

Objective:

“To provide adequate educational facilities for the students of the three Cluster Villages of Na Kheme, Houa Na and Na Bouam.”

All schools were to have been constructed by June 1967. Houa Na was finished in October, 1967, and the other two in September, 1968.

These schools also employed the PWD carpenters and on-the-job trainees. An indication of the interest displayed by the villagers is the fact that, with the road too muddy for vehicles, the villagers of Houa Na carried 125 sacks of cement three kilometers during August, 1967.

Activity Plan No. 24 — Home Economics Program in Clothing Construction

Response Category: Training.

Evaluation: Ambiguous/na

Objective:

“a. To educate the people about one of the services (Home Economics) of the RLG Extension Branch, thus making them more aware of the presence of their government and how it is there to serve the people.”

“b. To lay the ground-work for a long-term on-going program in Home Economics.”

“c. To provide an opportunity for the future homemakers to work together, by their own choice, for the benefit of themselves and their country.”

“d. To develop local leaders who can provide assistance for the home agents.”

“e. To develop and promote self-sufficiency in clothing requirements, home industry and health.”

This program was a formalization of much of what the home economics agents assigned to the Cluster had already been doing. The new element was paragraph (d) - which intended to train two girls in each village to be village representatives of the home economics agents. The program was cancelled because a national program of similar scope was promulgated - superceding this program.

The plan contemplated three programs; the "Local Leader" program mentioned above; five 2-month courses in blouse construction; and an augmentation of the Public Health, Maternal and Child Care program which would instruct in making baby and maternity clothes.

The local leaders were trained and two courses in blouse construction were given. The courses in blouse construction and baby and maternal clothing were continuations of courses given by the home economics girls without an Activity Plan. Much difficulty had been encountered because of the low skill level of the home agents. This seems to be an evolutionary problem which is becoming less critical as the girls accumulate experience and self-confidence. There is the possibility that US home economists stationed at field locations tend to overshadow the Lao girls and hinder their development. Since there are obvious training advantages in having skilled American home economists work with the agents, the problem needs study.

Activity Plan No. 25 — Village Development Committee Training Program

Response Category: Change

Evaluation: Satisfactory/1

Objectives:

"A. Formal Objectives

1. To organize a Village Development Committee in each of the 24 villages in Muong Phieng Cluster.
2. To train a group of elected village leaders from each of the villages in a five-day training course."

"B. Descriptive Objectives

1. To move the existing pattern of local leadership to a more effective administrative machinery which begins to promote selfgovernment, mobilize resources and introduce social change.
2. To equip local leaders with the skills of a group process whereby they can more effectively discover practical solutions to village problems.
3. To stimulate renewal among local leaders for the task of village leadership.
4. To facilitate increased interaction between government leaders and local villagers thus effecting better understanding and a stronger relationship.
5. To lend support to the change of villager attitudes in the direction of concern, hope and initiative for a better life."

"C. Ultimate Objectives

1. To create at the local base of Lao society a democratic institution for effective self-government.

2. To redefine the meaning of village leadership around the model of a creative process which is the critical exchange of ideas among an informed, concerned nucleus of persons.

3. To foster an increasing belief among village people that economic and social advancement can be obtained through individual competence organized in collective effort."

As stated in the Introduction of this Activity Plan, this is an experimental endeavor. The program is still in the earliest stages of growth. The formal objectives have been achieved practically on schedule.

These committees are legally authorized under Royal Ordinance No. 254 of August 24, 1966 "Organization and Administration of Rural Society - Tasseng and Ban". They are identified as village "Krommakan" or councils. It is said that few other provinces, if any, have yet established these krommakan.

The committees have been elected and trained on schedule. One of the final training activities was the identification of the existing problems at each Committee's village. These lists of problems were to serve as work agendas' for actual Committee operations when they returned to their villages.

The committees are now testing their roles, authority and scope of action in their own villages. The existing administrative structure is also doing its own testing, and some conflicts have occurred.

The Nai Ban of Houa Na is in direct conflict with his committee. He had agreed, at a meetings of Nai Bans of tasseng Na Kheme, that his village would contribute a certain sum to the construction of a new clinic at Na Kheme. The committee refused to sanction the amount. The Nai Ban of Nakok, on the other hand, relies on his committee for advice and responds to their advice.

The Nai Dan of Dan Muong Phieng has used the committees as a lever to enforce his decisions regarding, for example, delinquent self-help contributions to projects. He recently had the Nai Ban, the committee members and some other villagers in Houa Na arrested for failure to show up for work. In some cases, other government officials have used the committee to transmit decisions already made. The committees were told not to bother to discuss the decision.

Probably more important is the fact that some of the committees are discussing and arguing. It is fortuitous that the Muong Phieng area is now trying to absorb two new irrigation projects. Problems arising here may well provide solid, meaty functional demands for cooperative action. This is the context in which the committees can step in to assist in attacking these problems and thereby gain experience as well as establish a claim to legitimacy.

It is unfortunate that the CRA workers appear either to be unsympathetic to the program or are disinterested in it. They had performed the initial indoctrination at the village level prior to the elections. They have expressed concern over the autocratic behavior of some of the Tassengs and Nai Bans.

The Royal Ordinance under which this project was promulgated has further provisions that might also be explored. Each Krommakan should contain four sub-committees; religion and culture (religion and education); social (health and welfare); economy (agriculture, livestock, labor force); discipline and security (keeps peace, local security).

Some of the cluster projects in the subject areas listed above might be furthered if a specific committee member in each village were charged, for example, with handling all livestock contacts with the Cluster and the local livestock agent. The establishing of an environmental sanitation representative in each village, as contemplated under Activity Plan No. 9, might also be accomplished through a designated sub-committee member.

Activity Plan No. 26—Dug Wells

Response Category: Work

Evaluation: Incomplete

Objectives:

“A. To improve indigenous dug wells, to make such wells closer to model wells standards and thus improve village health standards.”

“B. To construct new concrete-lined dug wells according to model wells standards in those villages which agree to the required self-help inputs. For each new dug well there shall be at least 15 families who will use the well and contribute the self-help inputs. The maximum number of concrete-lined dug wells for any village shall not exceed one well per 15 families.”

“C. To train local villagers from Muong Phieng Cluster in the construction of concrete-lined dug wells and water-seal latrines with the long term objective “that villagers obtain greater independence in future construction of dug wells and latrines.”

The objectives, in effect, are the same as AP-9 with the following additions: modern well standards, including the experimental use of the continuous-pour method of constructing wells, and the addition of well roofs, fences, well aprons and drain slabs; the requirement that each well be used by at least 15 families; the suggestion that these 15 families be the ones who actually dig the well; the attempt to train the local villagers in well construction and in the construction of water-seal latrines.

These objectives ran up against villager resistance. It was difficult to get the villagers to accept the idea that a roof had to be put over each well and slightly less difficult to get

them to put a fence around the well. Ten wells were started: two are now supplying water.

Twelve villagers agreed to participate in the training. The training was for three weeks and probably did not result in more than superficial understanding of well construction. After the three week period, nine of the villagers were dismissed and the remaining three were carried on as employees of the Cluster.

The projected work load of 22 new dug wells included ten for schools. It is believed that the program got off to an unusually slow start because the first wells that were selected to be dug were primarily school wells. It was found very difficult to enlist the people to dig school wells.

The program was kept going largely through the efforts of the IVS technician, Mr. Tom Xerri. His assistant Mr. Virath had not had enough experience to carry on this activity by himself. The short period of training did not properly equip the three villagers, upon whom reliance was being placed, for continuation of the program.

At the beginning of the training program Mr. Xerri had decided to ask IVS Vientiane to send a second Lao assistant to aid in the teaching process. His assistant, Mr. Virath, objected, stating that he felt that he could handle it by himself. Out of deference to Mr. Virath's opinions, Mr. Xerri did not pursue the matter. Had Mr. Xerri had more experience in this area, he might have seen the wisdom of overruling his assistant's position. Mr. Virath subsequently left the job while it was unfinished to take a position at the Nam Tam irrigation site. Mr. Xerri's tour is finished and no replacement is in sight. No work is underway.

Activity Plan No. 27—Construction of Two-Classroom Primary Schools in Ban Kang and Ban Nakok

Response Category: Work

Evaluation: Incomplete

Objective:

“To provide adequate educational facilities for the students of two Cluster villages of Ban Kang and Ban Nakok.”

The school at Kang is completed, while that at Nakok is still under construction. Completion of both was scheduled for June, 1969. For the first time in the Cluster, the Activity Plan calls for the construction of water-seal latrine buildings, a well, and a fence around the grounds. This makes the phrase “adequate educational facilities” more meaningful.

Construction was managed by a TCN carpenter, with three of the former trainees also assigned to the project. The villagers supplied the usual inputs of material and labor.

Activity Plan No. 28—Construction of Replacement Dispensary in Ban Nam Hia

Response Category: Work

Evaluation: Incomplete

Objective:

“To provide adequate medical facilities for public health services to the villagers of Nam Hia, Nakok, Nasom Nai and Nong Bua.”

Scheduled for completion in April, 1969, construction has not yet started. A water-seal latrine is included in the construction plan.

One hundred thirty-one heads of families signed an agreement to supply labor for this construction. Two of the ex-trainees will supervise.

Activity Plan No. 29—Construction of Replacement Dispensary in Ban Na -heme

Response Category: Work

Evaluation: Incomplete

Objective:

“To provide adequate facilities for public health services to the villages of Na Kheme, Houa Na, Nong Houg, Na Luak and Houei Oum.”

Scheduled to be completed in May, 1969, construction is still under way. A water-seal toilet is included in the design.

Two of the ex-trainees are supervising.

B. Identifiable Costs

Table 9 summarizes the budgeted costs listed in the Rural Development Division Activity Plans. In some cases (marked with an asterisk) the amounts are known to have been different from those projected; the revised cost is shown. In many other cases, although there is a probability that the estimates are inaccurate, the original records are either incomplete, unavailable, or unreconstructable within the time allotted for this study. These restrictions apply not only to the Rural Development Activity Plan estimates and costs, but also to those relating to Public Works Division and Agricultural Division Activity Plans.

The total budgeted costs under the RD Activity Plans are \$50,935, and include US commodity support, Counterpart Trust Fund kip expenditures, some of the RLG expenditures, and the cost of commodities supplied by the villagers. In addition, the villagers supplied over 37,000 man days of selfhelp labor. Costs not included are for

TABLE 9
Summary of Activity Plan Budgets

AP	USAID Dollars	Trust Fund KIP	RLG KIP	Village Commodities (in KIP)	Village Self- Help Labor (man-days)
1	—	3,000,000	—	—	—
2	4,734	—	72,000	0*	—
3	1,984	—	84,000	—	9
4	2,950	240,000	—	48,000	1630
5	1,775	—	84,000	36,000	—
6	50	—	—	—	2400
7	251	—	—	—	500
8	120	—	20,000	—	550
9	300	47,000	216,000	60,000	2400
(1)	80	—	—	—	—
(2)	560	—	—	132,000	1400
10	130	—	120,000	—	—
11	1,500	—	150,000	—	—
12	800	—	—	—	—
13	65	187,000	—	—	—
14	529	—	—	300,000	600
15	500	—	—	600,000	1120
16	300	312,400	—	—	3024
17	—	37,800	—	—	—
18	510	158,500	—	—	—
19	181	182,000	—	—	470*
20	1,412	559,200	—	17,000	640*
21	1,136	—	—	502,281	2750
22	1,552	—	—	695,000	3700
23	2,321	—	—	1,030,000	5300
24	185	335,000	—	320,000	936*
25	100	29,000	—	—	—
26	1,161	36,000	—	1,039,000	4920
27	737	—	—	1,047,000	3000
28	193	—	—	307,000	900
29	194	—	—	309,000	900
TOTAL	\$26,310	5,124,400 kip (\$10,248)	746,000 kip (\$1.492)	6,442,281 kip (\$12,885.)	37,145 (man-days)

US personnel (26 man-months stationed at Muong Phieng plus 20 - 30 man months technical support); Operation Brotherhood Filipino personnel (five persons totaling 95 man months); US International Voluntary Services personnel (15 persons, totaling 140 man months); RLG Agriculture, Home Economics, Veterinary Service, Fundamental Education, Public Health, and Commission for Rural Affairs workers (approximately 34 persons totaling approximately 950 man months); and USAID local hire and Lao employees (total unknown). Other unidentified costs are for general technical support of the Cluster headquarters; and the costs of air transport and telecommunications.

Road construction costs, including all US and RLG inputs, are estimated at a little less than \$700,000. The last of these expenditures are being made this year for the construction of the road to Nong Huong and Na Luak. Annual maintenance is estimated to cost about \$7,000.

Agricultural Division Activity Plan No. 2 estimates of the cost of the Hia-Nakok irrigation system were \$1,650 USAID dollar costs for commodities; 100,000 kip (\$200) for RLG costs; 850,000 kip (\$1,700) Counterpart Trust Fund costs; and 10 man-days village labor for each two hectares to come under irrigation (estimated at 2,500 man-days). The cost of US and TCN labor was not included, although local labor costs were included. Actual costs totaled \$35,300, plus approximately 2,600 man days of village selfheld labor. The total includes \$5,700 for commodities, \$9,250 for use of equipment, and \$20,350 for TCN and local labor. US labor costs are not included.

The Public Works Activity Plan No. 18 estimates for the Nam Tan Irrigation Project total \$1.0 million. Some of the anticipated costs (land clearing) have been shifted to the farmer, while other elements have increased due to work stoppages and additional work caused by floods and unstable security conditions. As of the end of August, 1969, 33,980 man days of self-help labor had been expended - an additional 2,823 man days had been scheduled but were not worked. Much work is yet to be performed. No current estimate can be made.

Some costs can be reconstructed only by more detailed examination of the total operations than was possible. For example, 17 successful wells were drilled (six by the Refuge Relief activity and eleven by the Cluster), and a minimum of six were drilled but were unsuccessful. USAID has estimated that each drilled well costs an average \$1,700, indicating a minimum cost of \$40,000 for well drilling which is not accounted for in planning documentation.

An order of magnitude estimate of the cost of the Muong Phieng Cluster development since its inception would place the total at between \$2.2 and \$2.3 million. This accepts the estimate of \$1.0 million for the Nam Tan, although it is probable that the final accounting will show this cost to be higher. With \$700,000 allocated to roads, the residual of approximately \$550,000 applies to all other costs listed above.

Many of the benefits accruing from this development program are intangible - the awakening of a sense of community amongst the villagers and between the villagers and their Government - possibly more unity in their resistance to attack. Other benefits are more tangible - better diet - generally improved health - accessibility to more of the amenities of life. All of these benefits support the more measurable gains which should result from the completion of the irrigation program. If the projection shown in Table 10 is met, the Cluster will be producing a surplus of almost 8,000 tons of paddy by 1977, providing a gross return of approximately \$400,000 a year at present prices. Livestock production should increase markedly over the present \$18,000 - \$20,000 gross sales outside the Cluster.

V. CONCLUSIONS AND RECOMMENDATIONS

A. Overall Achievement of Original Muong Phieng Cluster Objectives

The Cluster objectives outlined in the February, 1964, Cluster Plan did little more than set a direction in which the Cluster was to move. They emphasized the development of “. . . .community organizations. . . .” and “. . . .at least minimum social institutions. . . .”.

Except for the Village Development Committees, which are just starting, there has been little development of new community organizations which could “raise the general standard of living, promote health and welfare, or develop attitudinal or motivational change. . . .”.

Again, with the exception of the Information Program, which can be considered to be the start of an information disseminating institution, the Cluster has not developed new “. . .social institutions. . . necessary for the healthy development of the inhabitants”.

Instead, the Cluster has strengthened the ability of the existing community organizations and social institutions to the point where significant progress in raising the general standard of living, promoting health and welfare, and in developing politically sound motivational and attitudinal changes has been made. This has not been achieved without the creation of problems of varying magnitude and persistence - some of which are still unsolved.

Standard of Living:

One measure of the rise in standard of living is the availability of consumer goods. In 1963 there were seven retail stores in the Cluster area. Today there are 38 stores with a total of over 90 categories of retail commodities available. Another measure is the ease of transport. Previously there was an occasional truck or taxi between Muong Phieng and Sayaboury during the dry season. But the normal pattern was to walk from one's village to Muong Phieng - spend the night, walk to Sayaboury to shop - spend the night, and reverse the trip. Now 30 to 35 taxis a day run between the lower end of the Cluster and Sayaboury. Intra-Cluster rates are a maximum 100 kip between any two points - to Sayaboury it's 300 or 400 kip. The trip between Sayaboury and Muong Phieng takes less than an hour.

Practically no home weaving is done, but sewing of purchased cloth is now done by machine. Clothes are also purchased. Home lighting was provided by torches - now kerosene and pressure lamps are used.

The Cluster money supply has increased. Cash income is derived mainly from sales of rice, pigs, poultry and buffalos. Previously these exchanges were confined within a single village, although occasionally merchants from Sayaboury would seek rice or

buffaloes. Small amounts of rice have been grown for the RLG Rice Multiplication program since before the Cluster. For the past two years the great majority of rice sales were to ADO.

ADO has been the main agent in the monetization of the Muong Phieng economy. Major credit advances have been made for the purchase of buffalo, smaller advances for fertilizer and insecticide. In Muong Phieng, at the end of 1967, fourteen loans were made, to a net value of 560,000 kip. In the middle of 1967, seventeen loans were made to Meo at Nam Hia for a total of 682,000 kip; and at the beginning of 1968, thirty-one buffalo loans were made to the Meo at Nam Hia for a total of 1,237,000 kip. Repayments appear to have been made on schedule.

A villager in Na Kheme borrowed 60,000 kip to buy a seven-horsepower three-inch pump. He borrowed the money in November, 1968, and has since repaid the loan.

ADO started its fertilizer promotion in Muong Phieng in 1967, by delivering half bags of fertilizer to 132 farmers, free of charge. In the dry season of 1967 - 68, ninety-two farmers grew dry-season rice. Credit was extended to ninety-two farmers for fertilizer, to sixty farmers for insecticides, to nineteen farmers for sprayers, and to fourteen farmers for barbed wire. All but eight of these 185 loans have been repaid (seven in Muong Phieng and one in Nam Hia). At the end of that season ADO bought 100 tons of paddy rice from these farmers, paying approximately 2.5 million kip (\$ 5,000).

For the rainy season of 1968, credit was extended to 115 farmers for fertilizer. Thirty-nine of these farmers were in Nam Hia, 49 others were in Muong Phieng tasseng, and 27 were in the tasseng of Na Kheme. Seventy-three loans were extended for insecticides; 39 in Nam Hia, 20 at tasseng Muong Phieng, and 14 at tasseng Na Kheme. Twenty loans were made for sprayers; 17 at Nam Hia, one at Muong Phieng, and two at Na Kheme.

At the end of the wet-season, 265 tons of rice were purchased (Na Sing, 31 tons; Nam Hia, 73 tons; Muong Phieng, 117 tons; and Na Kheme, 44 tons), at a cost of approximately 6.6 million kip (\$13,200). The dry-season of 1968-69 saw an interesting development at the Muong Phieng Cluster. The Nam Hia Meo, who had started growing paddy rice only the previous year, were already in a position to buy many items for cash.

Fertilizer loans totaled 196, of which 38 were for Nam Hia, 145 for Muong Phieng, and 13 for Na Kheme. In the case of Muong Phieng, some farmers had four or five loans, which raised the number of actual loans, although the number of farmers was less than 145.

All of the 49 loans made for insecticides were from Muong Phieng. Nam Hia's cash purchases were for insecticides and sprayers.

At the beginning of the rainy season for 1969, ADO has been puzzled by the poor sales of fertilizers. At the end of July, only four tons had been purchased. It is believed that fertilizer may have been held over from last year. Some farmers have said that the rain water carries its own fertilizer, and that therefore rainy season paddy needs less fertilizer. This is not entirely superstition. USAID agriculturists say that rain carries a small amount of ammonia, which is lost when the rainfall starts running off into surface drainage.

Main non-ADO income was probably from the sale of approximately 395 pigs and 110 buffaloes last year for a total of approximately 8.5 million kip or \$ 17,500, not counting sales by Nam Hia. Since the Meo eat far more pigs than the Lao their extra-village sales may be smaller. Most of these pigs were sold to merchants from Sayaboury at an average 10,000 kip a head.

Health and Welfare:

The population is becoming younger as a whole. The birth rate is probably rising, but it is certain that more children are surviving. In 1963, 32.8 per cent of the population was 10 years and under. In 1968, it was 38.4 per cent. Persons 51 years and older were 10.0 per cent in 1963; in 1968 they were 5.9 per cent. (see Figure 4).

As many as 2,000 medical cases a month may be handled at the six dispensaries. Before the Cluster, there were two small and poorly equipped dispensaries; about once a month during the dry season, an OB mobile medical team from Sayaboury visited most of the villages and provided symptomatic treatment.

Classes in maternal and child care are now given at approximately yearly intervals at the tasseng centers, while mid-wife services are continually available on call. Local practitioners are still found in all villages, but increasing reliance is placed on the clinics. Most villagers are convinced that an injection is far more efficacious than pills or liquid medicine.

Schools are visited approximately once a year for vaccinations. In the early Cluster years, de-worming campaigns were pursued. The Cluster headquarters at Muong Phieng provides jeep or truck transportation to the OB hospital in Sayaboury for the more seriously ill persons (taxi are reluctant to carry sick people). Health has undoubtedly improved.

The general welfare, if contributions to the wats through "bouns" are valid indicators, has improved. All villages report much higher monetary returns from their bouns.

Both the Village Development Committee project and the information project have introduced new, effective, and hopefully lasting, institutions which should contribute to the general welfare. There is some doubt whether, at the present time, these institutions will continue to grow or even survive without US assistance. Both are essentially fully

operated by RLG and USAID Lao personnel. Continued operation will depend on the amount of RLG support provided after USAID support stops.

Recommendation:

Periodically during the history of the Cluster, its management was asked to submit projections of work likely to be proposed during the forthcoming fiscal year, as well as summaries of work still to be performed under outstanding Activity Plans. The documentation shows that there was a minimum of discussion, in these documents, of the Cluster area as an integrated or integratable region.

It is suggested that subsequent periodic summaries attempt to ascertain and quantify the maximum potential of each key sector in the Cluster area and the degree to which the potentials have been achieved as of the current period. A specific combination of sectoral goals could then be established which would be responsive to the overall or policy objectives for the Cluster (or region) as determined at the national level.

B. Villager's Perceptions of Change in the Cluster

At least two interviews per village were held with the Nai Bans and members of the newly-elected Village Development Committees. Information relating to conditions in the village prior to the Cluster program was solicited, as was information about the current conditions at the village.

These, plus other data including detailed age-sex distributions for each village and village maps identifying official's residences, stores, rice mills, schools, wats and showing locations of all Cluster-supplied wells are included in the reports for each village which comprise Annex II.

Information was also sought regarding the villager's impressions of the changes which had occurred. The preferred interviewing procedure would have had these expressions of opinion arise from a reasonably objective and relaxed discussion of events that had occurred during the past five years in their village. In some cases, however, it was necessary to ask the direct question "what changes have occurred since the Cluster has been in operation?"

It is believed that most of the opinions cited below are objective. The subject items are listed in approximate order of frequency of response. Since the opinions have been distilled from different contexts, a statistical expression has little meaning.

1. Roads and markets:

The greater facility for movement afforded by the main road and by the access roads from village to the main road were almost universally remarked. Villagers told how difficult prior travel had been - four days round trip to Sayaboury. Now taxis go to Sayaboury in less than an hour.

Villages in the northern half of the Cluster area shopped in Muong Phieng or Sayaboury. Villages in the center and south also shopped in Nan, Thailand, or in Ban Na Le, some 30 kilometers south of the Nam Phoui River in Muong Paklay. Things were cheaper in Nan and metal tools are still considered to be better from Nan.

Now they can get almost all they need from local stores, and in a relatively few minutes. Taxis always seem to be available.

2. Less quarreling and theft; more friendliness and tolerance:

Seven of the villages, all in the north and central areas of the Cluster, were impressed with the fact that persons seemed more friendly and got along better. Villagers in Nakok said they had always distrusted the villagers of Kang, but now they liked them.

There were fewer quarrels and much less thievery. Previously there were many conflicts, often of a physical nature, that had to be settled by the Nai Ban or the Tasseng. Now the conflicts were more likely to deal with matters of land or inheritance. The assistant Nai Ban at Phone Sai said that people are less obstinate and more agreeable. He goes on to say, however, that only one-third have changed - two-thirds have not.

3. Better bouns (Merit-making festivals)

Prior to the Cluster, the bouns were solemn religious ceremonies, dominated by the chanting of the monks. Because of village isolation, only one village would be involved. The festivals were small, with no more than one a year per village.

Now village's bouns are attended by persons from many villages. The Cluster management loans generators, lights, sound amplifying equipment, and often mohlam teams and movies. Large sums are received and used for civic purposes. Recently the village of Na Kheme spent 150,000 kip (\$ 300.00) for its own generator and sound equipment.

Bouns are held more often and must be considered to introduce important forces for inter-village cohesion and tolerance.

4. Better health:

The availability of the medic for health assistance is important. It is said that fewer women die in childbirth. Reliance on local doctors is said to be diminishing - can go to medic or send sick person to OB at Sayaboury.

5. Fewer fish, game, forest plants:

There were a number of complaints about the reduction in game and edible plants caused by the clearing of forests. The availability of fish was also said to be way down because of the dams. Two of the villages also blamed the Meo for shooting the game and for dynamiting the rivers to catch fish.

Villagers of Na Tane, however, said that previously they had had to sleep in the rice fields to protect them from foraging by herds of wild pigs. They say there are none now.

6. Changes in clothing and food:

Few women weave their own cloth. Some have been taught how to make clothes out of purchased cloth. Many now buy ready-made clothing. The teacher in Nasom Nhai says that they use one-day's earnings to buy clothing they could not make in one day. Only a few years ago, the villagers all wore a sheathed knife on their backs - to show status and for protection. This is no longer done, except by the Meo.

Fish sauce and food seasoning "Piang Noua" (monosodium glutamate) are now used. Some villagers feel it would be difficult to go back to using only salt for seasoning.

Banana leaves previously were used for cigarettes and cigars; now manufactured cigarettes are purchased.

7. Home lighting:

Formerly torches or open wicks were used for lighting. Now kerosene lamps with mantles are used.

8. Fewer fruit trees:

Straightening some of the village streets has been at the expense of fruit trees. It is also said that they are not replanted, as their fathers would have done.

9. Better schooling:

The easier availability of the higher grades, plus new schools and more teachers were remarked on.

10. Privies:

With the forests being cleared, some of the villages state a need for toilets.

11. Better livestock assistance:

The fact that Taiwan ducks were received and that the RLG veterinarians now visited villages frequently was mentioned a number of times.

12. Newspaper:

Houei Oum, Na Luak and Nong Houng (at the southern most end of the Cluster) all mentioned, presumably somewhat wryly, that the only thing they ever receive from the Cluster was copies of the newspaper. Other villages were appreciative of the reading matter. Copies passed among many hands.

13. Better water supply:

The improvement in water supply because of wells dug and drilled by Cluster assistance was mentioned.

14. Village development committees:

These committees and the members' new-attained ability to recognise and propose solutions for problems were mentioned frequently. Since the interviews usually included at least one Committee Member in the group of respondents, it is possible that the volume of replies was shaded.

Recommendation :

The immediately ensuing period of three or more years will be one in which villager reactions will be critical to the success of the irrigation programs. Considering the heavy investment of US and RLG funds, manpower and prestige in these programs, any measures which will help protect the investment should be given serious consideration.

One of these measures is the institution of procedures which will create a better flow of information to the Cluster management about the activities, attitudes and opinions of the villagers. There are two potential sources of information, neither of which is being tapped.

The first source is the Village Development Committees. Admittedly, there are some acute growing pains which need attention, including the recently expressed opinion by members in some villages that they should be paid for their services. With careful planning, based on experience of this kind in Thailand, the position of secretary of the Committee might be given a reporting function which could result in the building of a file of census and other kinds of information about the village.

Secondly, each visit of Cluster personnel to each village has undoubtedly resulted in the generation of new information about the village and its inhabitants in the minds of the Cluster personnel. The ideal solution would be to require a trip report following every visit, in which facts and impressions would be reported and filed in a master dossier for each village. As with most ideal solutions, it would not work. More practical solutions would be:

1. To make one person responsible for periodically questioning each field agent as to their travels, impressions, etc.
2. Hold periodic meetings with groups of agents in which the general situation at specific villages is discussed.

Records of these discussions would then be filed by village.

C. The Activity Plan

The Activity Plans were an innovation of the Office of Rural Development in 1963. In a sense they were sub-Project Agreements in that each was concerned with a limited segment of the full scope of a Pro Ag. The Activity Plan procedures made it possible for a wider range of RLG and USAID officials to become more deeply committed to the objectives, actions, and resource allocations of projects. The Plans were so obviously more useful than Pro-ag's for field use that critical evaluation of their utility did not seem to have been felt necessary until recently. A mission-wide survey of the Activity Plan procedure is now under way.

The Activity Plan procedures also call for pro-forma progress reports. These report forms have gone through a series of changes. The current form, issued in August, 1968, requires responses to penetrating and useful questions. Responses tended to be sketchy, possibly because the reporters have not had the functions and value of the reports demonstrated to them.

The Activity Plans accomplished the following:

They stated the objectives of the projects. The relationship to one of the major Cluster or Mission goals was often identified. However, the degree to which the given project was supposed to assist in attaining the larger goals was not always apparent.

A series of actions considered necessary for achievement of the objectives was listed, and an approximate time frame established. The major shortcoming was failure to list necessary operations regarding initial communications with officials and villagers to explain the project and to secure their cooperation. Many of the time schedules were unrealistic. In general, allowances were made for the growing season. Schedules were often so tight, however, that small encroachments into the growing season often occurred, delaying final completion by five or six months or by a year if the delay pushed the activity into the second rainy season.

Listing of required commodities seemed to be accurate. However, because of frequent work schedule slippage, time allocations of personnel could not be relied on.

Most of the projects required only small expenditures of dollars and kip. Errors of estimates, if they existed, probably were not great.

The document affirmed the commitment of RLG and USAID offices to the accomplishment of the plan.

Recommendations:

1. The main objection to the Activity Plan is that they establish no bench marks or check points by which (1) past progress can be measured, and (2) residual commitments of time, materials and funds can be estimated. Most technicians in Laos have enough experience so that they should be able to make reasonable predictions as to inputs required to attain stated stages of progress of the work.

It is recommended that an internal time table be established. When progress of a project does not meet the time table, the project manager should be required to revise his completion estimate and state the effect of the revision on the resources allotted to the project.

2. The current progress reporting forms are too standardized to be useful. One cannot estimate where a project stands with regard to the original plan. It would be better to devise a special reporting form (especially for major projects) that was tailored to the actual operations and objectives involved.

3. A specific point of management control for each project should be established. It should not be in the field, although conceivably the person could be considered to be the staff representative of the Area Coordinator, Provincial Coordinator, or Community Development Advisor. The point of control may also vary for type or scope of project. This control point should be required to acknowledge receipt of all progress reports, either by a "well done" or by a question regarding progress, in order to show that the reporting of progress is not a nugatory endeavor.

D. Mutual Reinforcement of Cluster Activities

The combination of Project Activities that made up the Cluster program probably had a greater total effect than if the same projects had been pursued at separate locations. Each input for a given project had the possibility of also aiding (or impeding) other projects.

The essence of development aid is change - change in the physical or human environmental conditions at a given locality. Each of the Cluster Activity Plans was designed to introduce environmental change or changes that would advance the RLG-US interests in the Cluster area in accordance with overall guidance from the RLG and USAID.

The environment that was changed was common to all Muong Phiang Activity Plans and a behavioral change could condition responses to other plans. A change introduced in Plan A might significantly change conditions important to Plans B and C. When a section of forest was cleared for expansion of agricultural production, a portion of potential cover for a PL intruder was eliminated, wild game was dispossessed, natural herbs were destroyed, surface-water run-off was speeded, local toilet places were made unsuitable, property rights took on a new significance, adjacent owners re-evaluated their position vis-a-vis the new land, etc. Each one of those changes could have a cross-effect on the success or failure of other, possibly unrelated, Activity Plans. If the cross-effects were positive, if they had been carefully phased, and if priorities had been weighed, then the Cluster as a whole would have received two or more project inputs for the price of one.

In actuality, the Cluster gained from some cross-effects that were planned, and from some that were unplanned. Probably some jobs were made more difficult. The series

of positive cross-effects caused by road construction are so widespread that their existence is taken for granted; they are rarely inventoried or made explicit. (see previous discussion under Sector Analysis). However, by neglecting to look ahead, programs that were dependent on roads, such as marketing of increased rice and livestock production, were started prematurely.

Also, the advantages of first constructing those sections of road systems that would have the most immediate impact might not be recognized. Was it better to replace a fair access road to Nasom Noi with an all-weather road before road access was opened to Na Luak, which has no road and no school, and so was unable to send its children to school at Na Kheme?

The interrelationships can be more complex. The construction of the three schools offering grades 4 through 6 would have been premature if performed before the development of the road system permitted children from nearby villages to safely traverse the many dangerous rainy-season water-courses. An additional prerequisite: economic conditions had to have improved to the point where children of these ages could be spared from home and field duties. With both these factors in operation, plus actual construction of the new schools and assignment of additional teachers, school attendance in grades 4 to 6 made outstanding gains.

The element of phasing is also illustrated by the probability that, had the forests been cleared before the attempt was made to introduce water-seal toilets, the latter program might have been more successful. Villagers now ask how to build toilets, since they have no place to go now that the forests are gone.

Hog raising was encouraged when good roads permitted merchants from Sayaboury to come to the villages frequently to purchase the hogs and when increased rice production made more rice bran available for feed.

In Summary:

1. The multiplicity of projects that comprise the Muong Phieng Cluster program have reinforced each other - the total output was greater than the sum of the inputs.

2. Identification, at the planning level, of the totality of changes to the environments which will be caused by development projects offers the possibility for scheduling the projects so that each project can receive benefits from the changes introduced into the total environment by preceding or parallel projects.

3. Inventorying the predictable cross-effects between projects may also expose future conditions or problems whose existence could threaten the success of the program. This is especially necessary where somewhat sophisticated activities which we Americans accept as common-place are introduced into the Lao environment (i.e. raising of pure-bred hogs, operation and maintenance of irrigation systems, and operating hand pumps at wells).

Recommendation:

It is proposed that an additional step be introduced into the process of preparing Activity Plans. Assuming that a detailed list of program-oriented actions or inputs will have been prepared, every project should be analyzed so that readily predictable changes can be made explicit. Insofar as possible, this should include changes in the environments and in human behavior. Similar lists made for concurrent projects or proposed projects would be prepared and compared for conflicts, overlaps, or reinforcement. New opportunities for furthering development objectives within the scope of planned operations and funding might be revealed.

E. The Muong Phieng Village Problem (a possible case of economic stratification)

A condition that has annoyed almost all the Americans who have worked at the Muong Phieng Cluster is the "uncooperative" attitude of the Village of Muong Phieng (including Phone Sai). Every American has encountered what Beth Yetley in 1964 first called a "give me" attitude. As late as 1969, Tom Xerri offered to have wells dug but was met with refusal to cooperate unless USAID provided work tools. Similar attitudes were expressed by the village leaders consistently during the interim years, but mainly in connection with improving irrigation water distribution.

The Cluster people have laid the blame for these attitudes on the construction of a diversion dam on the Nam Phieng River in 1957-59 which provided water to a limited number users. They say that no self-help contribution was required either for the original dam construction or for the digging of major canals in 1964, and that this spoiled the people. Now they want everything free.

On the other hand, Muong Phieng villagers have often been foremost in their responses to Cluster proposals. They asked for many more water-seal toilets than other villages. They followed Cluster lead, two years in a row in trying, unsuccessfully, to raise garlic. They have put in far more fish ponds, under IVS assistance, than any other town. The women sometimes have responded warmly to home economics projects.

The key may be that there are at least two Muong Phiengs - the Muong Phieng of the Nai Ban, Tasseng and related families who express the official Muong Phieng position, and the Muong Phieng of the rest of the people. It is reported that when self-help projects are accepted by the village - usually with no enthusiasm on the part of the officials - the Nai Ban, Tasseng, and their families excuse themselves from participation. This is resented by the rest of the village.

The local Chief of RLG Agriculture reports that when he has a matter of general interest to bring before the people of Muong Phieng he does not ask the village officials to make an announcement, as he would in other villages. He must send notes or messages directly to the villagers.

There is one reason why the Nai Ban, Tasseng and their families might not want to participate in the most important projects, which usually involve irrigation. They may already be getting enough water because of the favorable locations of their lands. They may feel that wider distribution of the water would endanger their crops and ultimately the dominant economic status that they have probably attained through years of more sure water supply than their neighbors.

This hypothesis assumes that the uncooperative families are those who are first served by the existing irrigation system. There was not enough time to check ownership of the best land holdings to verify this fact.

This economic stratification (assuming that it exists) may have affected the villager's access to rural development assistance. The official and wealthy stratum may have formed a barrier between the Cluster aid sources and the rest of the village.

It has also been said that Muong Phieng was the village most sympathetic to the PL. If there is internal dissidence, its cause may be similar to that found throughout the world - inequality of opportunity.

We Americans find it difficult to distinguish a rich Lao villager from a less-rich one, they don't drive Cadillacs. Possibly of more direct concern, however, is our usually undeveloped ability to recognize, first, that conflicting personal interests exist among the Lao villagers, and second, the impact that our actions and programs have on the conflicting sets of local interests.

The RLG is not equipped to provide these insights. Although the ability to make these distinctions is not critical for most programs, it can offer guidance in areas where RLG and PL interests are in active contention.

Recommendation:

This problem should be considered in connection with the recommendation under Section B "Villager's Perceptions of Change in the Cluster".

F. The Irrigation Problems

1. Muong Phieng No. 1 System:

This system serves the major paddy area at the northern end of the Cluster area and three small adjacent areas. The main area, totaling 360 hectares, has long been the richest producer in the valley and is the basis for Muong Phieng's and Phone Sai's economic dominance. The small areas totaling 65 hectares located along the east edge of the valley are primarily worked by Muong Phieng and Kang residents. A fourth area of 78 hectares, also along the east edge, but just to the south, is owned principally by Nakok residents. Water service to this latter area, located at the far end of the lowline canal, has been the source of acrimony between Muong Phieng, Kang and Nakok residents.

There are only two distribution canals on this system. The "highline", 5.1 kilometers long, serves most of the large area. The 5.4 kilometer "low-line" canal serves a portion of the lower part of the largest area but is the main water supply for the small areas comprising the eastern part of the system.

The problems at this system are :

a. There are no sub-laterals in the system. In years of generous rain-fall, there is no real problem, although some parts of both areas will receive barely adequate supplies. In the many years of marginal rainfall, as much as a third of the major area will not receive adequate water. The owners of the rich areas will not, however, permit the construction of laterals across their areas,

b. There is no system for controlling water distribution or for maintenance of the canals. RLG irrigation personnel assigned have been low-level, and can supply only the minimum of technical advice and persuasion to regulate the water flow in the canals.

c. Lack of a water control system for the low-line canal reduces water flow to a minimum or to nothing at the Nakok end of the line. The 78 hectares in this area will still receive inadequate water until controls are placed on the system. The villagers of Nakok now refuse to do any work on the canal, saying the work is useless since they do not receive any water.

It is my opinion that emphasis on local support for this system should change from the supply of labor to the supply of money, with the important proviso that labor can be supplied in lieu of money. Many users receive all the water they need from the short section of the canal that parallels the river and which feeds the two main laterals. These people feel no responsibility for upkeep on any of the rest of the system. Since labor is supplied at a given specific physical point, they refuse to work on any part of the canal which obviously does nothing for them.

However, the benefits of this system are monetary and fungible. The ones who probably make the most profit from the dam (those near the head of the system) make the least contribution to its operation. This system can be, or is, a commercially viable activity and has out-grown the reliance on self-help labor support. By computing a monetary cost for the maintenance of the total system, and apportioning contributions in terms of an equitable system, it should be possible to improve maintenance and continue development of the system.

Furthermore, the provisions of the 1964 agreement, which stated that permission was to be granted for construction of all laterals and sublaterals thought necessary by the irrigation advisors, should be enforced. If cooperation is refused, the water flow should be restricted at the dam outlet if necessary. This would be un-Lao-like drastic action, but is the kind of position that will have to be taken throughout the development of the three Cluster irrigation systems. It might have a very salutary effect on the whole area if the first place at which strict but impartial discipline were applied were at the center of the Cluster's elite.

2. The Hia-Nakok System:

In January, 1967, slightly over 100 hectares had been cleared and planted prior to the development of this system. By 1969 an additional 104 hectares were in paddy and many more were in various stages of clearing. A minimum of 357 hectares should be served when all irrigable land is cleared, with an additional 66 hectares doubtful.

This land is divided among 28 Lao families from Phone Hine, 27 Lao families from Kang and 86 Meo families from Nam Hia (22 holdings of Nam Hia families are marginal).

The main canal runs first through the Phone Hine holdings and, for three-quarters of its length, through Nam Hia holdings. Much of the water received by Kang holdings is received from laterals which originate in the portion of the main canal located on Meo land.

The problems are :

a. All of the laterals serve holdings owned by families from more than one village - in some cases, three villages. Also, both Leo and Meo might be served by the same lateral. When disputes about water use arise, the villagers should bow to the decision of the water-master instead of to their Nai Ban, the traditional way. While an American irrigation expert was on duty in the Cluster, the Lao who occupied the office of water-master commanded some authority. This water-master was reassigned at the same time that the American expert's tour ended. The new incumbent is relatively inexperienced. Strong leadership is needed to create an organization of water users that will effectively bridge traditional administrative patterns as well as ethnic differences.

The latter problem has been recognized as possibly serious. When a system of water-masters for each of the laterals was established, it was necessary to appoint both Lao and Meo masters in cases where both groups were served by a single lateral.

b. Double-cropping of land in the system is becoming popular (27 hectares in 1968, 81 hectares in 1969). Since the dam for the Hia-Nakok is on the Nam Phieng (river) just below the dam for the Muong Phieng system, there will be competition for the dry-season water that will be available. Allocation of the possible short supplies is complicated by the fact that some of the original (and deserving) double-croppers are located at the far ends of some of the laterals and may be the first to suffer as water supplies become scarce. Here again a strong control system is required.

It is suggested that an extraordinary effort is required. The present irrigation agent and his apprentice assistant do not even have bicycles to make the widespread travels that are necessary for inspection and control of the two systems that are their responsibility. It would be impossible for them to devote any time to the information and training duties necessary for creating a smooth-running system where not only has there never been one, but where there is opposition to its formation. With similar problems arising on even larger scale at Nam Tan, Hia-Nakok is the critical system at which to

formulate principles and test procedures. An American IVS volunteer or other with irrigation experience or a TCN should be assigned to work under Mr. Cox at both Muong Phieng No. 1 and Hia Nakook.

3. The Nam Tan System:

Because of its size, cost, and possible contribution to the Lao national economy, the Nam Tan system has national as well as local significance. The questions asked at the national level are; how much surplus rice (or other major product) can be exported from the Muong Phieng Valley, and what will be the annual rate of export over the next few (5 ?) years ?

Answers to both of these questions reside in local conditions: total number of hectares in production in each of the next five years in the wet-season; number of hectares in the dry-season; average yield to be expected; amount of rice required for local subsistence; and recovery rate from milling.

This evaluation study makes no attempt to predict economic developments. However, some of the conditions revealed in the study have a bearing on the estimate of maximum land available for wet rice production and on the rate at which the land in the Nam Tan System may be put into production. A second important element is the amount of new land that can be made available to refugee families.

A comparative aerial photo analysis of the entire Cluster area was made to determine total changes in cleared and planted land as between 1959, 1967, and July, 1969. These findings are summarized in Table No. 1.

These findings, plus an estimate by the Rural Development Division surveyors, show a total of 1,160 hectares irrigable on the left bank (RDD surveyors) and a maximum 1,400 hectares irrigable on the right bank. Of these 2,560 hectares, it is estimated that a maximum 1,000 can be doublecropped. As of August, 1969, 340 hectares on the left bank have been cleared; some of the newly cleared land is planted in upland rice.

In 1968, 753 hectares of previously cleared land worked by approximately 500 families had been in paddy in both right and left bank areas. One hundred fifteen hectares had been cleared but appeared to be out of production or abandoned. Assuming that the average holdings are 1.5 hectares, a maximum additional 753 hectares would have to be allocated to these estimated 500 families to fill out the 3-hectare plots to which each family will be entitled, leaving 1,060 hectares to be allocated to refugees or other eligible families. However, the 753 H. allocated in this way will actually be less, because some families will be thought by the Chao Khoueng, Nai Dan, and the Provincial Land Committee to not deserve a full three hectares and other families will be satisfied with what they have and will not ask for more.

Assuming an additional 200 hectares available in this way, a total of 1,260 hectares will be available for further distribution, which is enough for 420 families at the 3-hec-

tare rate. If further distribution is made at the rate of 2.6 hectares per family, which is the actual average size of recent allotments, there will be room for an additional 480 families. Refugees already settled on the Nam Tan left bank total 153 families. Although their specific plots have not been assigned, they have been promised 3-hectare plots. Thus the Nam Tan project should be able to absorb approximately 330 more families.

This study estimates that it will take approximately 7 years to bring all of the above land under irrigation. Some of the first new land placed in production will be the 500 plus hectares allotted to families already settled in the area and who currently have 1.5 hectares each in production. The Nam Pang Meo group of 63 refugees families (190 hectares) already have much of their land cleared and are growing some dry rice on the land.

They still have additional clearing and leveling before the land will be irrigable. New settlers, as they arrive, will each probably concentrate on getting approximately one hectare into production as soon as possible. It is estimated that land now being cleared and yet to be cleared will need seven years of work to bring all under irrigation. Given strong incentives and good leadership, the time might be reduced.

Table No. 8 is a very rough projection of the growth of production and consumption over the next 7 years. This rate of production would not be achieved easily, and the present estimate of 1.6 tons of paddy per hectare in the Muong Phieng No. 1 area may be high.

Meeting this schedule will require a good deal of assistance from RLG and US technicians and support personnel because of the complexity of the problems the new settlers will face. They are :

- a. How to obtain ownership of the land.
- b. How to regulate the use of water.
- c. How to determine the most gainful use of the land.
- d. How to deep ethnic conflict at a minimum.

a. Ownership

Permanent possession of unoccupied land in Laos can be obtained under Royal Ordinance No. 266, dated October 22, 1960, which provides for issuance of a temporary permit to the land-holder. If he has improved or cultivated two-thirds of the holding for two years, he is eligible to receive a permanent permit. It is also possible to issue a provisional permit which requires five years of occupancy before a title is issued. Except in the cities, titles to land are relatively non-existent, and there is doubt as to the actual legal status of the two kinds of possessions described above. Occupied land can, of course, be purchased. It is said that the going rate for paddy land ranges from 50,000 to 150,000 per hectare (wet-rice).

TABLE 8
Projected Rice Production
(Muong Phieng Cluster)

	1968-9	1970	1972	1974	1976	1977
Muong Phieng No. 1 (hectares)	483	490	515	530	550	550
Hia-Nakok	206	300	350	380	400	420
Nam Tan (L & R)	753	1,050	1,600	1,960	2,360	2,560
Other	128	140	160	200	220	230
Second crop						
All systems	81	150	300	500	700	900
Total hectares	1,651	2,130	2,925	3,570	4,230	4,650
Av. yield per ⁽¹⁾						
hectare (tons of paddy)	1.6	1.7	2.0	2.2	2.4	2.6
Total Paddy wet-rice (tons)	2,640	3,090	5,850	8,500	10,150	12,100
Population (persons)	9,000	10,500	11,500	12,200	13,000	13,800
Subsistence ⁽²⁾						
required (tons)	3,000	3,500	3,670	4,060	4,330	4,600
Paddy rice surplus (wet-rice)	(-360)	190	2,180	4,440	5,820	7,500
No. of upland families	500	400	350	300	250	100
Av. yield per family	1.5	1.5	1.5	1.5	1.5	1.5
Total upland rice (tons of paddy)	750	600	525	450	375	150
Total Surplus Rice (, , ,)	390	790	2,705	4,890	6,195	7,650

(1) Estimated yield for first and second crops although second crop yield may be lower.

(2) Subsistence based 200 kilograms of milled rice per year per person. At 60 percent recovery, this amounts to about 330 kg, of paddy per person, or 3 persons per year per ton of paddy.

In any event, the provisions described above are normally the only impedimenta to gaining some form of possession of unoccupied land. At Nam Tan, however, it was decided to hire a contractor to clear the land. Therefore, when each hectare comes into the possession of the villager it is already encumbered by a 50,000 kip debt for clearing, which the villager must legally assume.

The debt is to ADO, which hired the contractor, and the terms of repayment have not yet been finalized. Terms being discussed vary depending on the priority status of the occupant; one who already has land, a refugee, or a Sayaboury resident who does not own land. In general they provide a grace period for refugees, but repayment within three to six years.

Many of the villagers who have been allocated land are worried. The concept of a capital debt is new for the Lao villager. There is still uneasiness about the market for

the surplus rice which will provide for repayment of the debt. Also the construction of the irrigation canals and the land clearing and leveling have introduced many problems of intrusion, inadvertent dispossession and destruction of crops. Great confusion has existed as to what kinds of applications to make and to whom. Some villagers have provided self-help labor and the records of their work have been lost.

A weekly meeting has been set up at the dam-site which is often attended by the Chao Khoueng, but always by the Nai Dan and Mr. Ridenour. It is open to all, and usually has representatives of all organizations included at the dam. Many villagers attend. It attempts to arbitrate disputes and adjust grievances and has been very effective.

In two cases, the village litigants were not satisfied and invoked the assistance of their elected Assemblyman. This unusual exercise of democratic procedure was resented very strongly by the Nai Dan and still colors his attitude toward the village, Na Sing.

Doubts and disputes about possession and ownership can inhibit the level of effort and speed with which the villagers perform final clearing and leveling, build bunds, and get the land into optimum production.

b. Regulating water use

Included in this problem is also the general problem of maintenance of the system in an adequate state of repair. Irrigation experience has shown that there are alternate ways that water can be apportioned and labor applied to system maintenance.

Some of these alternatives are more appropriate for Laos than others. The present plan, which provides an experienced US irrigation engineer to, in effect, expose all the alternatives developed so far in the state-of-the-art, needs a strong Lao counterpart to assume the official direction of the program and guide its evolution into a stable, functioning organization which protects RLG and villager interests.

The possibility that the retiring Chao Khoueng might accept this position has been mentioned, and appears to have much merit.

It is assumed that the RLG Agricultural extension personnel would continue the demonstration and training in the use of new rice varieties, fertilizers, insecticides and other production aids.

c. Determining the most gainful use of the land

At the present time, with Laos still importing rice, this is not a critical problem. There is, of course, the need to retain a competitive position within the Lao economy. Cost of production, milling, quality control and transport to point of use cannot be disregarded, even within the present context where the stringencies of competition are eased by RLG and US support measures.

Ultimately it may be necessary to consider alternative crops. Since world production of rice is reducing export markets, this is not a too-distant eventuality. It would be provident to start a modest exploration of other crop possibilities in the near future.

d. Keeping ethnic conflict at a minimum

This may or may not be a problem. However, ethnic conflict is not unknown in our world. It could affect operations at Nam Tan.

Lao have complained about the Meo; they shoot all the game, dynamite the rivers for fish, always carry government weapons, let their buffalo forage through Lao paddy, fill all the waiting places at the dispensaries, make the river water unsanitary, receive favored treatment from the US, and one can never tell whether they are friends or enemies. Villagers of Nakok say they are ashamed to leave their village because the Meo are so much more successful than they are.

The Meo distrust the Lao. They feel dependent on their relationship with the US. At Nam Hia, they expressed concern when they heard that there may be no replacement for the IVS volunteer who has been living and working with them. After he left, they finally decided to tear down the old school which had been partially replaced recently by a new Cluster-built three-room school. Since six rooms are needed, there has been much lengthy official discussion about building the additional rooms. With Mr. Xerri gone, the Meo tore down the old school - which had been located at the other end of the town from the new one - and rebuilt it next to the new one - all in a matter of two weeks.

The Meo are probably better prepared to engage in the competition which may ensue. They have been involved in a partially monetary economy longer than the Lao, on the basis of their earlier opium trade. Possibly more important, the Meo ex-refugees now settled in the Cluster area have gone through approximately ten years of constant movement, living off charity, losing family and friends, and disrupting their communities, which amount to a cultural slimming-down to all but the most fundamental values. They can enter conflict, as it were, lessburdened by paraphernalia of tradition. In a joint Lao-Meo meeting in connection with Village Development Committee training, the Meo continually questioned the Lao's contention that they (the Lao) needed government help of all kinds before embarking on village street building and related projects. The Meo said that if all worked and planned together they could do these things without outside help.

The Meo are gradually assuming a more basic role in the Cluster economy. The group of Meo refugee villages located around the confluence of the Nam Phieng River with the Nam Phoui (three kilometers south of Houei Oum) are evolving into a market center to which Meo and Pai villages in the surrounding mountain areas bring pigs, possibly rice and other products for sale. Five new retail stores sell and barter goods. Merchants from Sayaboury go there to buy live-stock and possibly other produce.

The Lao, however, have the advantage of five years of Cluster development. As they themselves have stated, they have developed a sense of community and feel more capable to deal with new problems.

Possibly the point at which conflict may surface is in the control and distribution of water supply. If the RLG and the local authorities do not devise and put into operation a system which is practical and equitable, the Meo are liable to try to establish their own control procedures.

The influence of the Meo has been positive. They have served as a catalyst and as examples of energetic community action. If the Meo and Lao continue to work together, the Cluster should become a very productive area.

G. Reduction of Development Aid to the Cluster

After the five-plus years of intensive aid to the Cluster area, consideration is being given to the possibilities of reducing USAID assistance to the Cluster.

The implicit assumption is that various sectoral thresholds of development have been passed, that USAID support in those sectors can be withdrawn and that further development can be left to the RLG rural development agency (Commission for Rural Affairs), the regular technical ministries, or the villagers themselves.

It is necessary to examine the characteristics of USAID assistance and to estimate the possible effects of its reduction. The major binding force in the Cluster's activities has been the USAID-supplied administrative and technical support establishment. This now consists of the operational headquarters at Muong Phiang, the field support establishment at Sayaboury town, regional technical assistance based in Luang Prabang, and the national headquarters in Vientiane.

The support that this complex brings to bear on the Cluster includes:

1. Air Support:

Once a week a C-123 flies from Vientiane to Sayaboury, Luang Prabang, and back, with one-third to one-half of the space attributable to Cluster activities. On one day a week a C-123 flies to the Nam Tan construction camp with payload attributable to the Nam Tan irrigation project. Small planes can be booked for specific flights if adequate justification can be made, or small planes flying near Sayaboury on other trips can be called down by radio in case of emergencies. The only alternatives to this access to the Cluster area are a 4 to 5 day Mekong River trip from Vientiane to the port of Thadeua and 60 km by road, or a road trip to Luang Prabang followed by a river trip to Thadeua and then by road. Both routes pass through PL territory. Air time from Vientiane to Sayaboury or Nam Tan is less than one hour.

2. Communications support:

Sayaboury and Muong Phieng are part of the single-sideband radio net centered in Vientiane. Technicians, administrators and others can converse directly from most parts of the net. The range of problems met and solved in a single day, compared with the pace of operations that would exist without this net or without air transport, multiplies the in-country utility of each US professional by several times.

3. Local surface transportation:

A motor vehicle repair facility is maintained at Sayaboury and a mechanic is based at the garage at Muong Phieng. There are 6 jeeps, 3 trucks, one pick-up truck, 3 motorcycles, and 3 trailers at Muong Phieng, and 5 jeeps, 7 trucks, and 2 pick-ups at the Nam Tan construction camp. The jeeps and pickups and some of the trucks are equipped with two-way radio. Recently, when the road between Muong Phieng and Sayaboury became susceptible to ambushing, the US irrigation engineer who had to travel the road almost daily felt some assurance when he knew that if his normal 5-kilometer-interval radio check was not received at headquarters within a reasonable time a car would be sent immediately to the sector he was last heard from.

Accurate records of gasoline consumption and mileage of all vehicles are kept by punch card, per vehicle, in Vientiane. If abnormal amounts of fuel, mileage, or both for any specific vehicle are noted in Vientiane, the Provincial Advisor or the Cluster manager are notified.

The vehicles in Muong Phieng are under the direct control of the Cluster manager. Since their use is sought by USAID and RLG members of the Cluster team, as well as by others, the manager can wield a good deal of authority through his allocations of use of the vehicles.

4. Muong Phieng Operational Headquarters:

This consists of a headquarters building (see AP-1), a training center (see AP-13) and two IVS-built houses. Both of the office buildings are the property of the RLG. At present the entire facility is manned by the Cluster Manager, the Nai Dan, their staffs, and the participating RLG offices. No Americans are permitted to stay in the Cluster area overnight, for security reasons, unless they stay at the Nam Tan camp, which is guarded by soldiers and contains revetted buildings.

5. Sayaboury Field support office:

This is the headquarters of the Provincial Coordinator, who has the responsibility for coordinating all USAID activities in Sayaboury province. As a former Cluster Manager at the Cluster (the only one in Sayaboury Province) the present provincial advisor maintains a personal interest in its operation. US personnel at the headquarters also includes a provincial agricultural advisor, two ADO agents, and a Bureau of Public Roads equipment specialist who is seconded to the Sayaboury sub-division of

the RLG Travaux Publics. A guest house is maintained at the headquarters for visitors to Sayaboury and the Cluster.

The Operations Brotherhood (Filipino) hospital in Sayaboury furnishes technical medical backstopping for the Cluster medics. It also treats the most serious medical cases from the Cluster.

6. Regional Headquarters, Luang Prabang:

The principal support supplied from Luang Prabang is in refugee relief and rehabilitation matters and for problems relating to education. Regional representatives are on call as needed.

7. National Headquarters in Vientiane:

In addition to the central control of the air, communications and transport support described above, the Vientiane offices supply technical experts in all the relevant subject fields, a sophisticated public works construction capability, a supply management and procurement capability, personnel management of the USAID and IVS employees, fiscal programming and control, coordination with RLG and other national and international agencies, and policy guidance and management. From the point of view of field operations, the most important direct assistance is in commodity procurement and in the supply of technical assistance.

At the present time, all of the support described above is still available to the Cluster. However, there has already been a reduction in other forms of aid, principally in the number of Americans engaged in Cluster management. At present there are none. With the departure of Carol Wells, in early 1969, it was decided to discontinue the assignment of US personnel for home economics activities. It was only a few months later that two of the three resident RLG home economics agents were reassigned to Sayaboury, where they work out of a provincial pool. Home economics activities in the Cluster, never very robust, are at a low level.

In August, 1969, the assassination of two IVS volunteers in another part of Laos brought to a head certain doubts within IVS about the role of IVS in Laos. The net result of the intensive re-evaluation performed by the IVS volunteers and their administrators was the closing of certain areas to IVS work. Muong Phieng was one of the areas, resulting in the withdrawal of Messrs. Xerri and MacIntosh. The other USAID American, Mr. Robert McClymonds, had finished his tour of duty as irrigation advisor only the previous month. There are no present prospects for the replacement of any of these persons, leaving the Cluster with no US technical assistance in the Village Development Committee program, the wells program, the just-about-to-start youth program, and in refugee relief and rehabilitation, including general liaison with the Meo in the Cluster.

American participation is still strong in the Nam Tan irrigation project, and in the Agricultural Development Organization, and is small but adequate in road equipment

maintenance and repair. Except for these activities, the sum of USAID support for the Cluster is in logistic support, including maintaining the Cluster staff, which now consists entirely of Lao personnel.

The Cluster manager is a Lao and is doing an excellent job. The information program is directed by a Lao, but still seems to need US support and encouragement. Muong Phieng No. 1 and Hia-Nakok irrigation projects, agriculture extension, animal husbandry, the Village Development Committee project, and home economics are completely staffed by Lao. Support in agricultural matters is supplied by Mr. Willson Lane, the US agricultural advisor in Sayaboury. OB still is available to the health program, and refugee relief assistance is supplied from Luang Prabang.

The questions that arise are a little more complicated than "when do we reduce aid?" The questions are:

1. Do we need to replace US advisors or supply additional aid in order to either:
 - a. maintain the advances already made at the Cluster?
 - b. Continue a planned rate of further development?
2. Can further reduction in aid be made, consistent with either of the above alternatives?

Recommendations:

Decisions as to the acceptable or desired rates of development at Muong Phieng under the present conditions in Laos are beyond the scope of this study. However, we believe if wholly-Lao management of the Cluster continues without a fairly constant though small US presence, even though assuming continuation of all USAID administrative and technical support activities, the Cluster establishment will be in danger of disintegrating unless the Cluster management is placed somewhere in the RLG structure. This action will not insure that disintegration does not occur, since there are also important technical problems, but the action could create a more friendly environment for continued operation of the Cluster. This event does not have to occur immediately if a carefully designed US participation is continued.

If the Cluster remains USAID-financed and managed by Lao employees of USAID, the present Lao Cluster management may tend to lose the aura of US protection and is liable to run into conflict with the existing RLG structure at a number of points. The Nai Dan has not hidden the fact that he is resentful of the Cluster Manager's authority, especially with regard to the assignment of vehicles. Local representatives of the Ministry of Agriculture have sometimes left the impression that they would be just as happy if they were allowed to perform their duties without Cluster interference. Ministry of Public Health representatives have been cordial, but when the Provincial Office was given the responsibility for supplying the Cluster dispensaries in 1966, the results were so unsatisfactory that a return to the system of having them supplied by the USAID Public Health Division became necessary.

It would not necessarily be a tragedy if the Cluster establishment were to disappear, *provided* that the functional ministries are able and willing to provide an adequate amount of their own services to maintain at least the level of development that has been achieved. This possibility appears remote at present. An interim solution is probably necessary, involving absorption into the Commission for Rural Affairs or the Ministry of Interior.

The first alternative is to have the Cluster management placed under the Commission for Rural Affairs. The CRA is the RLG counterpart to the USAID Rural Development Division. It operates under the philosophy that an agency and a group of workers are needed who view and are concerned with the full scope of rural conditions. They are then able to try to insure that agricultural, health, land tenure, education, commercial, and other rural interests are pursued in a balanced manner with the minimum of conflict or even with enhanced cooperation. This Commission was originally established through US aid, and has continually been regarded by old-line RLG agencies as a temporary activity that would die when the Americans left or lost interest in it. In spite of this, the Commission seems to have made slow but fairly constant program toward achieving a place in the regular RLG structure.

The CRA is now under the Minister for Rural Affairs, who is also the Prime Minister. A 1968 Royal Ordinance describes the roles of the field personnel in terms of their relationships at the *khoueng*, *muong*, and village levels. The agents who operate at the *muong* level, the "agents cadre", are given authority and duties that would make them the equivalent of the present Cluster managers. It is anticipated that these persons will take over the Clusters when they are turned over to the RLG. Recently half of the already-trained and generally highly experienced Fundamental Education workers have been blanketed into the Commission, and all CRA workers have been awarded Civil Service status. Thus, although the Commission does not have the prestige and stability of the Ministry of Finance, it seems to be moving forward rather than the reverse.

In Thailand, the equivalent of the CRA is the Community Development Department of the Ministry of Interior. This agency adheres to the philosophy stated above for the CRA, and has performed very productively in rural development in Thailand. Because of its position in the Ministry of Interior, there is little question of conflict with the local administrative structure which is under the Department of Local Administration, also a part of the Ministry of Interior. It is recognized that the roles of the Ministries of Interior in Laos and Thailand are not equivalent. However, the complex of duties normally comprehended within Interior Ministries in this part of the world usually provide a favorable and productive environment for rural development organizations.

Close cooperation between the CRA and the Ministry of Interior's local governmental structure becomes an increasingly important ingredient, as the Lao ability to carry on its own developmental activity strengthens. Throughout most of the Cluster's history, the Chao *Khoueng* (Governor) of Sayaboury Province, the top representative of the Ministry of Interior, has literally taken the cluster under his wing. He established close

working relationships with both Mr. Bustamante, the first Cluster Manager, and his successor, Mr. Ridenour, who was also the last American Cluster Manager.

This relationship was particularly helpful in getting road construction moving in 1964. His influence has also been especially important during the development of the Hia-Nakok and Nam Tan irrigation projects where villagers' questions had to be answered and their doubts reassured, and where equitable land distribution procedures had to be established, and more importantly, enforced. Some form of continuity of his depth of interest in the Cluster will be necessary, either formalized through a tri-partite Cluster - Ministry of Interior - CRA relationship or through the personal interest of the new governor.

One of the most productive aspects of the Cluster team approach at Muong Phieng has been the compounding of various levels of USAID and RLG ability and experience to create a functioning organism that could absorb and expeditiously develop new, sometimes area-naive US personnel as well as the usually relatively untrained Lao technicians. This has made it possible for a group with widely disparate backgrounds, training and motivations to make good progress in advancing the economy of the Muong Phieng area and in developing Lao personnel capable of continuing to carry on this advance by themselves.

The part played by the highly-sophisticated, for Laos, air-transport, communications-surface transport support system has critical but transitory importance. One of its principal functions is to multiply the utility of US personnel in Laos. If the US had technicians to station full-time at the key development areas in Laos, and if the security conditions were stable, we would have less need for the transport and communications flexibility which now, in effect, permits one American to be in three places at once.

The need for applying American skills and leadership in Muong Phieng, and presumably throughout the rest of Laos, is a simple function of numbers and time. Until the national education program started paying dividends a few years ago, the entire nation of Laos graduated less than 50 high school students a year. Although this rate is now increasing, the number of Lao executives, technicians, office personnel and skilled labor capable of manning and protecting their economy and society is - to put it mildly - insufficient. As seen from Muong Phieng, the unquestioned top priority need in Laos national development is more capable manpower.

The present development aid program at Muong Phieng is a race against time. Enough Lao must be trained to provide a minimum replacement of the Americans and third-country nationals before the latter depart, whatever the reason. When positions throughout the country can be staffed full-time by reasonably competent Lao, there will be less need for a sophisticated support system.

When and if this happens the support capability will probably be available through the private sector. The private sector of the Lao economy at Muong Phieng has

responded effectively to the opportunities opened to it by the development activities. This is indicated by the great increases in numbers of taxis (which operate as busses) and trucks, the installation of rice mills and retail sales establishments, and the response of the villagers to the opportunities to buy agricultural production aids from ADO. At the national level, private local air lines are in operation to provide an air transport capability.

ANNEX I

EVALUATION STUDY

OF THE

MUONG PHIENG CLUSTER AREA

CHRONOLOGICAL HISTORY

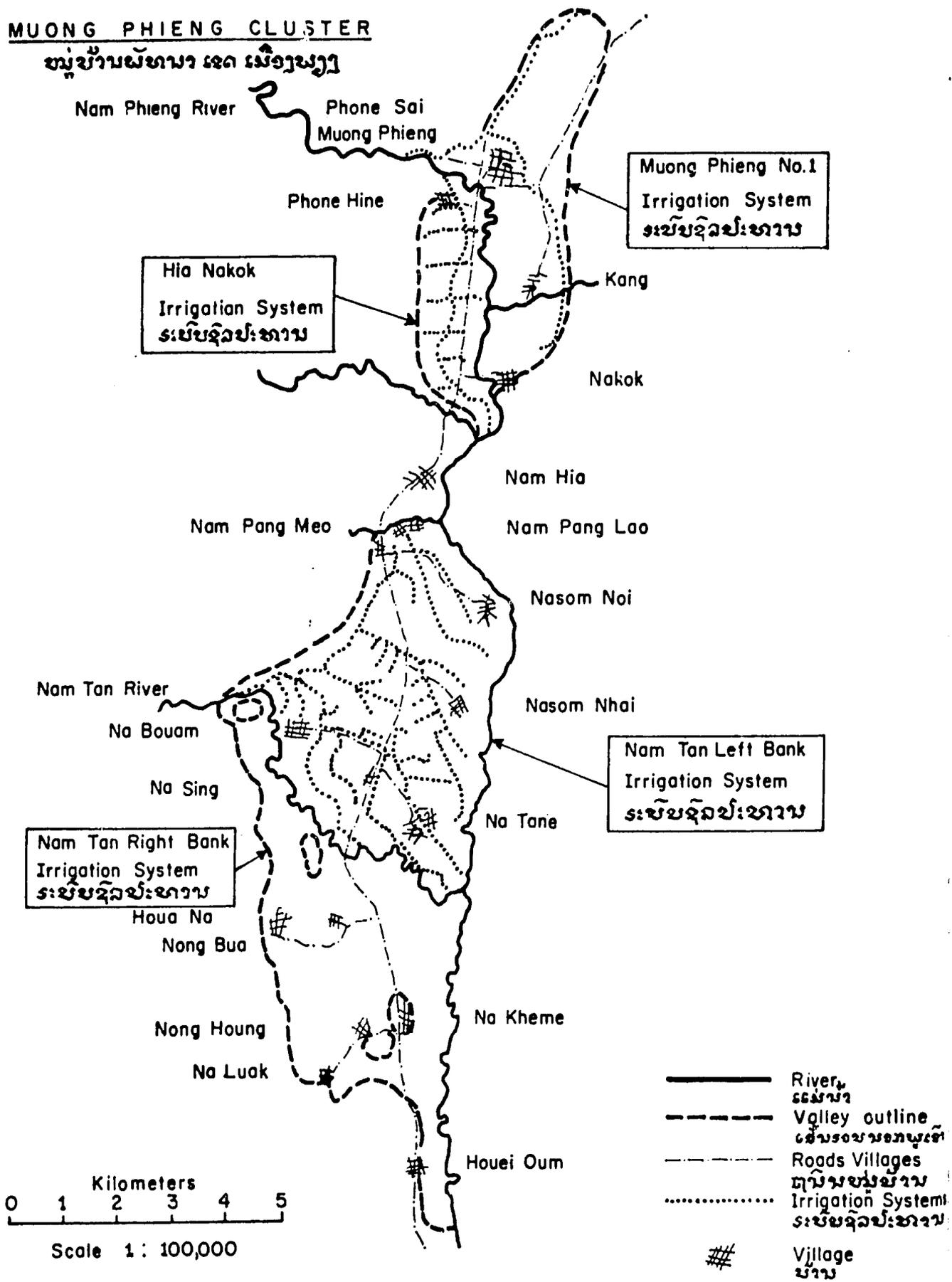
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MUONG PHIENG CLUSTER

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ANNEX I

CHRONOLOGICAL HISTORY

A. INTRODUCTION

This chronological summary of events is selective. It attempts to establish a continuity of events that illustrates the problems of managing the Cluster. This basic chronological summary also includes detailed histories of the environmental sanitation program and of agricultural activities.

B. THE PRE-CLUSTER PERIOD

The cluster area had received some joint RLG/USAID assistance before the start of the Cluster in early 1964. In 1960 the governor (Chao Khoueng) of Sayaboury Province had received a consignment of sheet metal roofing for use in schools in the Province. This was distributed to some of the schools or wats in the Cluster area and seems to have been well appreciated. In those days there were very few days in the year when a truck could drive into the Muong Phieng area from Sayaboury. All villages, except one, had to walk to Sayaboury to get the sheet metal. Each villager then carried two sheets of sheet metal roofing back to his village, walking all the way — a minimum 30 km. One of the villages, Nong Houng, whose Nai Ban was also tasseng of Na Kheme, arranged to have a truck carry the sheet metal for his village to Na Kheme and the villagers carried it, two sheets per villager, from Na Kheme to Nong Houng.

At about the same time, the RLG had sent word to each of the Nai Bans that there was a possibility that loans would be made for the purchase of buffalo. Nai Bans dutifully collected a list of persons who were interested in borrowing. Nothing further came of this. Since many of the villages mentioned this event at the present time, it would seem that the memory of unfulfilled promises can be retained for a long time.

During the period 1957-1959 a USOM-designed dam was built for the Muong Phieng No. 1 irrigation system. There are varying reports as to how the construction was effected. One version has it that the villagers were hired, paid salaries by RLG-USAID for the construction of the dam. In another version, a contractor had been hired to perform the work. When the dam was completed, he absconded without paying the laborers, who were local villagers. Another version has it that a group of Vietnamese laborers were brought in and paid for force-account construction of the dam. After completion of the dam they returned to Vietnam. This dam was constructed near the site of an earlier French dam, which had been built in 1931. The French dam was built entirely by "corvée", or conscripted local labor. It might be noted that the memory of corvee labor now sometimes confuses the proposition of enlisting villagers to work for self-help.

The USAID dam had a canal that carried the water only to the edge of the area to be irrigated. It was not until 1963-64 that a group, directed by Jack Williamson, constructed

a "High-line" canal to serve the northern, or upper area and a "Low-line" canal to serve the south-eastern, or lower area as well as the irrigable areas near the villages of Ban Kang and Ban Na Kok. This project carried a self-help element as well as force-account construction of certain parts of the work. The agreement between RLG-USOM and the villagers by which the work was performed also called for a continual input of self-help labor for maintenance for the canals.

A small dam had been constructed, Pre-Cluster, on the Nam Luak, a small stream in the southern part of the Cluster, to serve the paddy lying between the villages of Houa Na and Na Luak. This was reported also to have been constructed by contract. After a year or two, some of this structure was washed out. However a small group of about 8 families whose lands lay near the canal got together in a cooperative effort and rebuilt enough of it to serve their lands. This dam has continued in operation for these people.

The initiation of the Cluster, in early 1964, was preceded by about a year and a half of gradually increasing USAID/RLG activity. This Pre-Cluster intensification was started in June and July 1962, when the first 300 Meo settlers were brought into Nam Hia, a village in the center of the Cluster area. By the time the Cluster was started, some 770 people had been brought into Nam Hia. The USAID Refugee Relief Organization supplied the settlers with rice, vegetable seeds, hardware for construction, and 500 sheets of metal roofing during the initial year. Later on a distribution of 20 buffalo and 20 steel plows was made to selected villagers by the Chao Khoueng. They were little used until about 1966 when paddy culture was started by some of these Meo.

Following the acceptance of the Nam Hia area as a place for resettlement of Meo, interest within USAID was generated in the Muong Phieng area as the site for a wider program. In May 1963, a USAID-IVS team came to Muong Phieng with three objectives in mind. The first was to make an economic and general village survey. The second was to aid the Lao Veterinary service in a program to vaccinate livestock in the Muong Phieng and Na Kheme areas. The third objective was to investigate the possibilities for establishing an IVS team in Muong Phieng.

This survey team consisted of Jack Williamson and Song Thong, his assistant, who were USAID employees. The other members were IVS volunteers Arnold Radi, William Hollingsworth, and Craig Maxwell, with their IVS assistants; Mr. Saway, and Mr. Khamsy. This team arrived at the end of May 1963 and stayed for about two weeks.

During this time Mr. Hollingsworth surveyed the 7 villages in Tasseng Muong Phieng as well as the village of NaKheme. Jack Williamson and Arnold Radi made an intensive survey of the village of Muong Phieng. They drew a map of every street and lane, houses were counted and general economic information relating to this village was gathered. It is interesting to note that there were two taxis commuting between Sayaboury and Muong Phieng. The charge was 150 kip per person one way. The kip rate at this time was 80 kip to a dollar, so this is equivalent to close to 1,000 kip at the present time.

Although this survey resulted in a detailed report on Muong Phieng, attempts to locate copies have been unsuccessful. An objective of the study had been to provide a base line measurement against which to judge the growth or economic development of villages under the programs which were to follow. Another objective was to determine certain basic facts with regard to the possibilities for housing an IVS team in the village. They decided that it would be hard to get a house built because many of the people were occupied in the rice paddys at that particular time. They also discovered that there seemed to be so much conflict between the village officials and the local people that they felt it might be difficult to have the local officials persuade the people to build a house for them. They also found there was no public source of food, there was no slaughtering of animals, and there were no markets in which vegetables and other produce could be bought. Chickens and ducks could be bought in the town, but were thought to be very high..

An available fragment of survey report describes one of the traditional practices which have been changed as a result of Cluster activities, namely that relating to the time of planting of wet rice. The villagers were said to believe that this time was entirely determined by the spirits. The procedure for determining the appropriate time was in the hands of a lay Buddhist leader called, in this report, the "President" (but who is probably the Salawat) who was in charge of a ceremony in which only certain farmers and important people in the community participated. The date of the ceremony was determined by the Buddhist calendar and by the amount of water in the paddys. This procedure has been found to reduce rice yields since the rice is sown later than is optimum for the area.

The interest in having a cluster in Sayaboury Province ultimately focused on two areas as the possible candidates. They were Ban Na La and Muong Phieng. On October 16th, Dr. Thomas, Mr. Smucker, Mr. Paine of IVS and Mr. Nick Bustamante of Operation Brotherhood (OB)⁽¹⁾ met and discussed the two candidate areas. On the following day they met with the Chao Khoueng of Sayaboury Province and the Chao Muong of Muong Phieng, to inform them of the results of their discussion of the previous day. The following opinions were expressed: OB felt that Ban Na La was a small project and more capable of being given close supervision; they felt that Muong Phieng was a more promising area and that the chances for long range, large programs were better. IVS said they would choose Ban Na La in terms of the five criteria which had been used in selecting clusters; on the other hand they would choose Muong Phieng on the basis of long term potential. Mr. Smucker and Mr. Williamson together felt that Ban Na La was preferable over Muong Phieng. The technicians present, primarily irrigation engineers, felt that Muong Phieng was the first choice. Ban Na La offered difficulties of construction and possibly even danger because of the length of one of the retaining walls that would have had to be built.

(1) Operation Brotherhood is a medical service program staffed by Filipino personnel and working in Laos under contract with USAID. At this time they were operating a small experimental farm and a hospital at Sayaboury. The hospital is still in operation.

C. THE CLUSTER ERA MONTHLY CHRONOLOGY

December 1963

Documentation is not available as to the date on which the final selection of Muong Phieng was made. However, by the 28th of December, 1963, a regular staff meeting of the Sayaboury USAID group was held to discuss organization of the Muong Phieng Cluster. Personnel present were; Mr. Smucker, USAID, Mr. Bustamante and Mr. Bonifacio Gillego, OB, and Mr. Mervin Yetley and Mr. Myron Paine, IVS. The purpose of this meeting was to establish the agenda for a training session for the cluster team. Objectives of the proposed training session were:

- “1. To acquaint the participants with the nature, scope and philosophy of the Cluster program,
2. To acquaint them with the organization and functional setup of the Cluster team and,
3. To inform them of effective methods of village approach.”

The following subjects were discussed as possible topics for the training session:

1. comprehensive reports of previous surveys.
2. present state of health and sanitation condition and proposed programs.
3. present state of agriculture and proposed programs.
4. animal husbandry problems.
5. organization and functional relation of the Cluster team.
6. nature, scope and philosophy of the Cluster program.
7. human relations
8. leadership techniques
9. problem solving
10. village leadership
11. present reaction to change
12. USIS materials available.

Mr. Bustamante was placed in charge of the committee to organize and implement the training session. It was hoped that the Yetleys would be able to move to Muong Phieng in temporary housing by the 7th of January. IVS was also given the responsibility for compiling information about the Muong Phieng area.

January 1964

At the beginning of 1964, as reported in a memo from Mr. Smucker to Dr. Thomas, dated 2 January, the Cluster problems were as follows:

1. where to put the Samaki (Cluster)⁽¹⁾ residence;

⁽¹⁾ It should be noted that the name of the program at this time was “Muban Samaki”, which meant, in effect, “Togetherness Communities”. This name was changed later to “Khet Phatanakhan” which means. “Area Development”. It was found that the term “Muban Samaki” was similar to the terms that the PL had been using in their propaganda. The term “Cluster” or “Cluster area” is the USAID term for the “Khet Phatanakhan” program.

2. The composition of the task force for the Cluster. Mr. Smucker was pushing for at least 3 OB people and was also insistent they be on hand immediately so that they and the IVS people could arrive at Muong Phieng at the same time.
3. Mr. Smucker recommended that Mr. Bustamante, the Chao Khoueng, Mr. Khamtoun, (the provincial agriculture officer), Mr. Paine and Mr. Smucker visit some of the other Cluster centers.
4. What means should be adopted to advertise the Samaki concept to the people in the Cluster. He was suggesting the use of mohlam in addition to the meetings that the RLG officials were scheduling with villagers and village leaders.
5. Preparation of activity plans was important to them at that time. Health and agriculture plans were in process.
6. Details for administrative and financial support. Problems of how to get money, who paid for furnishings, what could be done to get better transportation, how do they go about getting a sideband radio installed, were pressing administrative problems.

These problems were resolved two days later when Dr. Thomas and Mr. Wherle, the Deputy Director, prepared a joint memo to Mr. Mann, Director. The problems were resolved as follows:

1. *Location:* The location was to be land upon which OB already had a clinic. This is the land which now contains the Cluster center and which had at that time room for demonstration gardens in the back. It was also anticipated at this time that a sub-center would be established at Nam Hia.
2. *Organization:* It was decided that because of the high quality of OB personnel in Sayaboury, and also because of their association in the area, the team should be combined USAID-OB-IVS. It was suggested that the team leadership be assigned to Mr. Nick Bustamante.
3. *Staffing:* IVS would provide 5 people of whom one would remain in Sayaboury to run the IVS farm. The others were Mr. & Mrs. Yetley, Bill Hollingsworth and Betty Morgan. OB would provide three persons, a public health nurse, a CD worker and an agriculture extension agent, plus five locals trained by them. Three of these locals were medics and two were interpreters.
4. *Training:* It was felt that local personnel should be selected from the Cluster area and sent to Sayaboury for training at the IVS and OB farms located there. A Lao agriculture extension worker should be used in this training and should also then be assigned to the Cluster area.
5. *Orientation:* Mr. Smucker has set up a 5 day orientation period.
6. *Additional Personnel:* In the light of OB's position that they would need three additional people from Manila, this memo recommended that a review of the contract carefully inspect the possibility of having people working on a lesser priority be assigned to the Samaki program. They point out that in Sayaboury the team then consisted of 14 Filipinos (three doctors, three nurses, 2 agriculturalist,

1 maintenance man, 1 CD man, 1 home economist, 1 auditor, 1 dentist and the team leader).

7. *Logistics*: This recommended that logistics be furnished entirely by USAID and not taken from any funds set aside in the OB contract. The memo further endorses the concept of having Americans and Filipinos working together to help the Lao. Special comment was made of the good relationship with the Chao Khoueng maintained by OB.

This memo was approved in its entirety by Mr. Mann two days later, on January 6. On 17 January the Director, by cable, affirmed to Mr. Smucker the appointment of Mr. Bustamante as field leader of the combined team. He stated that Mr. Narvano, the OB head, had approved Mr. Bustamante's assignment.

One of the first combined visits to Muong Phieng of the IVS-OB personnel took place between January 7 and 10th. Mr. and Mrs. Yetley went with the OB mobile clinic (based in Sayaboury) to Muong Phieng where they held clinics at Muong Phieng, Nam Hia, Ban Kang, Ban Nasom Noi, Ban Na Bouam and Na Tane. One of the main purposes was stated to be "to present a united front of IVS and OB working together". On 20 January Mr. Smucker officially designated Mr. Orinico B. Bustamante as coordinator of the Muban Samaki team in the Muong Phieng Cluster. He stated that all team members will be directly responsible to the Cluster coordinator for all operational activities. He also designated Mr. Mervin Yetley as assistant to the coordinator. The coordinator was stated to be directly responsible to the Area Advisor for operational activities.

On the same day Mr. Bustamante issued a statement of duties and responsibilities of the personnel assigned to the team. They included statements of duties and responsibilities for the team leader, for the assistant team leader, for a community development worker, for an agriculturist for home economists, for a public health nurse. The statement of IVS relationship to the team also included the position of the assistant team leader.

While the administrative and personnel problems of the Cluster Team were being worked out, USAID was continuing to work on another front in developing the Cluster area. Road building equipment had been ordered and was finally received during early January, permitting active work to start on the Muong Phieng/Sayaboury road. At this time, in discussion between Mr. Jack Williamson and General Ounphan Norasing, who was then military commander of the 6th region, plans were worked out to have a company of army engineers work on the road south of the Muong Phieng Cluster toward Paklay. At the same time and separate from the Muban Samaki activity, the Chief of Agriculture for Sayaboury Province had proceeded with digging of canals in the Muong Phieng No. 1 system (as mentioned above).

February 1964

During the week of February 3, a meeting was held at the home of the Nai Dan in Muong Phieng. It included the Chao Muong, all of the Nai Bans of 14 villages

plus the tassengs. The Cluster concept was presented and appeared to be met by interest and enthusiasm by the assembled Nai Bans. The suggestion that the Cluster building be used after the Cluster time as a hospital and dispensary was received with interest by all except one Tasseng. It was discovered later that this Tasseng had a son-in-law who was trying to practice medicine in the area, and he obviously felt that a medical program would provide too strong competition for his son-in-law.

By February 9, 1964 the Cluster plan for Muong Phieng had been prepared and completely staffed out within the USAID Mission. A final copy was submitted on the 9th to Tiao (Prince) Rattana Panya, the Chao Khoueng (Governor) of Sayaboury Province. This was identified as "a preliminary plan" or check list submitted to the Chao Khoueng for inspection and ratification. The plan established responsibilities on the part of the Governor, the Provincial Council, the Royal Lao Government, the United States Government and any other parties, regarding project development or project implementation.

The scope of the plan encompassed 14 villages. This included the village of Pak Sot, a village which lies in the mountains west of the Muong Phieng valley, and which has since been dropped from the Cluster.

The objectives of the plan were:

- "a. through the development of effective community organization:
 1. raise the general standards of living of the inhabitants;
 2. promote the health and welfare of the inhabitants;
 3. develop motivational and attitudinal changes conducive to the realization of the aims of the Government of National Union.
- b. Through planning, work, and mutual cooperation of the villagers at the local level, to develop at least minimal social institutions necessary to the healthy development and welfare of the inhabitants and their offspring."

The means for obtain these objective:

- "a. The objectives are to be obtained through five general program areas;
 1. Agriculture;
 2. Community Organization;
 3. Education;
 4. Health and Sanitation;
 5. Transportation and communication.
- b. These programs will be implemented by the United States Government, RLG, and Lao villagers through;
 1. USAID specialists
 2. IVS specialists
 3. OB specialists

4. Fundamental Education specialists
 5. RLG representatives and specialists
 6. USIS consultants
 7. Lao villagers
- c. The specialists, consultants, and representatives will implement these programs in conjunction with the villagers through the following procedures;
1. Demonstrations and classes at the Muong Phieng Samaki Center and the Sayaboury Training Center.
 2. Demonstrations in villages;
 3. Self-help instruction and supervision at the village level;
 4. Contractual obligation;
 5. Information programs to stimulate village action;
 6. Decision making and concomitant action of the Muong Phieng-Samaki Council." (It might be noted that as far as can be discovered there is not nor has ever been a Muong Phieng-Samaki Council. However, various combinations of US and RLG officials have formed ad hoc committees which probably could be considered to perform the functions of this Council.)

Program content is then described in terms of sub-activities under each of the main five program areas listed above under (a.). The sub-categories of these areas are listed below with comments in parentheses as to the present (1969) state of programs implemented under these sub-categories.

A. AGRICULTURE

1. *Improved rice production:* (Rice production has been improved considerably during the period of the Cluster. Both new rice strains and improved production practices have been introduced. In addition water supply has been improved by irrigation projects, which have also brought additional land into production.)
2. *Secondary crop development*
 - a. *Animal feed production:* (No progress has been made on the encouragement of the growing of animal feed. However, with the increased amounts of rice that have been grown, and with the need for introducing rice mills to process these larger amounts, there have now become available quantities of rice bran which are used by millers to feed hogs which they raise. The eight mills now in operation in the Cluster are said to be able to feed continually approximately 250 hogs.)
 - b. *Vegetable production:* (There has been no significant increase in vegetable production for marketing. The Cluster attempted to foster the production of garlic and cabbage. Garlic failed because of poor growing practices and cabbages because of the lack of a market.)

3. *Home garden plots:* (There has been some increase in home garden plots, primarily because, with the forests cleared, the supplies of forest plants and vegetables have been diminished.)
4. *Fruit tree propagation:* (There has probably been a reduction in fruit trees in the Cluster area in the past five years. Many of the trees were located in and around the houses in the villages and quite a number of these trees have been cut down due to the improvements in the village streets. In only a few of the villages has there been any attempt to replace these trees.)
5. *Swine raising:* (The attempt to introduce pure bred strains must be considered a failure. However, although reliable statistics are lacking, it appears that the total hog population in the Cluster has grown approximately 75% during the period of the Cluster's activities. A great deal of this increase, of course, is due to the Meo, who grow more pigs per capita than do the Lao.)
6. *Poultry raising:* (The introduction of Taiwan ducks has been a significant success. These ducks, either pure bred or mixed with the local varieties, are seen throughout the Cluster.)
7. *Cattle raising:* (No attempt has been made to further the raising of cattle.)
8. *Fish propagation:* (After the initial failure of large scale communal ponds in Nam Hia, the introduction of individual family fish ponds, within the grounds of their own home area, has proven successful. So far this development is confined to the northern end of the Cluster, where one IVS Lao assistant has been largely responsible for the development.)
9. *Dam and irrigation systems:* (The dams and irrigation systems, although neither planned or promulgated under the Cluster authority, have had forceful impact on the entire Cluster area. As an inspection of the map, Figure 1, will show, the Cluster is really one large irrigation area, comprising the four systems: Muong Phieng No. 1 Dam and canals; Hia-Na Kok System; and the Nam Tan Left Bank and Right Bank Systems. It is still too early to tell whether all of the anticipated production increases will actually eventuate. However, the success of the Hia-Na Kok System seems assured.)

B. COMMUNITY ORGANIZATION

1. *Muong planning council:* (There is no Muong planning council.)
2. *Samaki (Cluster) planning council:* (Except for ad hoc meetings of various combinations of American and RLG Cluster officials, there is no Samaki planning council.)
3. *Village planning council:* (The development of Village Development Committees could be one of the most valuable projects in the Cluster. Although the success of this venture is not yet established, enough headway has been made to indicate

that the involvement in planning of village persons below the level of Nai Ban has taken hold in some villages.)

4. *Participant training programs:* (There have been few persons trained outside the Cluster area through the aegis of the Cluster, although some RLG Agriculture personnel, plus ADO personnel, have been trained in Vientiane, Thailand, the Philippines and the US.)
5. *Local evaluation panels:* (No local evaluation panels have been convened.)

C. EDUCATION

1. *Construction of village schools:* (Except for Na Luak and Nong Houng, in the extreme southern part of the complex, all villages have schools and have access to Groups Scolaire. The increase in school attendance, especially in the 4-6 grades, can be considered one of the major successes of the Cluster.)
2. *Literacy classes:* (No literacy classes have been successfully fostered by the Cluster.)
3. *Recreation activities:* (An attempt made in 1965 to organize and equip sports activities has failed.)
4. *Community activities:* (One of the outstanding developments has been the conversion of the normally serious and strongly religious village Bouns into larger social and festive occasions. The Bouns are much more open affairs—they have music, dancing, mohlam and public address systems, (loaned by the Cluster Management) and are participated in by the members of more than one village. Consequently they have become larger, more enjoyable, and the villagers are anxious to have more of them.)
5. *Curriculum development:* (After an abortive attempt to introduce technical training in the Muong Phieng Groups Scolaire, there have been no new curriculum developments in the Cluster area.)
6. *Local evaluation panels:* (No panels have been convened.)
7. *Gardens, sanitary facilities, wells at schools:* (Gardens at schools have had sporadic success. Few sanitary facilities have been introduced at schools. It has been difficult to stimulate the villagers to dig wells at schools.)

D. HEALTH AND SANITATION

1. *Hospital and satellite dispensaries:* (Although the main community center in Muong Phieng was scheduled to be converted into a hospital when the Cluster ceases operation, no other attempts have been made toward the introduction of hospital facilities into the Cluster. However, the dispensaries in the Cluster have been fully utilized.)

2. *Improved sanitation:*

- a. *Construction of sanitary toilets:* (The entire effort in furthering sanitary facilities in Muong Phieng Cluster was directed toward the use of water-seal toilets. These toilets require a kind of toilet paper that is not available in the Cluster, as well as water, which is sometimes difficult to get. These have not been accepted and although a number were constructed and installed, many have not been used. Recently with the clearing of the forest, the normal procedures have had to be changed and there is some indication that the villagers would be more receptive to some kind of toilet facilities program.)
- b. *Blind drainage systems:* (None of these have been introduced.)
- c. *Proper garbage disposal:* (No progress has been made in this area.)
- d. *Yard and garden maintenance:* (No progress has been made in this area.)

3. *Development and maintenance of good water supply:*

- a. *Wells:* (A number of wells have been both dug and drilled. Success has been so-so. Some of the wells are in use, others are not. Some of the drilled wells have pumps that function, some do not.)
- b. *Storage:* (There are no facilities for the storage of water.)

4. *Immunization against communicable diseases:* (The local dispensaries continually carry on campaigns for inoculations and immunization. These campaigns are carried on at the clinics and in some cases at the schools.)

5. *Health and education classes:*

- a. *Maternal and child care:* (Good progress has been made in holding these classes in connection with the clinics located throughout the Cluster.)
- b. *First aid classes:* (No first aid classes have been held.)
- c. *Nutritional guidance for mothers:* (Some guidance has been given, but the ability to follow through has suffered because of lack of interest by the mothers.)
- d. *Study and control of communicable diseases:* (There has been no study or control initiated or carried out by the Cluster.)
- e. *Mid-wifery:* (There has been no education in mid-wifery although the medics at the clinics have performed a good deal of mid-wifery for local mothers.)

E. TRANSPORTATION AND COMMUNICATION

- 1. *Airfields:* (The first airfield occupied good paddy land and was not able to operate during the wet season. This field has been replaced by an airfield located near the Nam Tan dam site. Although the surface is hard and smooth, it can not be used by larger aircraft in wet weather because of its slippery surface.)
- 2. *Roads, bridges and culverts:* (This program has probably had the widest and most fundamental positive effect on the entire Cluster area. This program has made it possible for the other activities to operate.)

3. *Local Information Services:* (The information program, comprising Cluster newspaper, movies, library, and bulletin boards has proven successful. It complements the other activities by informing people of the occurrence of training activities, demonstrations and so forth.)
4. *Mass media dissemination:* (No progress has been made in this area, other than that relating to the Information program.)

The last section of the Cluster Plan deals with evaluation procedures. It calls for annual evaluations to be made concerning the program in its entirety. It states that the constituent parties involved in this process should be at least the following: the Chao Khoueng, the Provincial Council, the Muong Council, the Samaki Council, and selected USAID and/or US representatives. Few formal evaluations have been made.

With the arrival of the Yetleys in Muong Phieng during the first weeks of February, a problem first arose that has continually plagued the Cluster personnel. That is the question of the attitude of the people of the town Muong Phieng. They have been said to be uncooperative and the fault has been laid by the IVS, USAID and OB Cluster personnel to the fact that the Muong Phieng people were allegedly given the Muong Phieng Dam and were not required to expend self-help effort or in any other way involve themselves in the aid. In the monthly report for January 15 to February 15, Mrs. Yetley says that the people in Muong Phieng have been spoiled in the past by American aid and are thus very apathetic toward our program. They have the "give me" attitude. However, in a preceding sentence she says "many women and girls in Muong Phieng are working on the dam (Note: they were working on a self-help basis) so they have very little time for classes or clubs". A meeting of the women of the village of Muong Phieng had been called by the Nai Dan and by Mr. Khamtoun, the head of provincial agriculture, so that Mrs. Yetley and the home economics people could explain their program. About 150 girls from the village attended. It seems apparent, however, from Mrs. Yetley's comment that while relatively few of the girls were interested in attending the classes, the women, were at least interested in what she had to offer.

It was during early February, 1964, that two tents were erected at Muong Phieng for temporary housing. Bamboo was also being cut and prepared for erection of somewhat better temporary housing. The Muong Phieng irrigation project was being pushed forward by non-Cluster USAID personnel through both paying local people as well as by soliciting self-help. It seems possible that this activity was somewhat resented by the Cluster people who felt that the paying of the local people under-cut their position in requesting self-help for many of their own activities.

March, 1964

The official launching of the Cluster was performed as the first element in the orientation of the Cluster team, which was held between March 10 and March 14. The program was kicked off by one day of speeches and discussion by prominent Lao and US personnel. On March 10 a special plane from Vientiane brought to Sayaboury, Tiao

Somsavath, Director of Agriculture; Dr. Khamsouk, Director of Veterinary Service; Mr. Bouaphat Chanthapanya, Director of Water and Forests; Mr. Leroy S. Wehrle, Deputy Director of USAID; Mr. James Faulhaber, Chief of USAID Education; Mr. Fred Michael, from USAID Public Health; Mr. Steven White from USAID Agriculture; Mr. Harold Haight, Deputy Director of USAID Rural Development; Mr. Stacey Lloyd of Rural Development; Mr. Payne of IVS, and Operation Brotherhood officials.

The meeting was chaired by the Chao Khoueng of Sayaboury and included, also from Sayaboury, General Norasing, the Commanding General of the 6th Zone, provincial officials including the Primary School Inspector and the Chief of Travaux Publics, and local OB officials and members of the Cluster Staff. The first day and a half of speeches was followed for the rest of the week by a course, designed by Mr. Bustamante, for the Cluster Personnel including the Fundamental Educators and other Lao personnel who participated in the Cluster as well as the Americans and Filipinos.

The Lao officials made some pertinent remarks regarding the future activities. Mr. Wehrle emphasized the need for closer cooperation between the US and the RLG, and the importance of a clear understanding by the US technicians and personnel as to the exact RLG objectives and procedures. He emphasized the importance of being able to deliver commodities and technical advice when they are promised and consequently the importance of the US knowing what commodities will be needed.

A new procedure for planning and securing approval of projects was described and was felt to be a great improvement over the previous procedure. The main change seems to have been the provision for the scrutiny of the plans by the National Ministries before they were submitted back to the Provincial Council for final implementation. Tiao Somsavath, speaking privately later, said the new system was necessary in order to give the national ministries control over the projects in the field and to assure that local political pressures did not influence program content in the future, as he said they had done in the period 1958 - 1960.

In retrospect, it would appear that an opportunity was missed in this meeting. As Mr. Smucker stated in his memo of March 3, to Dr. Thomas, he did not know what the RLG officials from Vientiane were going to recommend, but he felt that the local division Chiefs did not understand the role of the RLG in the Cluster. He expressed the hope that the national-level officials would insure that this would be a truly Lao program rather than a USAID program. Mr. Smucker said that when he talked to the Lao Chiefs who were to appear on the program he told them that he would like to have them discuss the potential development of the area in that particular part of the province and to suggest realistic activities and how these objectives might be obtained through the united efforts of the cooperating agencies. No specific objectives were set, nor was visibly closer cohesion of RLG and USAID goals and operating procedures achieved. The main result was an official "laying on of hands".

I would suggest that the same people should have gotten together and spent either a morning or the entire day in discussing the organization of, and plans for the Cluster over the round table before they enunciated their general position in open meetings. They could have worked out a balanced program for the Cluster which took into account their own relative priorities, and the total availabilities of personnel and other resources. This could have provided substantive guidelines for the Cluster and its ensuing activities.

The evolution in thinking about the Cluster activities is expressed in the memo that Dr. Thomas sent to Jack Williamson. On March 27, he asked Jack to develop a number of programs:

1. Develop an information program which can be used to create an awareness or an interest in Cluster activities among the people of Muong Phieng.
2. Develop a program for the identification, selection and training of local leaders and for the formulation of effective community organizations.
3. Develop plans for and give guidance to the Cluster team in the basic principles of community development work.

It is possible that the first two programs would have been premature at this time. However, when finally started, two and four years later, respectively, they became key activities.

April, 1964

While the Cluster team was organizing itself, work was preceding relatively rapidly on road and bridge construction and on the irrigation canals for the Muong Phieng No. 1 Dam. By April 1964, the following road building and earth moving equipment had been delivered to the Cluster; one Galleon 104 grader, one D-6 Bulldozer, one TD-9 loader, two dump trucks, one jeep and one pick-up truck. Additional equipment ordered and presumably on the way was an additional bulldozer and one flat bed truck. This equipment had been used to grade some 60 kilometers of road for dry season use. Three bridges had been built and five bridges had been repaired.

This was not accomplished without some difficulty. At the time of reporting, the 6th of April, it was said that the labor on the Muong Phieng road from Sayaboury had not been paid for three months.

April of 1964 also culminated a period of Activity Plan writing by the Cluster personnel. During April, Activity Plans were submitted for agricultural, medical, education, water resources, vegetable and livestock production programs.

In April, His Majesty the King visited Muong Phieng and in particular inspected the irrigation project. He was said to have been particularly pleased with this project.

During this period the Cluster team members were able to transfer from tents to a bamboo house which had been erected for temporary living quarters.

A Boy Scout troupe was organized in Muong Phieng, with an enrollment of 36. Sewing classes started in Nam Hia with an enrollment of 42, interest was said to be very good. Health classes also started at Muong Phieng school.

A memo of April 21, 1964, from Dr. Thomas to Mr. Smucker, illustrates some of the difficulties involved in preparing Activity Plans. It is apparent that neither Mr. Smucker nor any of the Cluster personnel had been given very much guidance with regard to the preparation of Activity Plans. This concept had just been put into operation in the Rural Development Division and initially represented a significant advance over previous project planning documents. The potential for continued evolutionary development of a sound Activity Plan format seems to have been stopped by the pressures of time. Field personnel from Muong Phieng submitted plans which were marginally acceptable. By the time they had reached a minimum level of acceptability through much re-working, time and requirement to meet in some way the expectations of the villager and RLG people who had been involved in the original program planning forced the acceptance of Activity Plans which were less than perfect.

In the memo cited above, the Activity Plans which were being reviewed related to village dispensaries, water resources development, vegetable production, livestock and education. The first four ultimately resulted in activity plans, of which only the one relating to village dispensaries can be considered to have succeeded.

The last plan, dealing with education, ran into a number of procedural and jurisdictional difficulties. This will be discussed later in chronological sequence, starting in July, 1964.

May, 1964

On the 16 and 17th of May, 1964, a Boy Scout Jamboree was held in Muong Phieng. This seems to have attracted much attention and participation. However, shortly after this, youth activities died out completely and none have been undertaken in the Cluster since that time. The Cluster management placed complete dependence on one person for all aspects of the program. When this person, Mr. Galera, resigned, the entire activity died.

The dispensaries at Muong Phieng and Nasom Nyai were in operation. In addition, the OB mobile clinic served the Cluster on a twice monthly basis and usually treated approximately 100 patients on each trip. A program of physical and dental examination of school children was also started about this time. Of the first 202 people examined, 124 were suffering from serious vitamin deficiencies. At the Groupe Scolaire in Muong Phieng, 204 students were given anti-helminthics. Ninety seven were reported to have passed worms.

Home economic activities continued with sewing classes at Nam Hia. During the same period, two fish ponds were dug in Nam Hia. A comment in Mr. Bustemente's monthly report for May is quoted as follows: "We have difficulty presenting our plans to (RLG) staff officers who, having fixed plans of their own seem to be unreceptive to our suggestions. More autonomy in planning activities within the Cluster should be given". There seems to be no evidence that anybody inquired as to what the fixed plans "of their own" of the staff officers were. Nor was Mr. Bustemente called to task for expressing this attitude.

June, 1964

It became necessary to buy two horses because the southern half of the road from Sayaboury to Muong Phieng was completely impassable during the rainy season. Until this road was completed in late 1965, an inordinate amount of time of Cluster personnel was spent in digging out jeeps and trucks from the mud, or in traversing this stretch of "road".

A milk program was tried by Mrs. Yetley in the schools and was warmly received. However, the inability to maintain supplies of milk resulted in the cancellation of this program.

A well drilling crew started working at the Demonstration Center. Two RLG Home Extension Agents were assigned to the Cluster. Mr. Casimiro Guieb, OB Agriculturist was assigned to work closely with the two RLG Agricultural Extension Agents already working in the Cluster. Mr. John Batto of IVS also arrived to replace Mr. Wayne Perkins in animal husbandry. Mr. Sritawach Chatiket, a WHO Sanitarian, demonstrated how to make water-seal toilets.

The Governor and the Provincial Council submitted, through Mr. Smucker, proposals for:

1. A fence around the Provincial warehouse in Sayaboury.
2. A market at Muong Phieng.
3. School construction and repair.
4. A training program in agriculture.
5. Road and bridge construction in the Cluster.

Dr. Thomas indicated that all could be approved, immediately, except the market. This could be approved if a large self-help input were introduced by the villagers.

Mr. Batto, IVS animal husbandry technician, suggested that the one-hog-to-a-family distribution system contemplated for the Cluster might not be as successful as one geared to supporting entrepreneurs or cooperatives in maintaining larger hog-farms. Subsequent events relating to hog raising have substantiated his position. However, concomitant increase in concentrations of rice bran at new rice mills was necessary in order to create the feed which made the rice millers also the major hog producers.

June, 1964

By the end of June 1964, the first seven Activity Plans had been submitted. Work started, although all approvals had not been received. The status of these projects at the end of FY 1964 (June 30, 1964) was as follows:

Activity Plan No. 1 — Training and Demonstration Center

This was scheduled to be completed between April and June 1964. Work started on schedule, and the building, with all utilities, was completed in late 1965. The building, however, was ready for occupancy, without plumbing, by the team members in November 1964.

Activity Plan No. 2 — Livestock Development (Swine)

Although work was to start in April 1964, effective work did not start until July 1964.

Activity Plan No. 3 — Vegetable Production (wet season)

Scheduled to start in May 1964, effective work did not start until August 1964.

Activity Plan No. 4 — Village Dispensaries at Nasom Nyai and Na Kheme

Both were scheduled to be constructed during May and June 1964. Both started during July 1964 and finished before the end of the year.

Activity Plan No. 5 — Livestock Development (Ducks)

This was scheduled to start in May 1964 and did not start until September 1964.

Activity Plan No. 6 — Fish Ponds

This plan was scheduled to start in January 1964, and finish in May 1964. It was started and completed on schedule.

Activity Plan No. 7 — Experimental Crop Rotation

Scheduled to start in three villages in May 1964. Started in one village during FY 1964.

July, 1964

A survey form was designed by Mr. Bustemente and approved by the Chao Khoueng, Chao Muong and Nai Dan. The form would have supplied valuable base data. If this survey of Cluster villages was made, none of the data has survived.

By this time, although the first Activity Plans had not yet been approved, the Cluster was either engaged in or was actively planning other activities. These activities were summarized as follows by Mr. Bustemente:

A. *Health and Sanitation:*

1. Hospital Construction
2. Village Self-help Dispensaries
3. Maternal and Child care
 - Well-Baby Clinic

- Prenatal, Examinations
- Mothers' Class
- Domicillary Obstetrical Service
- 4. School Health Program
- 5. School Health Education
- 6. Deworming
- 7. Toilets
- 8. Wells (with well rings)
- 9. House Spraying
- 10. Soakage pits, drainage, yard cleaning
- 11. Crematorium
- 12. Mobile Clinical Service

B. *Agriculture:*

- 1. Irrigation System
- 2. Rice Multiplication
- 3. Livestock Development
- 4. Fishponds
- 5. Vegetable Production
- 6. Aggie Center/Home Garden
- 7. School Gardens
- 8. Demonstrations/Experiments
- 9. Crop Rotation
- 10. Technical Assistance
- 11. Farmers' Classes
- 12. Aggie Extension

C. *Village Education:*

- 1. Boy Scouts
- 2. Boy Scout Leadership Training Course
- 3. Sewing Classes
- 4. English Classes
- 5. Athletics

D. *Community Organization:*

- 1. Nai Bans' Meetings
- 2. Village-level Meetings
- 3. Village Councils

Dr. Thomas felt it necessary to pour a little cold water on the profusion of plans being submitted (Memo of 22 July, 1964). A plan for vocational education at the Muong Phieng Groupe Scolaire which was being pushed by Mr. Bustamante also ran into intra-USAID jurisdictional complications. Dr. Thomas urged some actual accomplishments before the Cluster risked over-taxing itself with additional projects.

The draft Activity Plan for Vocational Training was prepared after discussion with the Primary School Inspector (PSI). The Cluster personnel assumed that he shared their enthusiasm for the project. However, when it became apparent that a modification of the curriculum would be necessary, plus assignment of additional RLG personnel, the PSI's support withered and he presented the plan to the Ministry in Vientiane as a Cluster proposal without his endorsement. Since the proposal also committed USAID personnel and resources, discussion about which had not been approved by the USAID Rural Development Department, many faces were saved when the project died an inconspicuous death.

At this time, visitors to the Cluster were warned that the last 13 km to the Cluster had to be traversed either on horseback or on foot. Since each visitor had to bring his own food. Care in choosing one's pack was advised.

The Cluster "backyard" garden was planted, and was said to include peanuts, pineapple, corn, sorghum, soybeans, bush beans and pole beans, eggplant, sweet potato, sugar cane, bananas, mustard, radishes, kohlrabi, sugar beet, fruit trees, and oats.

The Cluster team by this time comprised Messrs. Bustamante, Guieb and Ariola (PH nurse) from OB; Mr. & Mrs. Yetley and Mr. Batto, IVS; no USAID Americans, and 11 local hire or TCNs. RLG personnel included two Fundamental Education workers, one Agriculture Extension and two Home Economics agents.

On July 23, Mr. Smucker sent Mr. Bustamante a memo which emphasized planning for, or anticipating difficulties at the planning stage. In trying to establish guidelines, he drew an unfortunate distinction between what he identified as "productive" work and "non-productive" work. As he described it, productive work results in "accomplishments". Time used to explain projects, the informational aspects of the program, and the attending of village council committee meetings, are grouped with administrative work, vacationing, sick leave and idle or loafing time as "non-productive". He qualifies his definition by saying that some of this work is essential and might better be called "facilitating". However, essential or not, he said it should be kept to a minimum.

This memo may explain one of the short-comings of the activity plans reviewed in this evaluation study: Inadequate recognition of the need for communicating with Lao officials, technicians and villagers and for securing their meaningful participation before the start of the projects. These operations are not explicit in the activity plans nor is adequate time implicitly provided for their performance in the sequence of events within which they would fall.

Mention was made of sketches of the villages prepared at this time. None have been located for this study. Agricultural extension work was concentrated on assisting the "farmer-cooperators" who participated in the rice multiplication project being run by RLG Agriculture and assisted by Mr. Guieb of the Cluster. Special mention was made of the fact that assistance was also given to farmers who were not "farmer-cooperators" when requested.

The well drilling team at the main Cluster building reached a depth of 26 meters without striking water. Shortly after moving to a new location, they were pulled out of the Cluster by Public Works.

August, 1964

Some farmers from the far reaches of the Cluster came to Muong Phieng asking for insecticides. When told that they could not have any because they had no sprayers, they replied that they could make sprayers out of bamboo cylinders. They were given the insecticides, although there is no further report as to their success in using the improvised sprayers.

The USAID TCN surveyors and RLG trainees started surveying the site of the possible Hia Nakok irrigation project. Four self-help laborers are supplied each day by the Nai Ban of Nam Hia. A nutrition survey was started by Mrs. Yetley and Miss Caroline Gerhold, both IVS. A well-coordinated and highly appreciated operation was the shipping of 10,000 tilapia fingerlings from Bangkok to Ban Nam Hia on 5 August. The plane was met by 150 villagers who carried the many fish containers to the two community ponds.

Meetings were held with the Nai Bans of Nasom Noi and Nam Hia to select farmer cooperators for the swine and vegetable production projects and to ask about other village desires. Nasom Noi wanted first priority placed on toilets, but preferred pit toilets to water-seal. Nothing was done about this, since only water-seal toilets were being recommended. English classes were started. Interest dropped off after a few weeks when the students saw that they couldn't pick up English in a few easy lessons.

As of the end of August, 1964, only Activity Plan No. 1, Demonstration Center, had received all the signatures necessary for implementation. Of the remaining six that were being processed, three had reached the Program Office (swine, ducks, dispensaries), two were in the Agriculture Division (vegetable production and fish ponds), and one was awaiting the Chao Khoueng's signature (experimental crop rotation) prior to being sent to Vientiane.

September, 1964

Ambassador Leonard Unger and a group of RLG officials including Phagna Pheng Phongsavan, Minister of the Interior, Tiao Somsavath Vongkoth, Director General of Agriculture, Tiao Ratana Panya, Governor (Chao Khoueng) of Sayaboury Province, and

Messrs. Keo Viphakone, Souk Upravon, and Chao Sisavong, plus Dr. Howard E. Thomas, Assistant Director for Rural Development, and Mr. Silas J. Smucker, Community Development Area Advisor, Sayaboury, visited the Cluster on September 2, 1964.

In briefing material prepared for the Ambassador, Mr. L. Wehrle summarized the initial Cluster period:

“Unfortunately the legacy of USOM and RLG work in this area is not favorable. In 1957 and 1958 a commitment to build a dam north of Muong Phieng was made with the promise that laborers would be paid for their services. Unfortunately the contractor who did the work bugged out without paying the laborers. RLG officials subsequently returned to the area, heard the complaints of the people of their maltreatment, and made promises to rectify the situation by paying the people. This, however, was never done. USAID picked up the project last winter and used trust fund payment procedures to assure that laborers were paid on time as promised. Though at first it was difficult to elicit cooperation from the villagers, this has been improving because (a) the Americans kept their promise to pay the laborers, (b) the Americans and Filipinos kept their promise to stay in the cluster area even under difficult conditions and after the PL told the people that the foreigners would leave soon, and (c) because promises by the cluster personnel to bring in fish and help the people grow gardens have thus far been filled.”

Briefing material submitted at this time cited the Cluster population as 10,000. Census data available at the Nai Dan's office shows the population for 1962-63 to have been 6,100. The population was probably 7,000. The briefing material included a detailed summary of project activities—past, present, and planned. It presented optimistic estimates of the current conditions and of future prospects. However, when the conditions under which the group had worked and the limited number of personnel are considered, their achievements in the preceding seven months provided a basis for optimism.

In addition to the seven projects mentioned earlier, the team had completed activity plans for fruit plant propagation, multiplication and distribution, and for “latrine training”. Plans were in preparation for health and sanitation; water resources; vocational training school; agricultural training; self-help irrigation for refugee villages; Muong Phieng market; school construction, repair, and maintenance; organization of village committees; school lunch program; English classes; and youth program.

Following the visit, Mr. Bustamante proceeded with characteristic vigor to push two new ideas (via a memo through Mr. Smucker to Dr. Thomas):

1. Promotion of home industries (embroidery and weaving) through creation of a rotating fund of 75,000 kip to buy thread, needles, cloth etc. He asked that he not be required to prepare an Activity Plan because of the experimental nature of the project. He expected this to provide the initial impetus for a widening program of home extension activities to improve rural home makers.

2. He wanted to shift the emphasis from "static concentration" to intensive agricultural extension work by establishing sub-stations in three key villages. Starting the following week, evening classes would be held on techniques of extension work for all Lao associated with the program. He requested training materials and visual aids.

Simultaneously with the transmittal to Dr. Thomas by Mr. Bustamante of these projected plans, Mr. Smucker requested that Dr. Thomas furnish information for creating a credit organization for the Nam Hia Meo farmers so that they could buy tools. He felt that Cluster personnel could provide assistance and guidance, once they knew how to organize a credit cooperative.

Dr. Thomas, in reply, pointed out that no additional OB, TCN or US personnel were available, that the Cluster now had more activities scheduled than they could handle, and, that any experimental activity either could be written up as an activity plan or it was just a "guessing game". Dr. Thomas found himself in a difficult position because, while he did not want to discourage productive or imaginative thinking, the Cluster's planning activity was already far ahead of the ability of their little group to perform. While the Cluster leaders, in effect, staked claims on all the mountain peaks in sight, the work force was wearily trying to decide which mountains to start climbing, and in what order.

Mr. John Batto, IVS livestock technician, left Muong Phieng was reassigned to Phone Hong. The Cluster Manager's report for September states that meetings were held in a number of villages (two meetings in Na Tane, two in Nasom Nyai, four in Nam Hia, and two in Nasom Noi) regarding project activities and to elect village council members. Also, a meeting of all Nai Bans was arranged by the Nai Dan so that Mr. Bustamante could explain the Cluster objectives and program. The general reaction was reported by Mr. Bustamante to be very favorable.

During the above meeting called by the Nai Dan, the translator was Mr. Keo Phoum-phondeth, RDD Administrative Assistant, who was visiting the Cluster. In a report to Dr. Thomas he says the Nai Bans did not attend the meeting called by the Nai Dan but sent their assistants in their place. Most of the participants were said to have understood only little of what was being said. Keo said that the Nai Dan was old and uninterested in the Cluster if not actually negative about it.

According to Keo, any success in the village meetings which were held to elect village council members was due to the arrangements and presence of Bouarith Khamphouvong. Bouarith had been the titular head of the Buddhist hierarchy in Sayaboury Province and was (and still is) known and respected throughout the Province. He has since attained the position of Cluster Manager. His known later performance authenticates Keo's assessment.

Keo also reported that there was little interest in home gardens because the villagers said they had neither the tools nor the time for gardening. Furthermore, they needed fencing to keep out the buffalo.

Keo emphasized that the villagers who had a capable Nai Ban tended to be cooperative and interested. He reported, however, that the RLG Agricultural Service, represented by Mr. Nyai at Muong Phieng and Mr. Khamtoun, the Province Chief at Sayaboury, did not attempt or did not know how to coordinate their activities in the Cluster area with the team. Keo felt strongly that the RLG technicians and officials should be brought into all planning and operations.

October, 1964

Mr. Manuel Galera was responsible for establishing the Boy Scout troop and was to implement an Activity Plan for Youth Activities upon its approval. He had been assigned, however, on a part-time basis from the OB Hospital in Sayaboury. That organization complained that he was spending too much time in Muong Phieng and restricted his time in Muong Phieng. Because of this, the Boy Scout activities died out, and the youth activities, Activity Plan No. 8, can only be said to have limped along.

The two RLG Veterinary agents, promised to the Cluster many months ago, arrived. Eighty persons attended two meetings at which water-seal toilet construction was demonstrated. Two additional dispensaries were constructed at Houa Na and Na Tane without benefit of Activity Plans. Two medics at other dispensaries were to split their time to serve the new dispensaries. Although the Cluster assumed that Mr. Fred Michael of Public Health Division had approved the implicit amendment to Activity Plan No. 4 and agreed to furnish medicine and other supplies, the Vientiane office of Public Health Division stated that no such commitment was made. The dispensaries were abandoned.

November, 1964

A jurisdictional problem was brought to a head by a memo from Mr. Tucker, Chief of USAID Agriculture, in which he said: "The only non-Lao person in Muong Phieng authorized to give them (the two Lao home extension workers) technical advice is Mrs. Yetley" "If Mr. Bustamante had suggestions or advice on their work, these should be channeled through Mr. Khamtoun, RLG Provincial Agriculture Chief" ... "Mr Bustamante's only role in relationship to the Home Economics Agents was as a coordinator of all activities of over-all Cluster programs".

The major irritant in the situation had been the performance of the Lao home agents. They were having difficulty arousing interest in their projects, they were not too well qualified and lacked assurance in dealing with village women. Mrs. Yetley, the IVS wife who was trying to give them direction, was not a professional home economist. She had had to adjust to life under hard conditions while trying to find productive professional employment for the inexperienced home agents. Their accomplishments

in the three and a half months, as listed by Mr. Bustamante, were: "Dug 7 ditches and garbage pits; conducted a sewing class which did not last for two weeks at three hours a week; held three village meetings, one was unattended, another was attended by a few; sewed three pairs of pants, three pillow cases, and two blouses; helped one woman make a washboard and knife rack; made a sample food cover (one), and conducted a one-week survey."

Mr. Bustamante had apparently been pushing them, assigning them non-home economics duties when he saw them idle. Mr. Tucker's memo was an attempt to give Mrs. Yetley sole authority to direct their activities. Mr. Bustamante considered this a threat to his overall authority, which he interpreted as follows (quoted from Faulkner's memo of 25 November 1964):

1. He has a mandate from USAID to see that Mission goals are accomplished within the cluster;
2. That through a Cluster-team approach, i.e., the personnel of USAID, RLG, OB and IVS, plan and carry out projects in a Cluster which are designed to raise the standards of living in the Cluster population.
3. That he interprets his mandate as giving his full responsibility for the success or failure of the Cluster program.
4. That he was given verbal authority from Mr. Khamtoun to integrate three Lao extension agents into the Cluster team to train them and to give daily supervision to their activities. One of the reasons for this is that Mr. Khamtoun had no plan of his own for the implementation of the Agents. Mr. Bustamante had no knowledge of any written instructions from RLG superiors to the local RLG technicians concerning their relationship to the Cluster Manager.
5. That any contacts of Cluster team members with USAID technicians should first be channeled through him."

As also stated in Mr. Faulkner's memo the basic questions are:

1. What should be the extent of involvement of RLG technical services in the Cluster operations?
2. What is the role of the Cluster Manager?
3. What is the role of IVS? What are their relationships to the Cluster Manager?
4. What are USAID's technical branch program planning and operational responsibilities?

The only tangible result of the conflict was the early departure of Mr. and Mrs. Yetley from the Cluster.

November saw the partial completion of the Demonstration Center. It lacked plumbing of any kind. Although USAID Public Works denied any responsibility for installing plumbing, they installed it some months later. The Cluster team members moved out of their bamboo hut into the new building. The dispensaries continued to treat approxi-

mately 1,300 people per month. The home economics girls started a model home in which modern home practices could be demonstrated. They were also teaching nutrition in the prenatal and well-baby clinics. Mr. Yetley, just before he left, found himself with a major job of trying to train the RLG Livestock technicians, who were found to be very poorly qualified.

December, 1964

The Prime Minister and Mr. Mann visited the Cluster in early December. The cluster management, in their briefing, emphasized ratooning, garlic production, and vegetable production. Mr. Keo Viphakone explained the history of the Muong Phieng dam, which was visited. The party visited Nam Hia where the Prime Minister addressed the medics and the Nai Ban on the importance of sanitation—boiling water, cleaning the body, possibly elevating the Meo houses.

Planning for school construction, repair and maintenance was started and benefited from the assistance of the Area Education Advisor, Mr. Vandrell. Mr. Bustamante raised the question of training of midwives. He was reminded that strict limitations had been placed on the health program as follows:

- “1. This is a summary of the Public Health Program to be carried out in the Muong Phieng Cluster.
 - a. Dispensaries at Muong Phieng, Nam Hia, Ban Nasom Nhai, and Ban Na Kheme.
 - b. Maternal and child care activities.
 - c. Well-baby clinic.
 - d. School health program.
 - e. Mobile clinics—to be held to a minimum.
2. Support for the above program is limited to supplies that are available in the medical warehouse. Exceptions can be made if requested and if feasible.
3. There is to be no expansion of Public Health facilities without the written approval of the Chief, Public Health Division.”

(Dr. Weldon memo, dated October 12, 1964)

January, 1965

The year 1964 had been a difficult year of testing, trial, error, solid accomplishment, learning, and, except at the end of the year, good cooperation amongst the various groups who comprised the Cluster team. There was a ferment of ideas, plans, and rejection of plans. There was a corresponding profusion of documents. The following years saw the documentation reduced, as many developments became routine.

The Chao Khoueng restated his request for construction and repair of schools and for construction of a market in Muong Phieng. The first substantive step toward getting this latter activity approved (since Dr. Thomas had indicated in June of 1964 that the pro-

ject could be approved if a self-help element were guaranteed) was the request for standard market building plans from Public Works Division.

After the wet season hiatus, construction started on the low-line canal to Ban Kang and Ban Na Kok. About 100 persons from Ban Kang started work. Muong Phieng inhabitants refused to do any work on the canal which passed through their land but which served Ban Kang and Ban NaKok.

The demonstration garden at the Cluster Center was becoming very expensive to maintain during the dry season. Eighty man days were spent in watering, in addition to jeep hauling time. Approximately 180 sacks of rice seeds were bought by the RLG from the rice multiplication project and hauled to Sayaboury by Cluster trucks. Youth work was discontinued because of the resignation of Mr. Galers. A total of 108 sprinkling cans were said to have been purchased by villagers for use on their home gardens.

The village of Nam Hia put on a "Thanksgiving" boun to express their gratitude and appreciation for the assistance they had received. Speeches were given by the Chao Khoueng, a USAID representative, and the Director of Operation Brotherhood. Mohlam, movies, and public address facilities were furnished by the Cluster and USIS.

February, 1965

All of the total 485 ducks were distributed, and about half of the ultimate total of 47 pigs. Cabbages were sold in Sayaboury by 53 families. Squash harvested from the demonstration center garden were put on sale in Sayaboury but only two people bought. Others thought the squashes were too strange-looking.

With the receipt of pure-bred livestock in the new environment, the question of medicines and vaccines has become important. Very little medicine and no vaccines were on hand, and order placed for them had not been acknowledged. Storage of vaccines was impractical without some form of refrigeration. The livestock technicians were given a refrigerator some three years later.

March, 1965

At the request of the people of Na Bouam, the ultimate site of the Nam Tan dam was visited by Tiao Somsavath, Director of Agriculture, Mr. Savady, RLG Irrigation Chief, and Mr. C. Matthews, USAID Irrigation. The villagers' limited desires for a small dam were the seed from which the comprehensive Nam Tan plan developed.

April, 1965

Mr. Bustamante went on home leave in April; his place was temporarily assumed by Mr. Bouarith Khampouvong, Muong Phieng "Lead Man", as he was called. The low-line canal to Ban Kang and Na Kok was completed. The well drilling team returned and drilled an unsuccessful well 37 meters deep on the Cluster center grounds. Mr.

Eliseo Tavanlar of the United Nations, completed the survey of house and garden plots in Nam Hia. Of the total 150 delineated, 116 were allocated. These lots later were determined to have been too small (approximately 400 square meters instead of 600 square meters now allocated in similar circumstances).

Mr. Casimiro Guieb, Cluster Agronomist, returned from home leave. Mr. Joe Bussewitz, IVS, was transferred to Muong Phieng.

May, 1965

RI.G agriculture extension agents distributed 1,600 kg of rice to 97 families in six villages for the improved rice multiplication program. Pig pens were being built, feed cookers improvised out of fuel drums, and seeds for forage crops being distributed for the pure-bred Yorkshire pigs, all of which had then been received. Lack of medicines has made it impossible to treat small diseases and ailments before they became major problems. Materials started arriving for the multipurpose training center.

The monthly report from the Cluster for the month of May showed a change in the reporting format. The total report was broken down into three major sections, each numbered by a Roman numeral.

- I. *Significant problems encountered during reporting period.*
 - a. Statement of the problem;
 - b. possible effects on the Mission objectives;
 - c. possible effects on relationships with counterparts;
 - d. record of action taken.
- II. *Significant accomplishments/events during the period.*
 - a. Political
 - b. Security
 - c. Military
 - d. Refugee or PL defectors.
- III. *Table of physical accomplishments had the following headings:*

Activity Plan No., the name of the activity, planned duration, objectives—quantative and qualitative, whether or not completed this period, total to date, (presumably total number of quantative items completed to date), balance (presumably the balance of items yet to be completed).

Although the previous system needed improvement, this new version had the negative effect of eliminating interesting and significant detail which had been in the previous reports. Most of the items were more suitable for quarterly or semi-annual evaluative or trend summaries than for monthly progress reports.

The format was too rigid to be informative, and lacked a system of benchmarks or mile-stones that could impart meaning to the estimates of progress.

The format was only used during the last few months of Mr. Bustamante's tenure.

The Tasseng and the Nai Ban of Muong Phieng were changed in an election conducted by the Chao Muong on 26 May. The change was reported to be for the better, as the newly chosen officials were more cooperative and energetic individuals.

June, 1965

There was discussion between Mr. Haight, Acting Assistant Director for Rural Development, and Mr. Souk Upravan, Commissioner for Rural Affairs, regarding the general advisability of establishing positions for Lao Cluster Managers within the CRA, and the specific possibility of having Mr. Bouarith placed in one of the positions. Mr. Bouarith would be designated a Deputy to the Chao Muong. It was determined that there would be little change in salary whether Mr. Bouarith was on the CRA payroll or the USAID payroll.

When this possibility was presented to Mr. Mann by Mr. Haight, in the desire to receive some guidance, Mr. Mann said that he concurred in principal as long as USAID maintained control of commodities and funds.

This discussion probably contributed to the eventual promulgation of a Royal Decree (No. 127 dated May 13, 1968) which established "Agents d' Encadrement" (Supervisors of CRA rural agents) who were to assist Chao Muongs in administering development aid.

There were no changes in Mr. Bouarith's status as a USAID employee. It is possible that Mr. Bouarith himself did not desire to make this change, in as much as the status of the Commission for Rural Affairs was not well established within the Royal Lao Government.

The monthly report for June under the new format was not very informative. A new tabular category is introduced, "Not covered by Activity Plans". This made it possible to discuss civic action training, leadership training and literacy classes. The latter classes were said to have been started in Nam Hia, Na Tane and Muong Phieng with a total of 95 students.

The record of the status of Activity Plans still in operation during FY 1965, and those started within FY 1965 follows:

Activity Plan No. 1—Training and Demonstration Center

Construction was continuing on this center.

Activity Plan No. 2—Livestock Development (Swine)

Scheduled to have started in April 1964, and with the anticipation that enough pigs would have been bred so that 240 could have been returned to the Cluster by the

end of February 1965. The ultimate total of 47 hogs was not delivered to the site until February 1965.

Activity Plan No. 3—Vegetable Production (wet season)

This project was on-going.

Activity Plan No. 4—Village Dispensaries

Nasom Nhai—completed in February 1965—scheduled to have been completed in June 1964.

Na Kheme—scheduled to be completed in June 1964, not completed by June 1965.

Activity Plan No. 5—Livestock Development (ducks)

478 ducks were distributed by May 1965. The remaining requirement is to return ducks two for one.

Activity Plan No. 7—Experimental Crop Rotation

Activity under this plan stopped in January 1965.

Activity Plan No. 8—Youth Activities

This plan was scheduled to start in October 1964 and to last for six months. It ended in November, 1964, however, with the departure of Mr. Galera.

Activity Plan No. 9 — Environmental Sanitation

This plan was scheduled to start in October 1964, and to be completed in May 1965. The plan contained five elements:

1. *Water seal toilet* construction found 139 out of 150 planned completed by April 1965. However only a small percentage of these were actually installed.
2. *Sanitary wells*: Ten were to have been dug in five villages. By July 1965, five wells were supplying water although slabs had not been completed, and an additional eight were being dug.
3. *Sewage disposal*: Demonstrations of either drainage ditches, kitchen drains, garbage pits, had been made in Muong Phieng, Phone Sai, Na Tane and Ban Kang during this period.
4. & 5. *Training*: Extension education and training, received no attention during this period.

Amendment 1. to AP-9 had two elements. The first was to construct five crematories; the second was to drill twelve wells. All were to be completed by the end of June 1965. One of the crematories was constructed at Muong Phieng, none of the others were ever constructed. One well was drilled during the period to June 1965.

Activity Plan No. 10 — Home Economics

This activity continued.

Activity Plan No. 11 — Health and Sanitation

This plan continued on schedule.

Activity Plan No. 12— Agricultural Improvement Program

This activity continued.

Activity Plan No. 13— Multi-purpose Community Building and Community Center

Scheduled to be constructed between April and May 1965. The building was still under construction at the end of June 1965.

Activity Plan No. 14—Repair School Buildings at Muong Phieng, Na Bouam, Nakok, Nasom Nyai and Na Kheme

All the work was scheduled to be finished by May, 1965. All were under construction at the end of June, 1965.

July, 1965

During the period July through November, 1965, the bulk of Cluster energies were devoted to implementing Activity Plan No. 16, Social Action Training, and Activity Plan No. 17, Village Leader Training. Little time seems to have been spent on other activities except health and agriculture extension. One IVS volunteer was on duty for one month during that time.

September, 1965

The Nai Dan of Muong Phieng had been officially relieved of his duties, but the new Nai Dan had not yet assumed command. During this month there was the visit of the American, British and Australian Ambassadors. It is also said that there was a 47 man army detachment in Muong Phieng which had been given the additional mission to secure the Cluster area and personnel and to cooperate in whatever way they could with the Cluster.

October, 1965

In October the program assistant in Rural Development asked for a list of activities planned for the period October, 1965, through June, 1966; fifteen were listed, as follows: (The numbers do not refer to Activity Plan numbers.)

1. Public market—Muong Phieng: It is said that cement had not yet been received and it was doubtful that the lumber for columns could be produced on time.
2. Road Construction: Muong Phieng to Na Kheme.
3. Well Drilling: (seven wells).
4. Civic Action training course.
5. Nai Ban/Tasseng meetings/seminars.
6. Repair of Muong Phieng Groupe Scolaire.
7. 1,000 square meter propagation center.
8. Finish the wells project (dug wells)
Comment: Six more wells are to be completed and well rings have to be put in.
9. Continue Material and child care.

10. Home demonstrations (Lao Womens Association with Home Agents)
Comment: The Chao Khoueng would request two home economics people from the Lao Womens Association to conduct a series of demonstrations together with the Home Agents in the Cluster.
11. Trial planting of garlic and onions: It was said that the scope and extent of the project still had to be discussed with Mr. Khamtouné upon his arrival from the US.
12. Home Gardening: This also had to be discussed with Mr. Khamtouné.
13. Boy Scouts Organization (three villages): The two additional villages, besides Muong Phieng, were to be Nam Hia and Na Kheme.
14. Construction of Crematories.
15. Villagers training (as organized or requested).

The following abridged narrative on construction for Muong Phieng was also prepared and was signed by the Chao Khoueng and Mr. Bustamante.

Construction listed as completed:

1. The center building which will later be converted into a ten-bed hospital.
2. The multi-purpose building which is being utilized for training activities.
3. Four self-help clinics located at Muong Phieng, Nasom Nyai, Na Kheme and Nam Hia—all in operation.
4. Irrigation dam and canal for Muong Phieng.
5. Eight dug wells in four villages.
6. Toilet construction in four villages.
7. Repair of four schools: Na Kheme, Nasom Nyai, Na Bouam and Na Tane.
8. Four fish ponds completed.
9. Additional room in Nam Hia school—purely self-help.

Construction in progress:

1. Six more dug wells.
2. Two drilled wells.
3. Repair and cementing of floor of Muong Phieng Groupe Scolaire.
4. Road from Muong Phieng to Na Kheme.

Planned construction:

1. Public market for Muong Phieng.
2. IVS house for Muong Phieng.
3. Irrigation dams in Nam Hia and Na Bouam.
4. Eight drilled wells in three villages.
5. Villages school at Nasom Noi, Groupe Scolaire in Muong Phieng.

November, 1965

Since Mr. Bustamante was being transferred by OB to Vientiane, Mr. Smucker recommended to Dr. Thomas that George Ridenour officially assume full control as Manager of the Muong Phieng Cluster on December 1, 1965, and that Mr. Bustamante

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remain in Muong Phieng for one or two weeks, if necessary, to give counsel to Mr. Ridenour. This was approved on November 30, 1965.

A problem arose during this month in the civic action training course where the per diem was reduced from 150 kip to 100 kip per day after the course had begun. Mr. Ridenour recommended that the 150 kip per diem be retained for just this course, as he felt it would be demoralizing for the trainees.

The 47 man army detachment was still on duty and was maintaining routine reconnaissance patrols. The construction of the IVS house in Muong Phieng was started during this period.

The period December 1964 — November 1965 contrasts negatively with the first year of the Cluster. The conflict about the Home Economics activity, the difficulty of accomplishing the aims of on-going projects, and possibly the lukewarm reception of some of his other proposals seems to have diminished Mr. Bustamante's interest in Cluster activities.

After the departure of the Yetley's in Jan. 1965, there was no IVS couple at Muong Phieng until the arrival of the Candea's in December, 1965. There was no IVS member of the Cluster team between November, 1964, and April, 1965, when Mr. Joe Bussewitz arrived, and between his departure three months later and the December arrival of the Candea's.

December, 1965

A boun was held in Muong Phieng for fund raising for the Groupe Scolaire.

The period of December, 1965, and early 1966, was a transitional period. There was a new Cluster Manager, two new IVSers and a new agriculturist from OB. The garlic program was started late for the second time. Mr. Donald Klaus, the USAID Agricultural Extension Consultant, also felt that the planned 1,500 kilos was too large for the farmers to handle. Last year the 350 kilos that were planted were a failure, also because planted too late and because of poor control of water.

The new IVSers were Randall Candea and his wife Elizabeth. Both had urban backgrounds as opposed to the rural backgrounds of previous (and following) IVS couples. They brought a different view to the problems of the Cluster; Mr. Candea outlined the following projects as being of specific interest to him:

1. *Cluster Library*: Mr. Candea had already enlisted USIS support. Reading materials had been received.
2. *Sports*: Mr. Candea conceived of an initial small program which would evolve into a larger activity, ultimately to involve all villages and including a training course for village teachers.

3. *The general state of the irrigation system at Muong Phieng:* He felt that a general re-survey was needed and that many of the irrigation tools, pumps, picks, shovels and etc., had either been misplaced or stolen.
4. *English Course:* Although a previous English course had been started and given up because of dwindling interest, Mr. & Mrs. Candea and Mr. Ridenour felt that they would like to offer an English Course. This would be held in conjunction with the Lao American Association and would be held in the evening. (It was difficult to maintain interest, however, and the course was discontinued).
5. *Home Industry:* He would like to explore the potential for training in crafts, such as; wood carving, silver, pottery, bead and needle work and etc. He was also interested in the outlook for skills, such as; blacksmithing, tinsmithing, masonry, carpentry and charcoal making.

January, 1966

With Mr. Ridenour's first report the reporting became more complete and meaningful. The third drilled well at the Muong Phieng Training Center was successful, water was found at 15 meters. A number of contracts were awarded for lumber for office furniture, and for bookcase-magazine rack and storage cabinets for use in the Cluster Library.

A breakthrough was made on the construction of the Market at Muong Phieng. The Nai Bans of the villages concerned had objected that they could not get the wood which had been allocated as a requirement from each village. However, it was decided that each village would provide an amount of kip equal to the value of their original wood allotment. A contract was made with a local sawmill to provide the finished lumber.

Evening classes in teaching English were started, and plans were drawn to beautify and landscape the Cluster Center. The need for baseline information about the villages was recognized. A copy of the questionnaire that was used in Vang Vieng was given to each Nai Ban by the Nai Dan. These questionnaires were ultimately filled out, but have not proven to be very useful, due to ambiguities in reporting. It was also planned that a follow-up survey would be undertaken in the following month, by teams of interviewers composed of representatives of each of the RLG services. It is not believed that this survey took place. During this time the newly assigned Managers of other Lao clusters made an inspection tour for orientation. They were Messrs. Loring Waggoner, Frederick Hubing, and Peter Lydon.

February, 1966

The problem of the role of RLG and USAID agriculture technicians in Cluster operations, first raised between Mr. Tucker and Mr. Bustamante, still existed. Mr. Ridenour reiterated that closer cooperation with USAID Agriculture was required in order to realize the maximum agricultural potential of the Cluster.

A draft Activity Plan for information program was submitted for review and editing. Surveyors started to block out 3-hectare plots in the Hia Nakok irrigation system area.

The Cluster was visited during February by their Excellencies Sisouk Champassak, Minister of Finance, Inpeng Suryadhady, Minister of Justice and Keo Viphakone, Secretary of State for Social Welfare; Mr. Joseph Mendenhall, USAID Director, and other USAID officials.

March, 1966

Basketball courts were installed at schools at Nam Hia and Na Kheme on a self-help basis. Although the information program activity had not yet been finally approved, the Cluster Library was completed, USIS materials having been available for some time for this library. The librarian will be the next Fundamental Educator to be chosen by the Primary School Inspector of Sayaboury.

Mr. Candea in connection with Mr. Nyai, the RLG Agriculture Extension Chief for Muong Phieng, worked up a system for the control of water and for the control of maintenance on the Muong Phieng irrigation system. Check points were to be set up along the canals and they were to be visited periodically. However, Mr. Nyai was transferred before the system could start and Mr. Chan Keo, his successor, has been too busy to concern himself with the system, although he had agreed to help Mr. Candea. However, as of the present, there have been no changes.

The first of the two IVS houses was structurally complete, but still needed plumbing and wiring. Work on the second house was about 30% complete. The house for the RLG veterinary agents has been completed.

A new tasseng was created comprising the villages of Na Tane, Na Bouam, Na Sing and Nasom Nhai. The new Tasseng of Na Tane was energetic, well respected and said to be an innovator. The Meo village of Nam Hia finally had an election and resolved many conflicting claims for leadership by electing a single Nai Ban, the leader of the Meo contingent from Xieng Khouang.

April, 1966

On the 11th of April a violent wind storm with hail and rain hit the Muong Phieng area. The second IVS house, which was then 50% complete, was leveled and a small section of the roof on the multi-purpose Community Center was damaged. Twenty-nine houses were demolished in Muong Phieng. Three Cluster primary schools suffered damage.

The villager self-help input from Phone Hine in connection with the Hia Nakok irrigation project had been less than satisfactory. Evening meetings were held in the village to discuss the program. The Lao Cluster Manager explained in detail the importance of planning and the need to have the plans affirmed by work performed by the villagers. Specific cases of delinquent families were openly discussed. Some heads of families stated that they felt that their land might not receive water from the canal system. They were told that anybody who doubted that water would reach his land

should request a specific survey through the normal Nai Ban/Tasseng/Nai Dan/Cluster Manager request channels.

A number of administrative improvements occurred at this time. The new Nai Dan of Muong Phieng proved to be interested in his work and effective in his dealing with the Government. To quote Mr. Ridenour "He is becoming increasingly attuned to the seriousness of lethargy and unenlightened attitudes of certain RLG technicians in the Cluster".

A letter was written to all Nai Bans and Tassengs stating that there was a May 15 deadline for all recipients of water seal toilets to either install them and put them to use or to have them returned. Many of these had been constructed but relatively few had been put into use.

May, 1966

A USAID contract team of Japanese fisheries experts, USAID personnel and Mr. Sisavang, Chief of the RLG Fisheries Service, visited Muong Phieng to survey the feasibility of establishing a fingerling propagation station in Muong Phieng. It was tentatively determined that the site of the abandoned demonstration farm might be suitable for the fish ponds.

Cluster participation in home economics activities has been difficult, because the RLG has permanently placed two of the agents in Nam Tan. They are thus unavailable for supervision or planning of their activities by Elizabeth Candea.

In line with the increasingly close relations between Agriculture and Cluster, Mr. Fidel Tamayo, the Cluster agriculturist, has been given formal authority to serve as advisor to the two Veterinary agents. He will also serve as supervisor of forage and feed crop trials in Muong Phieng.

Mr. Manual del Rosario resigned from Operation Brotherhood effective 15 May. His services with Muong Phieng Cluster terminated at the end of April. Mr. del Rosario had been the public health nurse. Dr. Kennedy, USAID Public Health Division, inspected the Muong Phieng Cluster in order to determine the respective responsibilities of OB, the Cluster and USAID Public Health for the betterment of the overall public health program in the Cluster. In general, he recommended that the Muong Phieng Cluster health program be included under the program of the Provincial Medicine Chef for Sayaboury. This was not a perfect solution, however, because of difficulties of getting medical supplies from the RLG health warehouse in Sayaboury and because of the Public Health Division's better ability to supply the dispensaries from its own stock.

A new group of Meo Refugees arrived at Nam Hia, total 670 persons. They are called the Houei Sec Meo, from the name of the stream located between Sayaboury and Muong Phieng where they had been temporarily encamped.

Mr. Ridenour was married during May. His wife proved to be an effective, albeit unpaid asset to Cluster management.

The possibilities of starting a charcoal industry were explored. The ready availability of firewood has made this impractical. Blacksmiths, who might have been customers, prefer to make their own charcoal, since they feel that close control of kind of wood and its processing is necessary for their work.

A start was made on organizing a tool production group in Nam Hia. Five blacksmiths would be supplied equipment, to be repaid from earnings, for production of tools which would be sold to USAID for distribution to refugees.

June, 1966

A request for counterpart funds to support recreational facilities and youth activities was rejected by Mr. Mendenhall, USAID Director. The possibility of supporting Boy or Girl Scout programs was held out, however, provided funding was kept at a low level. Four-H Club activities, if to be considered, would require coordination with USAID and RLG Agriculture.

There was confusion as to the best way to use IVS personnel for agricultural training programs. The specific problem involved proposed training projects and activities in which the IVS specialist could be profitably employed in an advisory capacity to the locally-assigned RLG Agriculture Extension agents. These proposals could not elicit a response from Provincial-level authorities presumably because they had been given no guidance from Vientiane. The reasons for the lack of response were felt to be the ambiguous hierarchical position of Provincial Agriculture with regard to Cluster activities, and the lack of a defined relationship between the IVS specialists and the RLG Extension agents.

The Director suggested that when the Provincial office was reluctant to take action on proposed projects, the program be sent to Vientiane for discussion between the USAID and RLG national-level organizations. Their determinations would then have the force of official direction for the Provincial office.

Substantive progress in the development of controlled water-use on the Hia-Nakok and Muong Phieng irrigation systems was felt to have been made with the arrival and preliminary activities of a TCN irrigation engineer, two RLG irrigation trainees and four RLG irrigation laborers.

Three months ago the Houei Sec Meo refugees had come to Nam Hia and the nearby area to explore the possibility for permanent settlement. This month 67 of the families returned to Houei Sec and 54 decided to remain at a new village site, Nam Pang, which was allocated to them. Eighteen additional families from this group have been absorbed

into the Nam Hia community. PL-480 food plus surplus ADO rice from Sayaboury were being used to feed this group.

A community development summer intern, Mr. James Breiling, a journalism student from the University of Iowa, arrived to assist with the information project (Activity Plan No. 18).

At this time, active consideration was being given to the construction of a fish station and a forage and feed crop demonstration and propagation installation. A USAID-Funded Japanese fisheries contract team and Mr. Wilder of USAID/Livestock selected an area next to the canal for the Hia-Nakok irrigation project. The project was said to hinge upon the availability of Mr. Fidel Tamayo, OB livestock technician, who had been working at Muong Phieng. The attempt to have him transferred directly from the OB staff to the USAID pay-roll failed when OB insisted that he return to the Philippines upon completion of his contract. Although he subsequently returned and became a valuable member of the USAID agriculture staff, the delay in his return contributed to the scrapping of the plan for a fish station at Muong Phieng.

During FY 1966, four Activity Plans were approved and started. Their status as of June 30 is as follows:

Activity Plan No. 15—Muong Phieng Market

The market was to have been built between October and December 1965. It was started in February 1966 and was still under construction at the end of June. It was completed at the end of September 1966.

Activity Plan No. 16—Social Action Training

Two courses were given and completed by 8 and 24 soldiers respectively. The courses were well-prepared. The scheduled third course was not given.

Activity Plan No. 17—Village Leader Training

Two one-week courses were given on schedule between October and December to tassengs, Nai Bans and Pulong Nai Bans. No further courses planned.

Activity Plan No. 18—Information

This plan started about on schedule in February 1966 and has been continuing as planned.

Other Activity Plans started before FY 1966 and still in operation or completed during FY 1966.

Activity Plan No. 1—Training and Demonstration Center

Completed in late 1965.

Activity Plan No. 2—Livestock Development

The swine were not reproducing but were dying.

Activity Plan No. 9—Environmental Sanitation

Amendment No. 1—Wells: Wells were being dug.

Activity Plan No. 14—Repair of school buildings at Muong Phieng, Na Bouam, Nakok, Nasom Nhai and Na Kheme.

Repair of all schools except the one at Muong Phieng was complete by June 1966.

July, 1966

The problem of integrating the provincial level of Lao agriculture into Cluster activities received a big boost with the more active participation of Mr. Walter Scott, USAID Agricultural Advisor, Luang Prabang. He made two visits to the Cluster in the company of the RLG Provincial Chief of Agriculture, Mr. Khamtouné, who is showing progressively more interest in the Cluster.

Dr. Kennedy, USAID Public Health Division, determined that the new Meo refugees were in an acute malnutritional state, and prescribed a milk feeding program and vitamin supplements. This two-week program was administered with exceptional efficiency by Mrs. Ridenour, who kept records of the dosages and reactions of all participants throughout the program. Results were said to have been very beneficial.

Dynamite blasting is being used in the Hia-Nakok area for clearing of land for Nam Hia families. According to Mr. Earl Rambo of USAID Irrigation, this method was not used later at the Nam Tan project because it is too expensive.

August, 1966

Mr. Ridenour felt that the Cluster had lost face with the Nam Hia refugees because of the delay in implementing the plans for a small tool program and blacksmithing industry. The missing ingredient was the assurance of USAID that they would buy the acceptable tools produced by the group. The project has been in limbo since May, 1966.

Work was started on activity plans for livestock training and for general agricultural training.

September, 1966

A detailed survey of home conditions throughout the Cluster was completed by Mrs. Candea and the home economists. Attempts were made to buy blacksmithing tools and equipment in Sayaboury, with no success. The Mekong flood, which was so disastrous in Vientiane, had little direct effect at the Cluster. However, planning assistance required from Public Works in connection with school construction and repair was not forthcoming when needed, due to their preoccupation with flood conditions.

October, 1966

Mr. Fidel Tamayo, Agriculturist, departed. The two-room addition to the Muong Phieng Groupe Scolaire was finished after months of inactivity. The Nai Dan had

convened a meeting of all Muong Phieng and Phone Sai residents and had reached an agreement that each household would supply one siding board. A few days later, 251 siding boards and as many laborers showed up to add the finishing touches to the construction.

Five blacksmiths at Nam Hia entered into a contract with USAID whereby they will repay to USAID the cost of tools, equipment and work materials through sales of finished tools to USAID.

November, 1966

Constanzio Ariola, OB Public Health Nurse arrived to take Manuel del Rosarios' place after a hiatus of six months. During this time there was no qualified person to supervise the operation of the four clinics.

The first issue of the Information Bulletin was issued this month.

December, 1966

Mr. and Mrs. Richard Augspurger arrived. Mr. Augspurger is an agriculturist, while Mrs. Augspurger (Joanne) worked in home economics at the Cluster, although she was a sociologist by training. A new dispensary was built in Na Tane under the "Small Rural Development Project" program. This program permits the expenditure of \$100 of US funds and 50,000 kip of counterpart without Vientiane approval, and gives useful latitude to the field administrator. The villagers contributed 108,000 kip for purchase of lumber and 336 man-days of self-help labor.

Construction of the school at Na Tane (Activity Plan No. 22) will employ, as an experiment, a hollow-core wall as opposed to the normal cement-block construction. Mr. Frank Bewitz was to have directed this experiment, However, he did not take up duty at Muong Phieng as planned; it is possible that the experiment suffered from his absence.

January, 1967

This year started with a heavy emphasis on training. The Activity Plan for livestock training had just been approved (AP 19) and much Cluster activity was devoted to devising new training programs.

A mimeographed notice of the program had been sent to all Tassengs and Nai Bans and was placed on bulletin boards throughout the Cluster. An application form was devised to be used in all training programs to aid in the selection of trainees. One objective of this form was to screen out "draft dodgers". A training contract was also devised which committed the trainees to apply what they had learned so that other persons in their own villages could also be helped.

A training program was started for construction training. Forty-two applications were received for the twelve training slots. These persons would participate in the school

construction to be performed under Activity Plans 21, 22 and 23. The trainees would be paid a minimum wage which would increase as their skills increased. This aspect of the training was being supported by the USAID Rural Public Works Division. This program has been a successful and most useful training program in the Cluster.

The draft for Activity Plan No. 20 "Training and Crop Production" has now been started on its way through Vientiane. When Fidel Tamayo returns to Muong Phieng he will provide technical supervision for both Activity Plans 19 and 20.

Discussion is starting on a Nai Ban/Tasseng training course. This discussion much later ended up with a program to elect and train village development committees for each village.

A problem was met and successfully resolved while resettling the Meo at the village of Nam Pang Meo. In the center of the area is a large pond which, according to local tradition, contains a bad "phi" or spirit. Irrigation personnel promised that they would be able to drain this pond. With this assurance, the Meo started building houses all around it.

February, 1967

Mr. Fidel Tamayo returned to the Cluster training staff as a USAID employee. He is now employed by the USAID livestock branch. He will be employed at Muong Phieng for a minimum period of six months to get the training program started for livestock. Mr. Augspurger will now be available to devote full time to the RLG Agriculture Extension Agents and to preparation for the villager training under Activity Plan No. 20, training in rice, vegetable and fish production and irrigation methods.

Mr. Silas J. Smucker was transferred from his position as CDAA in Sayaboury to a position in the Agriculture Division in Vientiane. Mr. Ridenour now takes on the responsibility for both Sayaboury and Muong Phieng.

Approximately fourteen tons of paddy rice were purchased within the Cluster and distributed to the Meo refugees at Nam Pang Meo. The rice was purchased with advance funds provided by the Refugee Relief and Resettlement Branch. It was believed that another month's supply of rice could be bought locally.

It was being discovered that the tools prepared by the blacksmiths under the tool production program at Nam Hia are brittle and do not hold temper. The temporary services of a blacksmith expert were sought.

March, 1967

A further kind of training was started this month; clothing construction by the home economic girls. This was under Activity Plan No. 24, and was under the direction of

Joanne Augspurger. Another twelve tons of paddy rice was purchased within the Cluster and was distributed to the Meo refugees at Nam Pang Meo.

During this month the Cluster was visited by Crown Prince Vongsavang. He was accompanied by His Royal Highness Tiao Singkeo, Palace Protocol Officer, His Excellency Sisoumang Sisaleumsak, Minister of Telecommunications, and his Excellency Touby Lyfoung, one of the top Meo officials in the government. A day or so later the Cluster was visited by a delegation from the Asia Foundation who were considering the possibility of constructing a youth and vocational trade school in Sayaboury. This group was headed by Mr. Louis Connick, Director of the Asia Foundation in Laos. Later in the week the Cluster was visited by the USAID Director, Mr. Mendenhall. He was accompanied by His Excellency Ngon Sanaikone, Minister of Public Works, Phak Savan, Director General of Travaux Publics, Mr. Ben Stewart, Mr. Thomas Cole, Mr. John Perry and others.

April, 1967

At this time, 22 Meo farmers were getting ready to plant their first paddy rice in the Hia-Nakok area. They lacked tools, buffalo, tillage equipment and technical advice. There was hope expressed that this would be forthcoming in the near future. An additional month's rice was purchased locally to give to the Nam Pang Meo.

Three field observation training days were held in Muong Phieng for a total of 132 farm leaders from Sayaboury, Na La, and other Cluster villages in order to show the double-cropping rice demonstrations and irrigation work. Later in the month nine Muong Phieng farm leaders visited the Vientiane area accompanied by Mr. Richard Augspurger and Chandy Sisoth, Chief Agriculture agent in Muong Phieng. They went to observe double-cropping and improved agricultural practices. Both observation projects were funded under the Small Rural Development Projects program.

May and June, 1967

This is a combined report because May reports were not submitted due to Mr. Ridenour's illness. During this period the third anniversary of the founding of the Muong Phieng Cluster was celebrated at the Cluster Center on June 3. This is an odd day, in as much as the Cluster officially started on March 10, 1964. A three-week training course was started in Muong Phieng for information assistants from other Clusters. Formal distribution of three hectare farm plots to twenty-six Meo families from Nam Hia in the Hia-Nakok irrigation area was made. The Hia-Nakok irrigation project was formally dedicated on June 29th at a ceremony at the dam site.

Seventeen buffalo had been requested by the Meo paddy farmers. These were purchased locally using ADO buffalo loan procedures.

Five Activity Plans and one Activity Plan Amendment were approved and started during FY 1967:

Activity Plan No. 9—Amendment No. 2—Drilled Wells

Fourteen wells to be drilled. Three drilled were before the team was pulled out.

Activity Plan No. 19—Livestock Training

Three courses were to have been given before June 30, 1967. One was actually given.

Activity Plan No. 20—Training in Rice, Vegetable and Fish Production; and in Irrigation Techniques

This program started in June, 1967.

Activity Plan No. 21—Three-Room school at Nam Hia

This was scheduled to be constructed between January and March, 1967. It had not yet been started by the end of June, 1967.

Activity plan No. 22—Two-room schools at Muong Phieng and Na Tane.

Both schools were scheduled to be constructed between March and May, 1967. Villagers of Na Tane started assembling materials before the scheduled start of the school. The school was completed by the end of December, 1967. Work on the school at Muong Phieng did not start until March, 1968 and was finished in January, 1969.

Activity Plan No. 23—Two-room schools at Na Kheme, Houa Na and Na Bouam

All three schools were scheduled to be constructed between January and May, 1967. The schools at Houa Na and Na Bouam started in May, 1967. The school at Na Kheme started in November, 1967. The school at Na Kheme was completed in May, 1968 and the schools at Houa Na and Na Bouam were both completed by September, 1968.

Activity Plans approved earlier and still in progress or completed during FY 1967 were:

Activity Plan No. 10—Home Economics

Courses still being given.

Activity Plan No. 11—Health and Sanitation

Courses and assistance still being given.

Activity Plan No. 18—Information

Newspaper, Library, Bulletin Boards, movie showing, all in operation.

July, 1967

In response to a request from the Chao Khoueng, the USAID Director, Mr. Mendenhall, designated Mr. Ridenour as the Chao Khoueng's point of contact in USAID for all matters outside the Agricultural field which the Chao Khoueng might want to raise with USAID. One purpose of this was to permit Mr. Wilson Lane, the Agriculture Advisor, in Sayaboury, to devote more time to agricultural matters throughout Sayaboury Province. Although Mr. Ridenour continued to reside in Muong Phieng he was prepared to go to Sayaboury at anytime that the Chao Khoueng desired. Mr. Ridenour's

new title was Community Development Advisor—Area (CDA) for Sayaboury Province.

Activity Plan No. 20, Villager Agricultural Training was approved. Since the market at Muong Phieng had never been dedicated and was little used, it was therefore decided that July 21, a Buddhist Holiday, would be a day for the first formal use of the market. The Nai Dan prohibited the selling of meat within the city at any place other than the market. Since then the market has been used on an average of 15 minutes to 1 hour every day.

Only eight Meo farmers from Nam Hia have been able to plant rice on the Hia-Nakok this year. It had been originally planned that at least 22 would plant rice this season.

August, 1967

During this month the poor condition of the road south of Muong Phieng seriously held up engineering and survey work for the Nam Tan dam. Mr. Fidel Tamayo left this month for reassignment in Vientiane.

A note from Mr. Daniel Fredericks, Training Advisor - RDD, to Mr. Ridenour regarding official communications of the Commission for Rural Affairs to Chao Khouengs and other RLG counterparts exacerbated a problem that had been buried up to that point: The status of the CRA worker. Their general status within the Cluster and within the Province had been weakened by the lack of official description of their duties, and by the unorthodox way their affairs were administered. Recent communications regarding their status in the Province had been sent directly from the Commissioner for Rural Affairs to the individual CRA worker. This was contrary to procedure followed by other RLG ministries. Agricultural Extension Agents receive all of their instructions and other official communications through the provincial office of the Ministry of Agriculture.

Because of this confusion, it was difficult to determine who was to tell CRA workers to do what. In Muong Phieng, the Nai Dan has assumed the responsibility for keeping them working. However the Nai Dan is under the Ministry of Interior and the CRA workers are under the Commission for Rural Affairs, which is directly under the Prime Minister. These facts were reported to Mr. Frederick by Mr. Ridenour.

September, 1967

Six more plots for Meo families were cleared at Hia-Nakok and planted in IR-8 rice. Nine plots remained uncleared of those which had been promised. However, the PWD tractor had been taken off of this job to go down to the Nam Tan project and these plots were not cleared for planting this season.

October, 1967

Dan Frederick replied to George Ridenour's memo about the relationship between the CRA workers and the Chao Khouengs. He pointed out that a number of official

letters had been sent from the CRA in Vientiane to the Chao Khouengs and the Chao Muongs. Some months ago the Chao Khouengs received job descriptions for all levels of Rural Agents and statements as to whom they were responsible, how they were to be used, and requests that monthly reports on their activities be submitted through the Chao Muong and the Chao Khoueng to the Commissioner of Rural Affairs. Mr. Fredericks states that Mr. Ridenour's memo caused considerable comment in the CRA and has presumably resulted in an airing of the problem and a checking of correspondence and communications channels between the CRA and Chao Khouengs and Muong representatives.

A major workload was put on the Cluster and upon Sayaboury officials by the arrival of a group of 1,876 Meo refugees. They arrived in Sayaboury and Thadeua by all available means of transport. Trucks and vehicles were commandeered to move them down to Muong Phieng and the additional 22 kilometers to the Nam Phoui River. Rice was air-dropped at the new site at Nam Phoui. Although medical supplies for 1,000 people were at hand there were no medics to distribute them and the Cluster loaned one of its medics to the group. It is expected that the daily rice requirement will be about 1½ tons of milled rice.

November, 1967

On the 13th and 14th of November, the Cluster and Sayaboury were visited by the Mission Director with Mr. and Mrs. McMurtrie Godley, Dr. Weldon, Dr. Muller and Dr. Khampay Abhay.

December, 1967

New IVS members of the Muong Phieng Cluster were John and Carol Wells, Tom Xerri, and Michael Flannigan. The main problem continued to be the supply and care of the Meo Refugees at Nam Phoui.

January, 1968

The Home Economics Training Program was started in early January. This was the course in clothing construction which is covered under Activity Plan No. 24 and was under the direction of Mrs. Carol Wells. The veterinarians were particularly happy this month because they finally received a refrigerator for keeping medicine and vaccines. This has been a pressing requirement for over three years.

It was said that self-help laborers on the Nam Tan irrigation Project were fearful that they would not benefit from the work they were doing. It was reported that some officials had been making claims to land although they had not been performing any work. A meeting was held on January 17, it was decided by the Chao Khoueng and his associates that any person laying claim to land in the project must either give physical labor or, if that is not possible, he must pay others to work for him. Fortunately, this system was superceded by a more equitable one.

About 200 of the refugees at Nam Phoui wanted to go back to their home in Luang Prabang area because of the very large number of deaths which had occurred at Nam Phoui. They were persuaded not to leave, mainly through convincing them that if they did leave they would not receive further refugee food and other supplies.

February, 1968

Mr. Robert McClymonds, a contract Irrigation Specialist, arrived in Muong Phieng on February 12 to work under Mr. Cox. He was to concentrate on improvement of the organization and maintenance aspects of the Hia-Nakok system but would also devote some time to the Muong Phieng irrigation system. Resistance was still being met in securing adequate self-help participation in the Nam Tan Irrigation Project. Work was started on planning for the Village Development Committee project. This was the responsibility of Mr. Michael Flannigan.

March, 1968

One of the employees at the Nam Tan irrigation work was killed in a tractor accident this month. There continued to be a shortage of self-help workers at the Nam Tan site. Mr. Bouarith talked with Tassengs and Nai Bans and took them and villagers on tours to explain the work. This kind of indoctrination and communication was effective. More should have been done, and earlier.

April, 1968

A meeting was held at the Nam Tan site, attended by Mr. Mendenhall, USAID Director, His Excellency Houmphanh Saignasith, Minister of National Economy, Ambassador Ryan of Australia, Mr. Bounlieng, Cabinet Secretary, Mr. James Chandler, Mr. Gene Paguet, Mr. Jack Kardell, Mr. Gordon Whittaker, Mr. Walton Nixon, Mr. Garnette Zimmerly, Mr. Hugh Brady, Thao Manh, Social Welfare, Mr. Miles Osborne of the Colombo Plan, Mr. Thouvong, RLG Forestry, Mr. Pieme of "XAT LAO" Newspaper and Mr. Phamsin of USIS. They discussed refugee resettlement, irrigation, construction, land clearing arrangements, land utilization and relations among American and Lao officials involved in the project's implementation.

A number of problems arose at Nam Tan. For example; three of the farmers lost their land to the canals for right-of-way. The farmers asked that new land be cleared for them to compensate for the damage. They cannot get an answer at least until the next Wednesday meeting at Nam Tan. In another case one of the farmers who was getting his land ready for planting found that Public Works came and took the soil off of his land in order to fill low spots on the canal right-of-way. During the night of April 18 there was an exceptionally heavy rain and the temporary diversion dam was washed out. It is said that there was about 6,000 cu. meters of water and debris in the excavation.

May, 1968

The Nai Dan of Muong Phieng, the Associate Director of the Cluster, Mr. Bouarith, three Tassengs and one Nai Ban made an observation trip to the Clusters of Ban Kuen, Vang Vieng, and Pone Hone on May 22-26. This was done under the Small Rural Development Projects program. The Nai Dan and Bouarith then proceeded to Nong Khai Province in Thailand where, along with Michael Flannigan and the RD Training Advisor, Dan Frederick, they saw the Thai Government's Village Leader Training Program in action.

June, 1968

Two Public Works carpenters were working on furniture at Ban Houa Na School. It has gone slowly because the villagers did not cooperate. After a talk with the Nai Ban and his assistant with a threat that the carpenters would be removed if more-self-help wasn't evident the self-help increased. However, it was not until the end of September, three months later that the furniture was actually finished.

Work progress on cadastral survey of the newly cleared areas and of existing paddy had been held up by the need to secure resolution of certain conflicting claims of land ownership and related problems. These could only be resolved by the Provincial Land Commission, which is chaired by the Chao Khoueng and contains as members the representatives of all concerned RLG agencies: Land Registration, Water and Forests, Agriculture, the Police, Military, Justice and Muong Officers.

Mr. Ridenour asked the Assistant Chao Khoueng a number of times to convene the meeting. After receiving no response (possibly because the Assistant Chao Khoueng preferred to await the return of the Chao Khoueng) Mr. Ridenour asked USAID to apply some pressure in Vientiane. This was done, and the Assistant Chao Khoueng notified Mr. Ridenour that the meeting would be held on 2 July, 1968.

One Activity Plan was approved and started during FY 1968:

Activity Plan No. 24—Clothing Construction

This was planned to start in January, 1968 and finish in May, 1969. One course was scheduled through June, 1968. This course was started and completed on schedule.

The June 30, 1968 status of Activity Plans which had been approved previously and which were in operation during FY 1968 were as follows:

Activity Plan No. 19—Livestock Training

By this time five courses were scheduled to have been completed. Two were actually completed.

Activity Plan No. 20—Rice, Vegetable, Fish and Irrigation Production

Two courses were to have been given by this time. One was actually given.

Activity Plan No. 21—Three-room School at Nam Hia

To have been completed at the end of March, 1967; was still under construction at this time.

Activity Plan No. 22—Two-room schools at Muong Phieng and Na Tane

Both to have been finished in June, 1967. Construction not yet complete on the school at Muong Phieng. Construction of the school at Na Tane was completed in December, 1967.

Activity Plan No. 23—Two-room school at Na Kheme, Houa Na and Na Bouam

All were to have been completed by the end of June, 1967. The school at Na Kheme was finished in May, 1968. The school building at Houa Na was finished in November, 1967, and the furniture was finished in September, 1968. Furniture and school at Na Bouam were finished in September, 1968.

Activity Plan No. 24—Clothing Construction

One course was to have been finished in 1968. It was finished on schedule.

Activity Plan No. 18—Information Program

This program continued to put out the newspaper every month, ran the library including a mobile library, and performed other information activities as planned.

Public Works Activity Plan No. 18—Nam Tan Irrigation Project

This major program was implemented jointly by USAID/Irrigation and USAID/Public Works, with much assistance from villagers. By August, 1969, 517 villagers had provided 33,980 man-days of self-help labor. All villages in tassengs Na Tane and Na Kheme were represented, as were Nam Pang Meo and Nam Pang Lao. The most man-days, 5584, were supplied by Nasom Nyai; Houa Na gave 5201 man-days, and Na Bouam, 4915 man-days. USAID/Irrigation was responsible for planning and engineering design. USAID/Public Works was responsible for all aspects of construction. Later, USAID/RDD was given the task of determining present ownership of all land and assisting in allocation of new land.

The operations of the dispensaries in the Cluster, which are carried under a Public Health Activity Plan, continued as usual.

The draft Activity Plan for the Village Development Training Program was submitted to Vientiane.

July, 1968

Eleven carpenters completed their training program this month. The graduation ceremony was held on the 24 of July.

Also during this month, 87 soldiers from the Sayaboury defectors' camp came to visit the Muong Phieng Cluster. Since they will be ultimately dispersed to other areas, this was thought to be a useful public relations device.

Service at the four dispensaries was restricted because of the lack of medical supplies. These had been ordered but had not yet been received.

At the meeting of the Provincial Land Commission, the Chao Khoueng explained the RLG policy with regard to the distribution of land. First priority would be given to bonafide refugees. Second priority would be given to villagers within the project area who did not presently hold title to any land. Third priority was for villagers within the project who presently held land titles, but for an amount less than three hectares. (The term "hold land titles" as used in the report probably is in error, because very few of the people in this area who have occupied land for a long time hold what might be called "land titles".)

The Nai Dan of Muong Phieng was given the responsibility for finalizing a list indicating which farmers are considered to hold title to their land. The Nai Dan had the Chao Khoueng's delegated authority to settle land disputes, subject to review and ratification by the Provincial Land Commission.

August, 1968

Although the self-help requirements of the Nam Tan project had been minimal during the wet season, organizing the small amount of work that was required had been hampered by the absence of the RDD field assistant. The Public Health activity had its work load increased by the need to put in a temporary clinic at Nam Tan dam site to take care of the self-help workers and the laborers working on the project. Also the clinician at Nam Poui, who had been responding directly to Sam Thong, the previous location of many of the refugees, had recognized that it was necessary to work under the chief nurse of Muong Phieng. Nyai Phoumiphath, RLG Zone Chief for Agriculture at Muong Phieng, returned from the Philippines this month.

September, 1968

Construction on the Muong Phieng school is held up by the inability to get sand and gravel; the source is now flooded. During this period the rice donated by the French to Laos has been used to feed the Nam Poui Meo, Yao and Lao Theung refugees.

Elections were started for the village development committees. The elections were preceded by a period of indoctrination run by the CRA workers. They went to each village and spent a number of days explaining what the Village Development Committee Program was about, and what would be required for the elections.

October, 1968

It had been difficult to find a medic who would stay at the Nam Tan dam site. The food is expensive, conditions for living are primitive. The medics said that if USAID would pay per diem they would live there; this had not been possible. The chief nurse,

Thao Thongphanh arranged to send medics there during the day, but they are allowed to go back to their village in the evening.

Training was given to ten farmers at the training center at Muong Phieng in second cropping and on how to maintain irrigation water in the rice fields. Vegetable seed were distributed to the refugees at Nam Poui. A team from USIS consisting of Mr. Paul Starzynski and Emil Minh made an orientation survey, preliminary to filming a documentary on the Village Development Committee Program. Maha Souvanh and Samloh went to Nong Khai, Thailand to attend the Thai school on village committees. Maha Souvanh went for one month and Thao Samloh for three months.

November, 1968

The installation of the field phone system for the Cluster started this month. There will be 12 phones in the system, which will be centralized at the police station at Muong Phieng. Some of the villages have become quite excited about the prospects of being able to telephone to either the police or more especially to the medics and the veterinarians.

Mr. Ridenour went to Pakse for two days to consult with the Area Coordinator, Mr. Diffenderfer and the CDA, Mr. Hubig, regarding the proposed KM-24 development project. Discussions were held concerning the overall management of the project, involvement of RLG counterparts, and logical program sequences to be considered in refugee resettlement, land clearing, self-help labor management and related topics.

December, 1968

The three Public Works Division carpenters and all the carpenter trainees under the Muong Phieng training program have been working on a series of three ADO warehouses.

In general this was a slow month. Both Mr. & Mrs. Wells were away for most of the month on vacation, as was Mr. McClymonds, the USAID water utilization consultant.

Thirty-four additional families of refugees arrived and settled along Lateral Two of the Nam Tan left bank system, near the town of Na Sing. These people are Lao who come from the Muong Houn area near Luang Prabang.

A fishery specialist, Thao Sanith arrived from Vang Vieng. He is an IVS employee. He will start his survey in the Muong Phieng area. There are already 27 fish ponds in Muong Phieng and Phone Sai area.

Installation ceremonies were held in each of the tassengs for the village committee members who had been elected. The Chao Khoueng, Chao Muong, Primary School Inspector, and other officials, plus a mohlam team were present for all ceremonies. The Meo refugees at Nam Poui who were settled in November and December 1967 have

harvested their upland rice. Only about half of the families will have enough for the coming year. It had been expected that all families would be able to raise enough upland rice after the first year.

The Nai Dan and the Land Committee have been slow in allocating land at Nam Tan. The ADO clearing team is only about 17 hectares ahead of the contractor. The contractor cannot start on his work until he is sure that the owner has been identified so that someone can pay for the work. Some of the Lao refugees who have moved into the Na Sing area now want to move out again. The last element in the group of school construction activities which were started in early 1967 is about to be finished. This is the furniture for the Muong Phieng school.

January, 1969

One hundred forty two families indicated their interest in double cropping this year. The four CRA workers for the Cluster who had gone to Ban Amone for training returned. A new course in sewing, cooking and nutrition which will last eight weeks started this month.

The USIS documentary on the Village Development Committee program was completed. The actual start of training of these village development committees is scheduled during this month. Mr. Souvanh will be in charge and Mr. Alex McIntosh of IVS will assist. Mr. and Mrs. Wells were re-assigned to Vientiane for duty at headquarters. New Activity Plans were submitted for two schools, and for two dispensaries. This will keep the construction trainees occupied.

A delicate problem arose during this month. The USAID administration in Vientiane decided to give a substantial increase in wages to Lao employees. When notification of this raise was sent to Sayaboury it became apparent that the wages paid to the USAID local employees would be markedly higher than those paid by the local government and by private enterprise in the area. Mr. Ridenour interposed a strong objection to meeting this requirement. The order was rescinded when the effects of this increase in all outlying areas became apparent.

February, 1969

It was decided that American advisors for home economics and agriculture would no longer be needed in the Cluster since the Lao had demonstrated full capability to handle these activities.

The Nam Tan dam was completed this month; many more months of work are needed for the canals, and for clearing and leveling the land.

A group of USAID and Lao Officials visited the Cluster and the Nam Tan project. The USAID officials were the Director, Mr. Charles A. Mann, the Assistant Director for Rural Development, Dr. Howard Thomas, the Chief of USAID Agriculture Mr.

Walton Nixon and the Chief of USAID irrigation, Gordon Whittaker. The Lao members of the inspection group were the Acting Minister of National Economy, His Excellency Houmphansaignasith, and the Secretary of State for Social Welfare, Keo Viphakhone, the Secretary of State for Rural Affairs, Souk Upravann, the Director General of Social Welfare, Houmpheng Pratumvannh, and the Director of Refugee Resettlement, Mr. Khamanh Traymany, and the Director of Agriculture, Tiao Somsavath.

March, 1969

The Provincial Land Committee met at the Nai Dan's office and allocated land to farmers who do not have land in the area. They included 24 farmers from Na Tane of whom 19 were given land on the right bank and five on the left bank and 15 farmers from Nasom Nyai, and 17 farmers from Na Bouam. The last two groups received all their land on the left bank. Each of these farmers will now hold three hectares of land.

The continuing programs, public health, information and the livestock continued as usual. For example; in the livestock program over 4,000 animals were vaccinated. The village leadership training course is continuing on schedule; two more groups of committees were trained this month. Visitors to the Cluster this month included: His Excellency Inpeng Suryadhy, the Minister of Justice, and of the Plan and Cooperation. The British Ambassador and a party also visited. Ambassador William Sullivan paid his last farewell visit to Sayaboury and the Cluster on March 15.

On March 24 a surprise enemy attack on Nam Tan resulted in the death of one of the workers. There had been rumors that the PL were active in the area, but nothing definite could be pinned down. The attacking group retreated by way of Na Kheme where they were met by a group of Home Guard militia. A fire fight ensued and it was possible to establish some identification of persons in the attacking group. It was said that within a week or so all members had been captured.

April, 1969

A local guard group has been organized at Muong Phieng village and is on duty around the village area every night. They comprise two groups. Villagers guard some of the approaches to the village whereas a group of functionaries guards the area of the Cluster headquarters.

There is difficulty in getting the Na Kheme and Nam Hia dispensaries underway. No self-help contributions of lumber, sand and gravel have yet been made nor have sites been selected. Mr. Khammisay, the Cluster Veterinarian, is still having difficulty rounding up students for another course in livestock training.

May, 1969

Construction has not yet started on Nam Hia dispensary although some lumber has been hauled by the villagers. When the carpenters started to work it was impossible to

raise any self-help assistance. Although the Nai Ban asked them to work they refused. The Nai Ban has thrown the problem to the Nai Dan.

The RLG had an agricultural demonstration in the Muong Phieng area for agents from Hong Sa, Pak Lay, Khene Thao, Xieng Lom, Na La and Sayaboury for a period of 15 days. The training program dealt with double-cropping. There were many distinguished visitors this month including His Excellency The Prime Minister and a party, the Australian Ambassador and a party, as well as His Excellency Houmphane Saignasith and Tiao Somsavath.

D. THE ENVIRONMENTAL SANITATION PROGRAM (Including Wells)

This program was implemented by two Activity Plans: Activity Plan No. 9 "Environmental Sanitation Program", and Activity Plan No. 26, "Dug Wells".

Activity Plan No. 9 contained five elements: a. latrine construction; b. sanitary wells; c. sewage disposal; d. extension education; and e. training. There were also two Amendments to AP-9. The first provided crematoriums and drilled wells and the second provided dug wells.

Because of the overlap of events concerning wells in AP-9 and its amendments and in AP-26, background events concerning wells under both Activity Plans are discussed first.

I. Background

A. Wells:

The first mention of water problems in the Muong Phieng Cluster was on March 17, 1964, when Mr. Smucker wrote a memo to Mr. Tom Cole, Chief of Public Works. He stated that the wells in Muong Phieng were all going dry and that the Cluster team had been hauling water from the river. He requested that a drill crew be sent as soon as possible. Following submittal of this memo, Mr. Smucker and the Cluster team wrote a draft Activity Plan for "Water Resources Development".

The well drilling crew consisting of Messrs. Thong, Bounthum, Chanluang and Salad was dispatched to the Cluster. However, by June 30 it had performed no work and had created so much dissatisfaction with its behavior that Mr. Smucker was forced to write a formal memo to them instructing them to leave on June 30, 1964. This had followed a series of reprimands from Mr. Wagner, Mr. Tom Cole, and others.

By the end of August, the Water Resource Activity Plan had been rejected and was in the process of being rewritten. However, efforts to get wells were not stopped. At the end of August, well ring forms which had been built by Mr. Myron Paine, of IVS, in Sayaboury were made available to the Cluster for training purposes for digging and

lining wells. These forms used bamboo for reinforcement. By November, the Cluster received new well ring forms which used steel for reinforcement.

Activity Plan No. 9, "Environmental Sanitation", which provided for digging ten wells (as well as a number of other activities) was signed on 19 January, 1965. The adequacy of this activity plan for planning and for management control will be discussed in detail later, and will include discussion of Amendment No. 1 which was signed on the 30th of April, 1965, and which provided for the construction of five crematories and for the drilling of 12 wells in ten villages, and discussion of Amendment No. 2 which was signed on the 5th of January, 1967, and provided for the digging of 14 wells.

A total of 28 wells were dug under AP-9 and its Amendment No. 2; Ban Muong Phieng, 9; Nam Hia, 4; Na Tane and Na Sing, 3 each; Na Bouam and Houa Na, 2 each; and one each at Nakok, Kang, Nong Ngua, Nasom Noi, and Nam Pang Meo. Six wells were drilled under Amendment No. 1 to AP-9; Na Bouam, 2; and one each at Muong Phieng, Nasom Nhai, Na Tane and Na Sing. Three wells were drilled at Nam Hia and two at Nam Pang Meo under Refugee Relief Funds.

The history of drilled wells at Muong Phieng is illustrative of the difficulties of trying to transfer the obvious advantages of drilled wells to the Lao people.

By August, 1966, one successful well had been drilled at Muong Phieng Cluster headquarters. At that time priorities were established for eight of the wells provided under Amendment No. 1. Two wells were being drilled at Nam Pang Meo, but these were funded under the Refugee Relief and Resettlement program. Three wells had also been dug at Nam Hia under the same program.

In March, 1967, Mr. Ridenour instituted a series of requests for training materials to be used for the maintenance and repair of hand pumps on drilled wells. Mr. Frederick, RDD training advisor, initiated inquiries to US agencies and to the World Health Organization but was unable to secure useful training materials for well equipment up-keep.

This had been a matter of wide Mission interest. In September, 1966, Dr. Thomas had issued a memorandum establishing a drilled well "doctrine" and describing a pump maintenance kit.

The report established the following procedural steps:

1. An effective pump maintenance procedure is to be established for all completed wells.
2. All future drilled wells will be covered by an Activity Plan.
3. Villagers at new and completed wells will be expected to purchase available tools; PWD will provide pump parts and grease.

4. Villager training at new wells will be the responsibility of the assigned well drilling crew, overseen by the AC staff or PWD personnel, if available.
5. Follow-up on the effectiveness of all maintenance operations will rest with the AC, using CDA, PWD staff and well drilling crews working in the area as appropriate."

The memo stated that progress reports on steps being taken to implement this pump maintenance program would be required in the regular monthly reports submitted by Area Coordinators until further notice.

The above outline procedure contains some unrealistic elements which probably made it difficult for the personnel at Muong Phieng Cluster to comply. No data was locally available relating to effective pump maintenance procedure. There were no sources of supply closer than Vientiane for tools or replacement parts for the pumps. There is no evidence that PWD provided pump parts or grease, although the Public Works crew at the Nam Tan irrigation project has provided ad hoc assistance. The well drilling crews at Muong Phieng, two of which had to be sent home for inappropriate behavior, were not equipped mentally or technically to train villagers.

By April, 1967, concern was being expressed at USAID headquarters about the indiscriminate use of drilling for wells. It was pointed out that while a dug well cost about \$70.00 (for material only, assuming labor was self-help) drilled wells were estimated at that time to cost over \$2,000. Dr. Thomas asked the field people to be sure that they had considered all possibilities for installing a dug well before a drilled well was requested. In May, as a follow-up to the drilled wells request presented by the Cluster, Mr. Earl H. Young went to Muong Phieng and inspected the six well sites. He determined that dug wells had been dug successfully within a relatively short distance from all the sites requested for the drilled wells. He recommended that none of the proposed wells be drilled.

In June the USAID Mission adopted a new policy concerning drilled wells. The intent was to put pump installations for drilled wells on a paying basis. It was decided to continue to drill wells by USAID without cost, for a limited period, but that the maintenance of pumps and their initial installation was to be a matter of private purchase by the villagers. It was also decided at this time to shift the responsibility for well drilling from the Commission of Rural Affairs to the Ministry of Public Works. The USAID Public Works Division worked out a counterpart relationship with the Ministry of Public Works which was similar to that existing between the Bureau of Public Roads and the Ministry of Public Works in road matters.

The Chief of the USAID well drilling unit was established as the counterpart to the Director of Hydraulics in the Ministry of Public Works (Travaux Publics) for all well drilling. Well drilling projects were to be approved by the Chao Khoueng and the appropriate USAID regional or provincial representatives and also by the Travaux

Publics sub-division chief in the given area. The sub-division chiefs would be the counterparts to the American well drillers in the area. Well pumps were to be maintained by Travaux Publics. The Travaux Publics sub-division in Sayaboury, however, has never performed any duties with regard to drilled wells in the Cluster. Recently, when the Nai Ban of Na Bouam officially requested Travaux Publics' assistance for their well, he received no answer.

Mr. Tom Xerri submitted a completion report for Activity Plan No. 9 and its two Amendments in March, 1969. He made a survey of all villages and located 28 wells dug under this program and 11 drilled wells. Twenty-one of the dug wells were supplying water. Hand pumps were a failure. Five hand pumps were placed on dug wells to assist in drawing water. These included four wells in Nam Hia and one at the previous residence of the Nai Dan in Muong Phieng. Three of these were inoperative as of the time of writing of this report. The operative pumps were at the Protestant Church in Nam Hia and at the Nai Dan's ex-residence. Of the ten drilled wells with hand pumps, only four were operative at the time of this writing.

A major shortcoming, according to Mr. Xerri, was the fact that no training was ever carried out with regard to the self-help digging of wells. Although villagers contributed self-help they probably gained little understanding of how to go about planning and digging a well themselves.

Work was started in early 1965 on the activity plan which ultimately became Activity Plan No. 26. The adequacy of this Activity Plan for planning and management control are discussed at the end of this section. There was a high planning input by the Fundamental Educators and by Mr. Virath, the IVS Lao assistant, in the preparation of the Activity Plan. One of the all-too-frequent Lao events occurred at this time however. The Fundamental Educators, who had been so deeply involved in the planning of this program and who were highly qualified to carry it out, were all transferred to Sayaboury.

The new plan calls for contracts of obligation to be completed between the Cluster and the villagers who were to dig the wells. The contract committed the villager to provide man-days of labor plus sand, gravel, wood, shingle lumber, and bamboo as required.

By October 1968, it became apparent in trying to get acquiescence to the plans for new wells that there had been a conflict between the felt needs for wells, as expressed by the villagers and the needs for wells as felt by the US technicians. It was almost impossible to get the villagers to accept the idea of constructing fences around the wells or roofs over the wells. A number of planned wells had to be abandoned because villagers refused to furnish self-help of any kind.

In January, 1969, Mr. Tom Xerri, the IVS wells expert, wrote a document that contains much practical information about the process of picking a site for a well, digging the hole, making the rings, lowering the rings, making the platform, constructing the

roof, and the final details of pumping the well out prior to putting it into operation. This document should be in the files of every field location that is liable to meet the problem of digging wells.

By the end of June, 1969, progress on Activity Plan No. 26 had practically stopped. The IVS Rural Development Assistant, Mr. Virath, went to Vientiane to take driver training and later took a job at the Nam Tan irrigation site. Of the ten well sites at which some activity had taken place, only two are now supplying or could supply water. The probabilities of the ten wells being completed by the coming dry season are not too high. Unless additional funds are found to keep the three village well technicians employed there may be no further work on these wells.

One of the technicians, Thao Kamdy, would like to become a professional well digger. He has indicated that he will not make highland rice next year in order to spend more time on the well project. Whether or not he would continue work on his own if the project were not in existence has not yet been determined.

Mr. Tom Xerri wrote an end of tour report which summarized progress on Activity Plan No. 26. He suggested that lessons might be learned from his experience on this project.

Although relatively strong interest had been shown in having wells dug in many of the villages, the participation of the villagers in AP-26, when work was required, did not bear out the degree of previously expressed enthusiasm. One reason may have been the concentration, at least in the early stages of the project, on school wells. Mr. Xerri thought that any wells dug at schools would require a very strong commitment on the part of the local people or that they should be done on force account.

Although training was one of the primary objectives of the program, once the program had started there were inadequately trained personnel available to train the trainees. Most of the work was done by one IVS assistant, who had not yet gained enough assurance to be a good teacher nor did he have a very strong technical basis upon which to base his teaching. It was unfortunate that the thought and care that went into the planning of this activity seemed to vanish when operations were met.

There is doubt as to whether or not the lack of interest on the part of the villagers was the motivating cause for the poor performance on these wells or whether it was due to the lack of strong leadership on the part of the supervisory staff. Since the stated intent of this project was to transfer to village personnel a feeling of responsibility for planning and performing the digging of wells, it seems apparent that the instruction time and the degree of indoctrination were inadequate for this purpose.

Three weeks of on-the-job-training was given to 12 trainees working on two wells. At the end of this time the three best trainees were put on the payroll to carry on the work of the activity plan. The others were dismissed.

Another factor which may have affected the operations was the fact that a new construction method was introduced. This was the continuous-pour method which was not well understood by any personnel in the Cluster, including the IVS volunteer and IVS assistant. It was felt that opposition to this method diminished as it became apparent that it was a feasible method. However, not enough work was done on these wells so that the villagers could be assured that this was a practical method.

Buckets and shovels had not been provided under the Activity Plan. When planning for the wells in Muong Phieng was underway and the Nai Ban was told there were no buckets or shovels available, he insisted that "development shovels and buckets" would have to be furnished by the Cluster. At this point it was agreed that no wells would be constructed under this program in Muong Phieng village.

As a final comment Mr. Xerri suggests that possibly all USAID subsidization of dug wells be ceased for a time long enough for the memory of these free gifts to be somewhat obliterated. At that time it may be possible for an entrepreneur or other organization of well diggers to make some headway in the villages.

B. Latrine Construction:

The Fundamental Educators had been, from the start of the Cluster, exploring the possibilities for entering into a water-seal toilet program. In May 1965, with the arrival of Mr. Sritavach Chatiketu, UN Environmental Sanitation expert, the program got off to a professional start. He was in the Cluster for six days and during which time he evaluated local conditions and demonstrated the construction of water-seal toilets. He also gave guidance and helpful information for the development of the Activity Plan which covered environmental sanitation.

Mr. Chatiketu made a number of comments and suggestions. He found that the only latrines in the village were those used by the Buddhist monks. He found plenty of culex mosquitos. He felt that the breeding place of both the anopheles and culex mosquitos was near Ban Nam Hia at a dam on the Nam Hia. (This was the dam which had been constructed to form a pool for fish-raising; it is no longer used for this purpose.)

He commented that the head man and the village chief of Muong Phieng (presumably the Nai Ban and the Tasseng) did not cooperate with the villagers, the OB staff, or the IVS staff. He said the people liked to drink water from the wells without its having been boiled because they were used to it and liked the taste.

He recommended that, for the present, efforts to improve sanitation be applied toward:

1. Improving village water supply.
2. Installation of sanitary latrines.
3. Removing stagnant water under the houses.
4. Refuse disposal.
5. Mosquito control.

6. Improvement of cleanliness of students, persons, houses and neighborhoods.
7. Organization of a health committee.

With regard to wells, he thought the efforts should be first devoted to improving the existing wells rather than trying to install new ones. He felt that new wells should be installed when there are no wells in the center of the village.

He felt the provision of latrines in the village would be very difficult although it is an important sanitary need. He suggested that attempts be made to try three different types of pit latrines in the villages. The most sanitary and the type preferred is the water-seal pit latrine. Another type which he suggested is the ordinary non-water-seal latrine, then being used by the Cluster staff. The third type that he suggested was one which could be used from the existing elevated floors of the village houses. This would be another pit latrine, but would have a pipe or tube of rolled matting reaching from the ground surface to the elevated floor. This latrine could be water-seal or not. He felt that it would be a very big step to go from the use of no latrines to the use of a latrine for which they must carry water.

With regard to mosquito control, he suggested that the staff control all mosquito breeding within one hundred meters of the dispensary and of their own dormitory. This should be done preferably without the use of insecticides. If this were done, there should be no mosquitos in the dormitory or the dispensary.

He emphasized the need to learn about the existing health habits of the villagers before trying to indoctrinate them in any new methods. He felt that a meeting with the village chiefs and the villagers should be held to discuss the sanitation problems. If they responded by trying to make the village cleaner, he felt it would be worthwhile showing sanitation films. After the films were shown there should be a follow-up talk which would reiterate the purpose of the picture. The villagers would be questioned to ascertain that they understood the picture and to clarify misconception.

A number of detailed suggestions with regard to introducing latrines were made. These were highly specific but running through all the suggestions was the reiterated need to pace the introduction of these latrines slowly enough so that the villagers would have time to absorb the idea.

Mr. Chatiketu introduced a concept which has not been followed up. He listed the names of all villagers in Muong Phieng village who said they wanted to have water-seal latrines. There were 22 and he listed them by name and by the number of their house. This kind of detail introduces an element of intimacy and close association with the actual life of the villager which might have been exploited further.

The first water-seal toilet in the Cluster was constructed at the Cluster Center during the month of June, 1964. In the following months a "latrine training" program was submitted in the form of an Activity Plan. Substantive progress was made both on the

toilet program and on the well program in August when one Fundamental Educator was sent to Vientiane to undergo training under Mr. Chatiketou. In September, two Fundamental Educators from the southern half of the Cluster also went to Vientiane for the six-day training course given by the UN.

Two demonstrations of water-seal toilets were held in two wats in Muong Phieng. A total of about 80 people attended the two demonstrations. A number of people in Muong Phieng indicated an interest and willingness to construct the toilets. During November, 37 water-seal toilets were completed by the Fundamental Educators. At the end of November, Mr. Bustamante reported that 52 water-seal toilet slabs had been made, ten of them had been installed and were in use. Others were held awaiting the farmers' readiness to install them.

Mr. Suphan, the Fundamental Educator, and the Public Health Nurse planned to educate the people in the why's and wherefore's of this project. They intended to associate the results of the Public Health Nurses deworming program with the toilet program and to show how toilets can improve the general health. It should be noted that when Mr. Chatiketou first introduced the possibility of doing a water-seal toilet program he insisted on an education program that was more intensive than the one outlined above.

By June, 1965, 139 of the water-seal toilets had been constructed. Seventy-eight were in Muong Phieng, nine in Na Tane, and forty in Na Kheme, twelve were not located at a given village but were awaiting distribution. It is not known how many complete installations of these were ever built.

The available correspondence about the water-seal toilet program indicates that greater emphasis was placed on the number of toilets to be constructed in FY 1965, than on the acceptance of the concept by the villagers.

By April, 1966, it was apparent that many of the toilets were not being used. Recently, however, with forest cleared for the irrigation projects, interest in toilet facilities of some kind has been awakened.

C. Other:

The remaining elements under AP-9 were sewage disposal, extension education, and training. Little progress was made in these elements.

The initial programs of the Home Economics agents related to home cleanliness, sewage and waste disposal and general home improvement. These efforts were confined to Muong Phieng and Phone Sai villages.

E. THE AGRONOMY PROGRAM

Agricultural activities as a whole comprised the largest single input of assistance to the Cluster. For convenience of reporting, they are broken down into the following sub-categories:

1. Agronomy, including the growing of crops, is the subject of this chronology.
2. Animal husbandry, including swine, ducks and fish. See main report for details.
3. Irrigation; which includes the construction of irrigation facilities and the organization of the users. These activities are discussed in detail in the main report, and will not be discussed here.

Each of the above subdivisions has had a number of Activity plans in operation. Since Cluster personnel have worked in more than one of each of the above fields (with the exception of ADO) there will be necessarily overlap in this discussion of the background agronomy program.

Four Activity Plans were implemented. They were:

- Activity Plan No. 3 - Vegetable Production (wet season).
- Activity Plan No. 7 - Experimental Crop Rotation.
- Activity Plan No. 12 - Agricultural Improvement Program.
- Activity Plan No. 20 - Training Program in Rice, Vegetable and Fish Production and Irrigation Techniques.

This section describes the essential chronology of events common to all of the agronomy Activity Plans and as well as to the other agricultural activities which were not covered by activity plans.

The first two draft Activity Plans for the agricultural activities were: (1) the vegetable production program, which ultimately became Activity Plan No. 3 and the livestock program for swine, which was later renumbered as Activity Plan No. 2. The draft plans were submitted at the end of April, 1964. A point of contention existed about the last proposal. Mr. Smucker wanted to up-grade the local pigs by crossing them with improved breeds. On the other hand, USAID Agriculture wanted to bring in new breeds of pigs. USAID Agriculture won the argument. The plan, when it was completed, called for the introduction of pure breed Yorkshire sows and boars.

The Plan for vegetable production was being considered during May and, although the plan was not yet approved, was so generally acceptable that an order for seed placed by Mr. Smucker during the later part of May was acted upon before the Activity Plan was approved. Seeds for hog feed were to serve 125 families for one year, since it was contemplated that 120 pure-bred pigs would be brought into the Cluster.

A major agricultural activity, but not covered by an activity plan, was the rice seed multiplication project. This was being implemented by the RLG Agricultural Extension

agents and the RLG Crops and Soils Division before the Cluster era. In the middle of 1964, Mr. Casimiro V. Guieb, an Operations Brotherhood agriculturalist, was assigned to the Muong Phieng Cluster to assist in this rice multiplication project. His duties were to assist farmer cooperators who agree to grow the rice seed to improve the means for propagation. This involved instruction in the production of rice seedlings, selecting the proper date for seeding, and teaching proper application of fertilizers and insecticides.

At this time it was the current practice in this part of Laos to transfer the two-week-old seedlings to another seed bed where they were allowed to recover and produce a bigger stem for 20 days. After this period the seedlings are again pulled up for their final planting. Mr. Guieb showed them that his methods of using fertilizer and insecticides and other improvements in planting eliminated the need for a second movement of the seedlings.

Mr. Guieb also worked on the Cluster garden which had an area of 1,500 sq. meters. This area was divided into portions for orchard, for planting vegetables, and for crops such as sorghum, peanuts and corn.

A survey of existing fruit trees was also started at this time. This survey also attempted to find out what other problems the farmers had. This survey was limited to the immediate area of Muong Phieng village because of the inability to move into the other areas because of poor road conditions.

In July 1964, Mr. Bustamante had a talk with Mr. Norman Sweet, the Program officer of USAID. They discussed the possibilities of underwriting the expenses of a farmer in establishing his own "model farm" and assuring him against loss. This sort of farm or farms would replace the demonstration farms planned in strategic villages. Mr. Bustamante picked up the ball and prepared a detailed analysis of the problem and a plan for implementing this system.

Dr. Thomas, when apprised of the plan, agreed that the program was workable and practicable, but stated that the personnel who were absolutely essential to perform the required supervision etc., were not available. Mr. Leroy Wehrle, Deputy Director, after the rejection of the proposal, saw fit to comment to Mr. Bustamante that he felt that experimentation in using different approaches in the various Clusters to find out which one works best was a valuable approach. He hoped that Mr. Bustamante would not be discouraged but would continue to contribute productive ideas.

In August, experimentation in the masagana system of rice culture was introduced. This system, which essentially is that of planting rice in rows according to specific spacing, was tried a number of times in the Cluster afterwards. Although this specific system was not adopted, it is felt that the generally wider spacing which began appearing in the Lao fields in the following years could be attributed to these demonstrations.

Experimentation in the use of eupatorium odoratum as green fertilizer was also started about this time. Five farmers agreed to carry on the experimentation. Later

it was decided that this was not a successful means for supplying fertilizer. The amount of eupatorium that had to be supplied to a given hectare was excessive to the abilities of the local farmers to grow it.

In September, vegetable seeds were distributed to Nam Hia, Nasom Noi, and Na Tane. Indoctrination meetings were also held at Nasom Nyai, Nam Hia, and Na Tane. Vegetable needs were discussed and an attempt was made to find out which farmers would be interested in livestock raising. A large number of farmers from each village attended the meetings and appeared quite interested. However, more interest was expressed in livestock raising than in vegetable growing, because it was felt that there was no market for the produced vegetables.

Calvin L. Martin and Dale E. Thorngren, both extension advisors from the Agriculture branch, along with Mr. Eliseo Tavanlar of UN Resettlement, Mr. Ounkham of the Ministry of Social Welfare, and Mr. Niraphay of the Extension Service of the Direction of Agriculture visited Muong Phieng in September. A plan for establishing nurseries for fruit trees was discussed. This is the plan included under Activity Plan No. 3. The Plan basically involved having selected farmers in all or some of the villages of Muong Phieng, Na Kheme, Nam Hia and Na Tane establish nurseries. These nurseries when in operation would provide grafting material and seedlings to other farmers in the area. Difficulty was encountered in locating the proper farmer cooperators and nothing ever came of this portion of Activity Plan No. 3.

Mr. Guieb was spending a good deal of time on the two agricultural areas maintained by the Cluster. The first is the Cluster home garden. Much effort was being devoted to make this an example for all the villagers. The garden was kept clean and free of weeds and the planting layout was designed with care. Mr. Guieb felt that those who came to see the garden very often planted things in their own garden the way they had seen them in the Cluster home garden.

The second area, the demonstration farm, was not only a place for demonstrating the culture of vegetables and crops but was planned to be a place for propagating planting materials. In this area were planted corn, sorghum, mung beans, soybeans, naphier grass, sweet potatoes, some fruit trees. Seedlings were being grown for cauliflower, chinese cabbage, lettuce, pepper and onions.

In October 1964, the Cluster was visited by Mr. Steven S. White, horticulture advisor, and by Phouang Phanh from RLG Agriculture. They came to observe the progress of the rice seed multiplication program. They were well pleased with what they saw with regard to the rice seed multiplication. They also inspected the other aspects of the Cluster's agriculture program. Their comment with regard to the multiplication center referred to the fruit trees. They found the following kinds of fruits: mandarin, pomelo, mango, jujube, mangostein, banana, makong and pineapple. They recommended that instead of having all of these varieties that first efforts be limited to bananas, pineapple and papaya.

In November occurred the conflict between Mr. Bustamante and Mr. Tucker, Chief of the Agricultural Division, over the home economics activities in the Cluster. This conflict resulted in an early departure of Mr. & Mrs. Yetley and was probably instrumental in the fact that an IVS couple was not returned to the Muong Phieng Cluster for over a year. This problem is discussed in detail in the general chronological history of the Cluster.

The Activity Plan for crop rotation was concentrated primarily in the growth of garlic. It had been planned that 2,000 pounds would be distributed for the first attempt to raise garlic in the area. Some 1,000 pounds had been received in the last fall of 1964, but only half of this was viable. Actually about 350 pounds were ultimately planted and, because of the late receipt of the garlic and of the poor methods of water control, this first seasons crop of garlic was a failure.

In May 1965 Mr. Calvin Martin, of the Agriculture Branch, extension advisor, Mr. Boun Nong Sipa, extension chief under RLG Agriculture, Mr. Boun Souei, home agent in RLG Agriculture, and Mrs. Dorathy Heieie, home economics advisor in the Agriculture Branch, visited the Cluster.

One of their main interests was the rice improvement project. This project was not being carried on as a part of the Cluster Activities. This rice project involved four villages, in which 47 farmers received 1,400 kilos of rice seed in order to grow more rice seed in what is called "the zone of multiplication" phase. The "zone of diffusion" phase would involve 122 farmer cooperators who would receive 3,680 kilos of rice seed to be used for rice growing for consumption.

They examined the garlic bulbs that were harvested at the multiplication center and found they had dried up completely and were of little value. It was felt that more experimentation and careful selection of seed stocks before they are distributed to the farmers for general production is required.

The Cluster multiplication center was also viewed. It was felt that the farm area was well kept, but the growing conditions and the devices used were beyond the financial capabilities and imagination of many of the farmers. The Center was operated by casual labor and directed by the OB agriculturalist; it proved to be very expensive. If this were ultimately to be run by one RLG agricultural extensionist it was felt that the results would be not worth the cost, since it would require the full time of one man. This man could be serving three to six villages in general extension duties.

The inter-relationships of the functions of the home economics agent, Fundamental Educators, and public health personnel was discussed. It was felt that the Fundamental Educators should take complete responsibility for the well and latrine program. It was suggested that the OB Public Health Advisor assist in training the home agents in non-medical phases of child care and feeding. Fields in which the home agents

should be working were home and yard sanitation, foods and nutrition, sewing, child care, and feeding and home gardens.

A memo was issued on technical recommendations of USAID agriculture regarding utilization of Cluster demonstration sites. It established that the Cluster site should be set at 1,000 sq. meters of land. The memorandum also offered detailed instruction as to the use of the land. The memo combined the considered opinions of the Agriculture Division, Chief of Party IVS, and the Assistant Director for Rural Development.

This memorandum forced reconsideration of the Cluster's Agriculture Center. They had two sites, a 3,000 sq. meters demonstration center and a 1,500 sq. meters home garden. A short time later the demonstration center was abandoned.

In August 1965, the Cluster submitted proposals for a series of training courses. They were in literacy training, swine production, rice production, composting, water-seal privies, first aid, castrating and caponizing farm animals, and propagating fruit plants. These were considered to be preliminary proposals and were circulated to all other ACs and CDA's for their information and for their possible adaptation in use in Cluster planning. None of these plans were actually put into effect in the Muong Phieng Cluster. However, the work done in connection with livestock training and agricultural production training probably played some role in the later development of Activity Plans for more comprehensive approaches to these training activities.

In the early part of 1966 there was little done in agronomic or horticultural activities in the Cluster. Mr. Guieb had departed and Mr. Fidel Tamayo was on board as the Operations Brotherhood livestock specialist. By April 1966 there was only one RLG agricultural extensionist here. He had continuing duties to visit all villages and also to distribute seed. The Cluster suggested that a formal relationship be established between him and Mr. Tamayo in which Mr. Tamayo would give him consultation and advice.

The role of Mr. Tamayo in RLG Agricultural matters was then formalized and Mr. Tamayo was given authority to serve as an advisor to the veterinary agents. He was also to serve as supervisor of the forage and feed crop trials, which were to be held in Muong Phieng. (These trials were not held). Mr. Tamayo's relationship with the agricultural extension agent were strictly informal.

By August 1966, the emphasis on agricultural activities had moved strongly to the irrigation area. However, at about this time Mr. Walter Scott, the USAID Agriculture Advisor in Luang Prabang, had been visiting the Cluster and had established a more close relationship with the Provincial Chief of Agriculture. This improved relations between the Cluster and RLG Agriculture. Also at about this time the Activity Plan for villager training in livestock care and management was submitted.

Mr. Tamayo departed Muong Phieng in September of 1966, with the hope that he might return as a USAID employee.

In March 1967, the Muong Phieng Cluster was the location for the in-service training program for RLG Agriculture Extension Agents from Luang Prabang, and Sayaboury. The course content included second cropping demonstrations, paddy rice culture, fertilizer and insecticide application techniques.

The Muong Phieng garlic program was the subject of a special study by Mr. Wilbert Rogers, Agriculture Program Assistant, in March 1967. His findings were:

1. The planting date was too late. In both previous years which were unsuccessful, the crops were planted in January. They should have been planted in early November.
2. The irrigation system was improperly managed. Those farmers near the canal received too much water, and those a slight distance away received only small amounts.
3. The garlic should have been grown in furrows, but was actually planted in paddy in rice fashion. This was due to the fact that demonstrations were conducted on rented land owned by non-participating farmers who would not permit their paddy to be plowed into furrows.
4. Logistical support to the participating farmers was lacking. Information as to proper cultural practices to follow was either incorrect, untimely, or indifferent. Although the participating farmers sought help from the local RLG Extension Agents, and the USAID Irrigation Farm Advisor, only token help was forthcoming.
5. Marauding buffalos had destroyed large portions of several demonstration sites.
6. The initial planning and implementation of the program were not well performed.

Agriculture extension activities picked up in early 1967 with the arrival of Mr. Richard Augspurger, IVS. In early May he arranged a series of three field trips for farmers from the Muong Phieng area to visit rice and vegetable demonstrations, garlic experiments and fish ponds. They would also be given an explanation of the new book "Agriculture in Laos" and would be given copies of the book. And they would be shown the new Hia Nakok irrigation system.

Mr. Augspurger also tried to arrange to have a group of nine of the rice, garlic and fish cooperators from Muong Phieng go to Vientiane. There they would learn more about second-cropping, vegetables and fish paddy culture. Arrangements for this in Vientiane were made by Mr. Roger Leinbach, Extension Advisor.

Progress on the Hia Na Kok irrigation system had reached the point where some 22 Meo farmers were offering to plant paddy rice for the first time in this wet season. It was felt that a successful Lao paddy farmer should be employed to serve as a trainer and advisor to the 22 Meo.

The results on the rice yields of the dry season of 1967 were considered to be very good, despite a heavy rice bug nymph infestation. It was said every variety yielded

at least 150% of the average rice yield in Laos, which is roughly 1-ton per hectare. IR-8 yielded 4.8 tons per hectare in the demonstration plot, and 3.3 tons per hectare in the farmers field. In an area of virgin land, Khaosung 52 yielded 4.4 tons per hectare. Two areas of Khaosung—52 suffered total loss because of the rice bug nymph; they were cut for forage.

In August 1967, Mr. Wilson G. Lane, Jr., Agriculture Extension Advisor of Sayaboury, warned that with the increasing production of rice in the Sayaboury—Muong Phieng area, the storage facilities would be inadequate. He recommend building a warehouse in Muong Phieng capable of storing 100 tons.

A meeting was held in November between Mr. Nyai Phoummiphab and Mr. Jon Wells, IVS—Muong Phieng, to discuss the new policies that would be adopted in the operation of the Muong Phieng Cluster training garden.

Early in 1968, arrangements were made to loan money to farmers in Sayaboury Province to buy buffaloes. It was suggested by the Chao Khoueng and accepted that priority would be given to farmers who would agree to grow two hectares of dry season rice for three years. Ten of the loans were allocated to the Muong Phieng Cluster area.

A demonstration vegetable garden had been established in Muong Phieng. The plot area was about 20 × 40 meters and was located in the low line canal in the Muong Phieng irrigation area.

Dry season rice planting for 1968 in Muong Phieng and Nam Hia was about 80 hectares.

Plans were underway to start the session of the training under Activity Plan No. 20. However, the trainers, who were the RLG Agriculture Agents, were objecting to the fact they would get no per diem. They said that in their last course they received 500 kip per day. Since two of the instructors lived in Sayaboury, they are not very enthusiastic about coming down without some sort of support. The cooperation of the RLG in this program was much less than enthusiastic, partly because there was a rumor that the RLG had a similar program that it would start implementing.

In April 1968, Mr. Well reported that there is detectable tension between the Ban Kang Lao and the Nam Hia Meo over land and water rights in the Hia Na Kok are.

Upland farmers have discovered that if they mix DDT with their rice seed at planting less damage from soil insects results. Because of this, ADO sales of DDT were higher than usual in May 1968.

The probable availability of a surplus of rice in the Muong Phieng area introduced a new and unfamiliar concept to the farmers. The government wanted to contract for about 850 tons of consumption rice from the entire province. Many of the farmers

are afraid to contract not knowing how good their harvest would be. Their first concern is for home consumption and they fear that if they are bound by a contract they may not have enough to eat nor would they have money to buy consumption rice, especially if it became scarce. Cluster personnel were considering offering contracts for surplus production only. This would leave the total availability to be known only at the year's end. It is possible that the situation will be alleviated when a dependable supply of water has been demonstrated.

In May of 1968, Mr. John Wells and Mr. Nyai, the zone chief for Muong Phieng, met with Mr. Kamtouné, Chief of the Provincial Agriculture. There were some serious questions as to the role of Travaux Public in the maintenance of the Hia Na Kok system. These largely concerned places where the road net intersected the irrigation system. A number of specific points of crossing were mentioned as well as the upkeep of the access road to the dam which lies on the road on which Travaux Public has their base camp. Results were inconclusive at best.

In June, Mr. John Well's duties were realigned. Although he would continue to work on agriculture extension and livestock, the main focus of his work would be on irrigation and especially the organization of the Hia Na Kok system.

Some of the dry season rice crop yields were said to be between 4 and 6 tons per hectare. Earlier estimates had been based on a 3 ton average. Some problems are being met with regard to the drying of the rice. Part of the problems has been the heavy rainfall during June. It totalled over 12 inches as opposed to almost 4 inches last year during this month.

Interest seems to be growing in arranging some kind of organization in the Hia Na Kok system. The possibilities are irrigation associations, or associations built around some sort of marketing groups for rice crops using farmer-owned warehouses, threshers and mills.

Graduation ceremonies were held in June for the veterinary course and the agriculture course. The latter is under AP-20. The ceremony is considered essential by the Lao in an occasion of this kind. However, these ceremonies so far have been underwritten, to a great extent, by the Americans who have assisted at the Cluster. Costs are said to run around 12-16 dollars per ceremony per American. A fund to cover these expenditures has not appeared in any of the Activity Plans to date.

The dry season crop purchased in Muong Phieng totaled 60 tons of milled rice. At a 50% recovery rate this would indicate a yield of about 2 tons per hectare. However, it is believed that the farmers did not sell their complete crops to the ADO.

RLG Agriculture Extension is starting in September a series of courses to be given in Sayaboury. The courses will be for ten farmers each. One will be given in the Muong Phieng—Hia Na Kok area. It is believed that the course content is similar to

that outlined for Activity Plan No. 20. This course is given under the national program which has been devised by the Vientiane Office of RLG Agriculture.

As of the beginning of the 1968-69 wet season, the farmers in Nam Hia have decided not to use fertilizer this season. They say the fertilizer doesn't help the rice grow.

After a certain amount of experimentation including conversations and consultation with farmers, Mr. Wells has devised a metal plough to be used in the area. The break through was the use of a piece of 2½ inch pipe to make the beam of the plough. The rest of the plow is made in the conventional manner. If this version works, it should be useful because all the parts will be available locally.

As of the early part of 1969, there were 18 RLG Agriculture people in the Muong Phieng Cluster Area. Four were agriculture extension agents, three were crops and soils people, four were working in irrigation, four were home economics agents, 2 were livestock agents, and four were ADO personnel.

Agronomic activities in 1969, as in fact for the previous year or more, were concerned primarily with rice. At the beginning of the 1969 dry season, approximately 142 farmers have indicated their interest in double-cropping. Almost all of the agronomic activities, therefore, have been under the aegis of the Agriculture Development Organization.

John Wells and his wife had left Muong Phieng in mid-1969 and Mr. McClymonds was the only American agriculturalist in the Cluster.

There seems no doubt that overall vegetable production has increased in the Cluster. For example, the village of Nasom Nyai received lettuce, cabbage, melon and onions in 1964. They had not had these seeds earlier. They went back after the first year or two and asked for more seeds, but could not get them. However, they undoubtedly have continued to propagate these from their own seeds.

The village of Na Kheme says they received seeds three years ago and although they haven't received any new ones since then, they are still growing the plants that were introduced at that time. At Na Tane, although 14 or 15 persons were trained at the development center in vegetable growing, when they came back they found they did not have enough water to grow the vegetables adequately. However, now with the arrival of the irrigation water they think they will have better luck. They are anxious to sell to the workmen at the Nam Tan project.

The village of Pone Sai considered that the greater amount of gardening was one of the significant changes introduced by the Cluster. The Meo at Nam Hia sent some of their village elders to learn how to plant and take care of the vegetables. They came back and advised the villagers how to grow the seeds that were given to them by the Cluster. The Meo however, found that they had already been familiar with most of these seeds. There were cabbage, lettuce, garlic and onions. The Village of Ban Kang has not taken up gardening although they were shown how to plant melons, beans and cabbage.

ANNEX II

EVALUATION STUDY

OF THE

MUONG PHIENG CLUSTER AREA

SURVEY OF VILLAGES

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ANNEX

INTRODUCTION

This annex comprises studies of each of the villages in the Cluster. It is hoped that they will be helpful for both administration of the Cluster and for research in village development.

The studies should give RLG and US administrators and technicians at the Cluster area the kind of comprehensive view of each village which they have not as yet been able to achieve. Although quotes have not been used, the text is intended to reproduce the opinions of the village respondents.

If this information is found useful, the format here presented may be applied to villages in other development areas, and should be modified and improved as experience dictates.

The studies may also furnish comparative material for students of village development. While the depth of analysis of village life is not profound and the accuracy of some of the demographic and economic statistics is questionable, experienced researchers should be able to achieve and apply useful insights into the relationships between the aid-induced inputs and the reactions of the local society. The studies can also be used as base-line data for future surveys.

Most of the data on agricultural production and village resources was derived through unstructured interviews of the field team (Messrs. Polachart and Pradith) with village Nai-Bans and, usually, village development committees. Data on rice production and the buffalo population for four villages (as noted in the studies) were collected this year for the first time by Commission of Rural Affairs (CRA) agents. As a first attempt, the CRA figures on rice production may be highly generalized, since totals tend to be rounded off in hundreds or fifties of kalong (each kalong holds ten kilos of paddy rice).

Demographic information for 1963 and 1968 was collected by the village Nai-Bans (in the case of 1968 data, sometimes assisted by the Commission for Rural Affairs agent) as part of their normal duties. The basic rolls list the name of each person, grouped by families, and his or her age. In the case of the Lao inhabitant, the sex was indicated, but not so for the Meo. Age and sex groups were computed, where possible, in five-year increments except for the first ten years.

In the latter case, one-year-interval groups were identified because of the possibility of relating aid inputs (such as health services and increased food production) with changes in the relative sizes of these groups. Only the most general conclusions were drawn from this data at this time. More detailed studies should be made in the future, based on this data.

Names of village leaders, teachers, store owners, and mill operators are cited, both for use by present administrators and for comparison in future studies.

Village maps were traced directly from 1969 aerial photographs at scale of approximately 1:10,000. These photos were compared with 1959 air photos in order to determine which houses had been added since that time. It is assumed that few houses were built between 1959 and the start of the Cluster. Although house sizes may be somewhat exaggerated, the distances from center of house to center are precise, as is the village layout.

The entire study had to be performed and the report and annexes written in a period of five months. It is hoped that the inevitable errors and sometimes crude literary style will not greatly inconvenience the reader. Original documents and field notes are available for consultation, should questions arise.

MUONG PHIENG

1. Location:

The village of Muong Phieng, along with its sister city, Phone Sai, and also including the satellite Nong Ngua, is located about two and one-half kilometers south of the northern most extension of the northern plain on the valley of the Nam Phieng River. The towns are all located on the left bank of the Nam Phieng. This is the northernmost inhabited area in the Muong Phieng Cluster. The center of the village is located at military grid 663 143. The center of the satellite village of Nong Ngua is located at 668 138.

Figure 1. is a combined map of Muong Phieng and Phone Sai. Figure 1a. is a map of Nong Ngua.

2. Administration:

The village of Muong Phieng is the administrative center of the Dan of Muong Phieng, the Tasseng Muong Phieng and the village Muong Phieng. However, the Tasseng and the assistant Tasseng both live in the village of Phone Sai. The Nai Ban of Muong Phieng is Nai Boonkong Thong Bai, and his assistant is Xieng Inpang. The name of the Tasseng is Nai Kheme Phan. His assistant is Xieng Boun Thai. There are fifteen members of the Village Committee. They are; Nai Cho, Xieng Inphan, Xieng Son Ock, Thit Chan Pheng, Xieng Sa, Nai Nad, Xieng Sivay, Nai Boun Tanh, Nai Ny, Chan Khan Pheng, Thit Phai, Xieng Lah, Nai Oun, Nai Pong, and Nai Oud.

Muong Phieng Village also contains the center for the Cluster administration. Reference is made to the village map. No. 6 is the clinic. This clinic is located in the building which houses the Cluster Administration. Adjacent to this building to the east is the training center and just southeast of this building is one of the IVS houses. Across the road to the northeast is the second IVS house. The Nai Dan's office, along

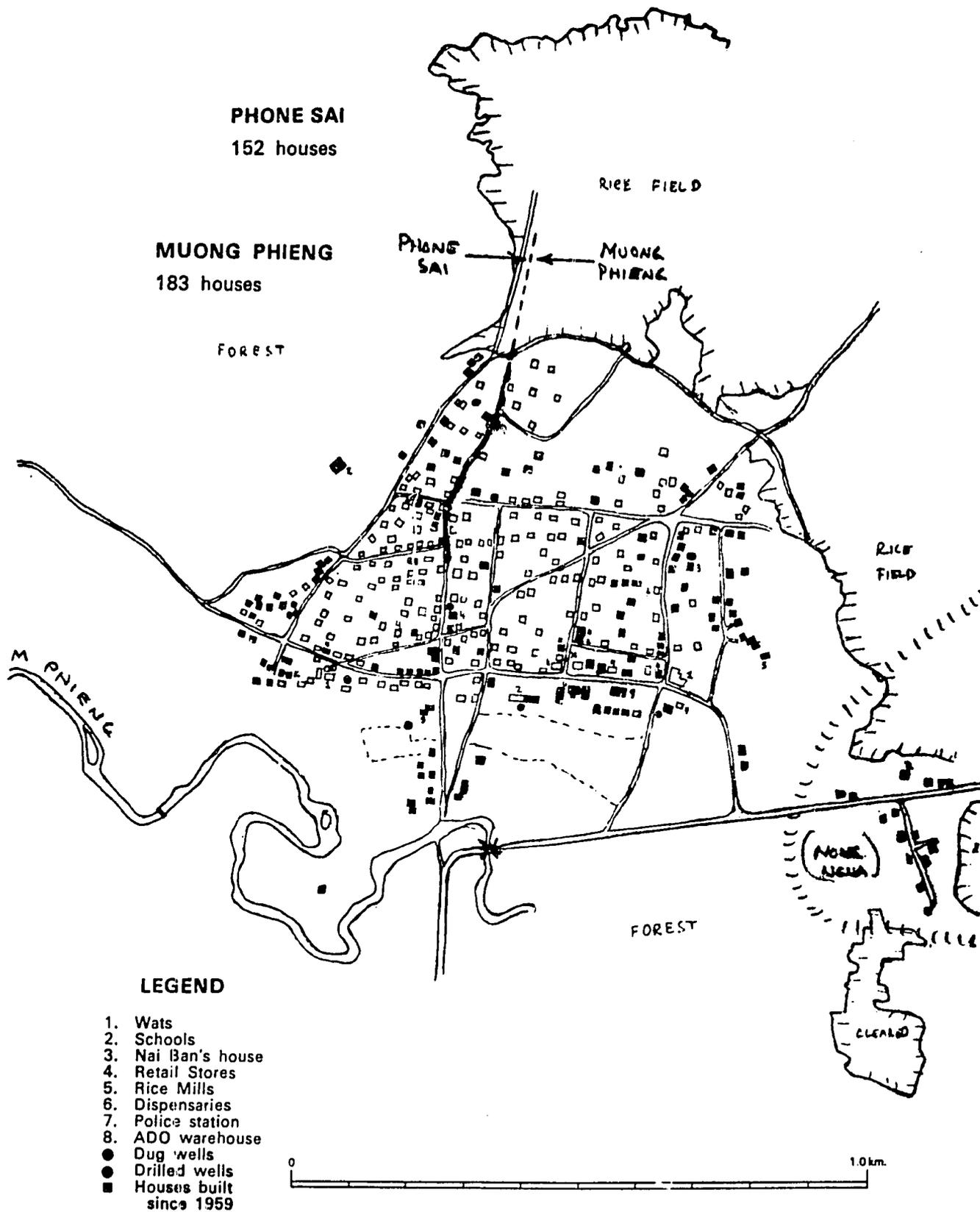


Figure 1 Muong Phieng & Phone Sai

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NONG NGUA

(satellite of Muong Phiang)
 43 houses, all new since 1959

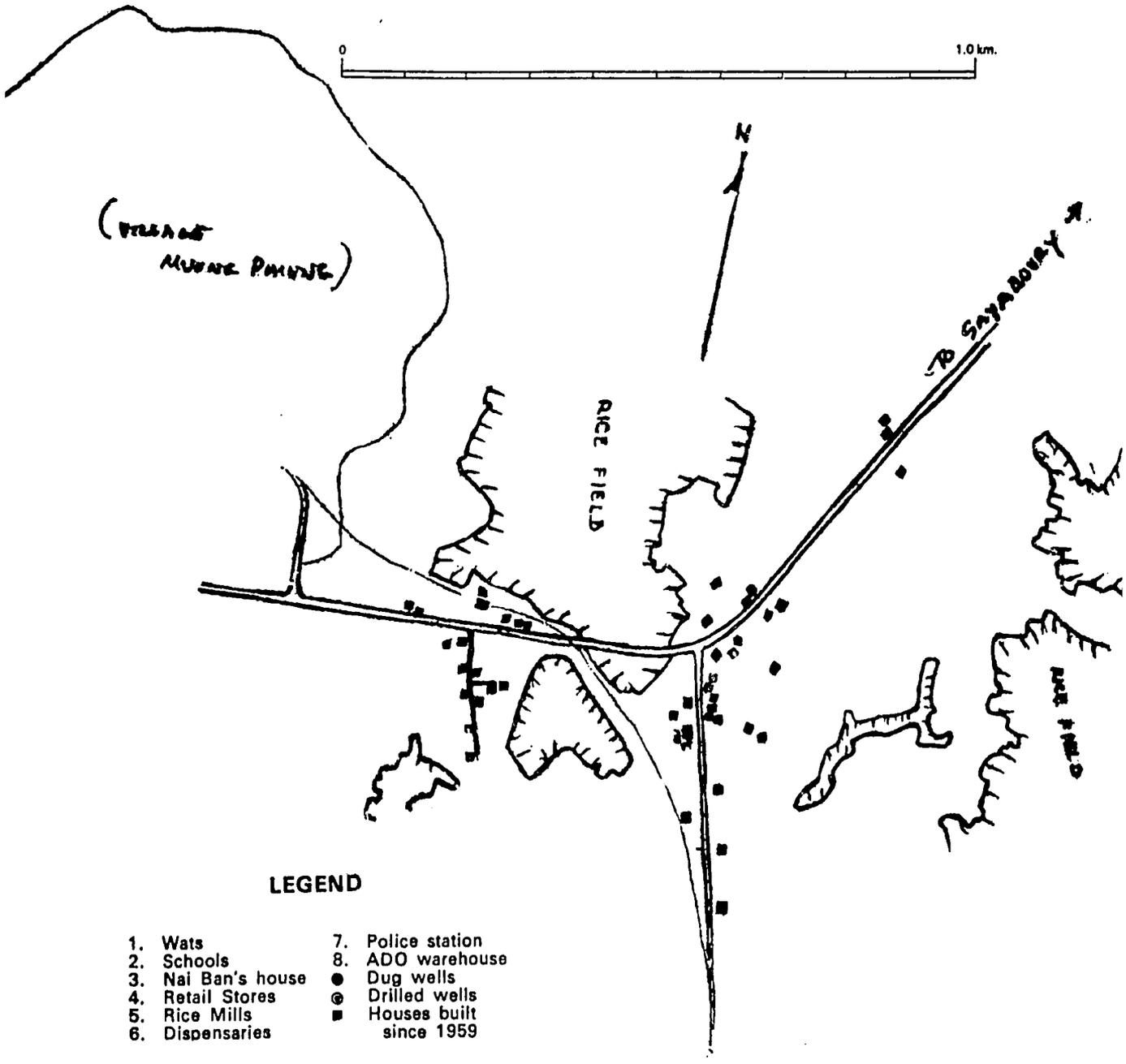


Figure 1a Nong Ngua

II/6

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with the Cluster Manager's office, is in the main headquarters building. The offices of the RLG agriculture, home economics, and livestock activities are in the training building. Just to the right of this building and identified with No. 9, is the new market. It should be noted that each of the solid black buildings are those which have been installed since the start of the Cluster. There may be others but these were all that could be identified in comparing the two sets of aerial photography.

3. Resources:

a. Land and Irrigation

The village of Muong Phieng shares with the villagers of Phone Sai the use of the largest single area of paddy in the Cluster area. This is the area lying north and east of the village and totals 360 hectares. Some of this area lies to the east of the road to Sayaboury and part of this could be worked by the villagers from Ban Kang, and also from the satellite village of Nong Ngua. It is probable that the 28 paddy holdings of the Nong Ngua families average less than half a hectare apiece. This would account for about 14 hectares which may well be marginal land, just recently put into cultivation.

In Muong Phieng it is said that approximately one-third of the village does not own paddy land. Thirty of these families are said to practice dry land farming. Those who farm upland rice are said to do it near Kew Kan, which is three kilometers away. Ten families are said to own three to four hectares of paddy.

The village of Muong Phieng was the first to receive large amounts of water through irrigation systems. The first dam was built in 1957-59 by the RLG and USAID. The dam is located about one and one-fourth kilometers upstream from the edge of the village on the Nam Phieng River. When first built the canal only carried water from the dam to the edge of the village. In 1964 two canals were taken off from this point, one proceeding almost directly north and the other proceeding east and south. First was the high-line canal, the second, the low-line canal. Neither of these canals has any laterals at the present time.

Construction of the two canals was proposed in November, 1963; a sub-project agreement was drafted. The water users were required to contribute or provide 10-man-days of labor during construction for each two hectares of land or fraction that they controlled. Secondly, after construction, each water user was to contribute 10-man-days for maintenance of the irrigation facilities. Thirdly the water users agreed to accept any change in the location of the existing canals and to allow the new canals to be built through and around their land, as directed by the project engineer. This latter requirement has never been honored.

It has been estimated that something in the nature of one-half of the hectareage in the area owned by the Muong Phieng residence probably would not get adequate water in periods of drought.

b. Manpower

In 1963, there were 700 people in Muong Phieng and 143 families. In 1968, the number was 973 persons and 167 families. The age-sex breakdown of this population is shown on the attached table.

c. Roads

Muong Phieng village was the first to be served by a good road from Sayaboury. The roads in the village tend to be somewhat muddy except for the road leading directly to the Cluster center from the main road. In the dry season, of course, there is no problem.

VILLAGE POPULATION

Age Group	Village: Muong Phieng				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	4	-	1	-	-	5	.51
1	3	19	6	24	9	1.29	43	4.42
2	7	15	17	21	24	3.43	36	3.70
3	8	27	15	20	23	3.29	47	4.83
4	4	17	7	15	11	1.57	32	3.29
5	8	14	17	14	25	3.57	28	2.89
6	13	22	17	21	30	4.29	43	4.42
7	4	17	13	12	17	2.43	29	3.00
8	8	23	10	11	18	2.57	34	3.50
9	8	13	16	15	24	3.43	28	2.89
10	8	21	9	20	17	2.43	41	4.21
11-15	46	57	55	55	101	14.43	112	11.51
16-20	32	49	34	63	66	9.43	112	11.51
21-25	19	39	32	33	51	7.29	72	7.40
26-30	26	20	37	60	63	9.00	80	8.22
31-35	16	16	16	19	32	4.57	35	3.60
36-40	29	44	24	35	53	7.57	79	8.12
41-45	15	11	14	9	29	4.14	20	2.06
46-50	8	26	15	21	23	3.29	47	4.83
51-55	5	6	15	6	20	2.89	12	1.23
56-60	15	14	23	10	38	5.43	24	2.47
61+	7	7	17	5	24	3.43	12	1.23
No Age*	-	-	2	2	2	.29	2	.21
Total	289	481	411	492	700		973	

* Age could not be determined.

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d. Airfield

The nearest airfield is at the Nam Tan dam site and is approximately 12 kilometers roughly to the south. The other airfield is at Sayaboury which is approximately 30 kilometers to the north.

e. Potable water

It is said that water is no problem in Muong Phieng. Almost all houses are said to have wells, the unprotected and unsanitary type for the most part. However, nine wells were dug in the city of Muong Phieng under Cluster programs. In addition, a well was drilled at the Nai Dan's house and a well was drilled at the Cluster headquarters.

f. Medical facilities

Muong Phieng has the best medical facilities in the Cluster, located at the headquarters. They are manned by three, although sometimes only two persons. At times one of the three medics is required to work at the Nam Tan dispensary.

The chief medic at Muong Phieng provides services for Muong Phieng and Phone Sai and possibly also Phone Hine which none of the other villages get. He makes home calls in connection with child birth at any time of the day or night. One of the Village Committee members, a Mr. Tid Chanpeng, has said "Why aren't there many medics? I really feel sorry for the medic here, he hardly has time to rest. He has to be able to see the sick at anytime. I would like to have more medics here."

g. Police stations

The main police station in the Cluster area is located in Muong Phieng just east of the market. At this station is the central for the telephone system. The policemen and their families are located in Muong Phieng.

h. Telephone system

The central for the telephone system is at the Police station. There is also one telephone at the home of the Tasseng of the Tasseng of Muong Phieng. Two telephones are located in the Cluster headquarters; one in the office of the Cluster Manager and the other in the office of the Nai Dan.

i. Rice mills

There is one rice mill in Muong Phieng Village. It is located at the far eastern extremity of the village. It is owned by Ay Vong. Mr. Vong came from Sayaboury to set up this mill. The mill has been established for approximately four months. Ay Vong raises between 20 and 30 hogs. His mill is rated at 15 horsepower and he himself rates his harvesting time mill production as the highest in the Cluster area. That is, he indicated, anywhere from 100 to 200 kalong of rice milled per day during this period of time. He estimates that during the rest of the year, primarily the ploughing season,

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he should run between 40 and 80 kalong. During the harvesting season he mills only glutinous rice. He says that he uses about 400 litres of gasoline per month for his equipment. His own estimate would give his mill a maximum of around two tons of paddy per day of milling capacity.

j. Retail stores

Muong Phieng has the largest number of retail stores in the Cluster, a total of nine.

The first store in the village is that owned by Ay Chanpeng. He came originally from Muong Phieng and started a store in 1961. He is a member of the Village Development Committee. He says that most of his customers are from Muong Phieng or are Phai¹ from the villages near Muong Phieng in the mountains. Mr. Ay is a Lao. he gets most of his goods from Sayaboury.

He sells the following items, with the kip prices quoted directly after the item: Blanket 900-1,200; cloth 500-2,000 per meter; rope 100-200: 15-120; hats 200-700; cosmetics 10-200; Nam Pra 150-250; Pang Lua (Monosodium Glutamate) 25; pots 200-600; slippers 200-250; milk (in cans) 125-150; cigarettes 30-160; kerosene 80 (presumably per litre); pail 400-600; candy 5-50; liquor and beer 150; medicine 10-100; batteries 150; matches 10; belts 200-600; salt 300-500; salong for men 400-600; tan hein 200; cigarette lighter 500; tin bowls 70-120; sugar 180; nails 250; envelopes 10-5; pen 100-200; shoes 600-1,200; soft drinks 100-200; writing book 30-80; towels 300-1,200; tooth-paste 150-400; fishing net 600-1,000; mosquito netting 1,200-2,500; umbrella 600-3,000; fishing line 60; local cigar 50 Kp. (500 kip = one dollar US).

The second oldest store is owned by Xieng Van. He comes from Muong Phieng and he started his store in 1963. He is a Lao and says he deals mainly with officials, since his store is located near the headquarters. He sells about two-thirds of the items that Mr. Ay Chanpeng sells and does not sell any that Mr. Ay doesn't sell.

The next oldest store is owned by Mr. Sa Nguan. He started his store in 1965. He is also a carpenter. He sells mainly to people from Muong Phieng and to Phai from the villages. He is a Lao. His is primarily an eating place. Serves from 3,500-5,000 kip per day worth of prepared noodles and coffee.

The next oldest store is owned by Thao Pi, he comes from Muong Phieng and started his store in 1966. He also sells primarily to people from Muong Phieng and Phai from the villages. He is a Lao and gets his materials and things from Sayaboury. He sells probably about half of the items that Ay Chanpeng sells.

The next store is owned by Adul Gaha. He comes from India and started his store in 1966. He is probably associated with one of the Indian stores in Sayaboury. He

¹ The Phai are said to be a Mon or Khmer people who are said to be the first inhabitants of the area. They are a small-statured, greatly under-privileged people who are looked down upon by Lao, Meo, and Kha. They try to avoid contact with others.

gets his goods from Vientiane by plane and by boat. Seems to sell everything that Ay Chanpeng sells and in addition the following; bedcovers at 1,500; briefcases 500; food containers 500; shaving blades 150; toilet paper 100; water glasses 50; lamp glass 350.

The next store was started in 1968 by Nan Seng. She came from Ban Na Xieng Dy. Her customers are from Muong Phieng and the Phai. She seems to sell half of the items sold by Mr. Ay Chanpeng.

Another store was started in 1968 by Ay Meo, who comes from Ban Na Sing. He is a Lao and gets his customers from Muong Phieng, and the Phai. He appears to sell about three-fourths of the items sold by Mr. Ay Chanpeng.

The last store started in 1968 was by Ay Oud. He comes from Muong Phieng and is a member of the Village Development Committee. He sells mainly to the people from Muong Phieng. He is a Lao and gets most of his goods from Sayaboury. He sells about three-fourths of the items sold by Mr. Ay Chanpeng, but in addition he sells bicycle tires at 700 kip and bicycle inner tubes at 750 kip; he also sells oil for 150 kip; and cabbages at 300 kip.

The newest store was started in August by Ay Nieng, He comes from Muong Phieng and is a Lao. He has primarily a noodle shop.

I. Schools

This discussion also includes the schools for Phone Sai, since the two schools are operated together.

The school in Muong Phieng now has the first four grades and the school in Phone Sai has the last two grades, 5 and 6.

In 1963, there was one school with five rooms and 141 students. The first grade had 40 students, taught by Mr. Sing Thob. The second grade 35 students, taught by Mr. Chansouk. The third grade had 35 students taught by Mr. Sisavat. The fourth grade had 20 students taught by Mr. Souvanh. The fifth grade had 8 students and the sixth grade had 3 students, both classes were taught by the Principal, Mr. Phout Chanthavong.

In 1968, there were two schools with a total of eight rooms. Six rooms were in the old school building which had a new addition added to it, and which is located in Muong Phieng, and the very newest school is in Phone Sai and has two rooms. These two classes are held for the 5th and 6th grades. The first grade had two classes both with 38 students each and were taught by Miss Sengkeo and Mrs. Khanthong. The second grade had two classes both with 36 students in each and were taught by Mr. Lope and Mrs. Sisavat. The third grade had 46 students in one class taught by Mr. Sayasana.

The fourth grade had 42 students taught by Mr. Somsack. The fifth grade had 38 students taught by Mr. Thong One. The sixth grade had 26 students taught by Mr. Souvat.

They feel that they have enough training materials in Lao and they also have enough supplies. However, they feel that they do not have enough training materials in French.

m. Wats

There is one wat with one monk and four novices. Other novices have gone to Sayaboury to study. This wat now gets much more money for its bouns than it did before. The money is spent on wat affairs only, such as repair of the wat. Money is held by the wat committee man "Salawat" and the Nai Ban. There are four member of this wat committee; Xieng Inphan, age 45; has been in the position for four years. Ay Som, age 45, has been in the position for three years. Ay Khampan, age 42; and Xieng Boonleng, age 35, both were elected this year.

4. Resource Utilization:

a. Rice production

For rainy season rice the farmers are said to plant from two to seven kalong, (probably per two hectares). Most of them use about 3 kalong and get 300 kalong after the harvest. For the second cropping in the dry season, they get from 80-100 kalong. The yield is less because they don't use all of their land. For upland rice the villagers use about 3 kalong and are said to get from 150-200 kalong. Sometimes, however, they only get 100-130. It was said that this year eight families double-cropped.

b. Livestock Production

Pig raising is said to be done by about half of the village, with the pigs being sold to traders from Sayaboury. Many horses used to be raised. Now only Xieng Kham has three horses and Ay Cho has one. It is said that from 70-80 pigs are sold a year to the traders from Sayaboury. Many chickens and ducks are raised. About five or six persons sell eggs, anywhere from 20-100 of them. Sometimes they sell all they have and sometimes they can't. The problems of raising chickens was a serious one. Tid Chanpeng is quoted as follows "This is a serious problem, everyone wants to raise chickens, but in February and March when there is less water a large number of the chickens start to die. When the rainy season starts the chickens are healthy again. The veterinarian gives vaccinations but it is not effective. Even the chickens of the veterinarian die faster than those of the villagers. The problem cannot be solved. The villagers decided to experiment by taking them to the fields to raise where is plenty of water. However they also died."

c. Other Production

Four years ago the villagers were advised by the Cluster to start growing garlic, they did this for three years in a row but were unsuccessful and had to give it up. Some

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people invested as much as 10,000 kip into the business, to buy seeds and hire labor. The villagers also grow lettuce, melons, cabbage, onion, parsley, but just enough to eat in the family. Fruits are mango, coconut, pomelo, and pineapples. Some tried to grow oranges but they were unsuccessful.

5. Security:

In 1962 there was a village protection group. The members camped at the present site of the open market. Thirteen or fourteen persons were ordered to join the group. There were 25-30 members all together including some from other villages. It was the same group as that at Na Kheme. Some days they stayed at Muong Phieng and other days they stayed at Na Kheme. Recently the villagers have resumed guarding the village. There are two groups of guards. One group is around the Cluster headquarters and is made up largely of Cluster personnel. The other group is made up of villagers and they man a number of posts around the edge of the village.

This procedure was stopped a few weeks ago when the carbines, which had been given to the villagers by the army, had to be returned to the army. They said it was because there was a large drive for equipment and they needed the weapons for the new soldiers. It was at about this time that it was decided not to let Americans stay in Muong Phieng. At the present no Americans spend the night in Muong Phieng.

6. Project Participation:

The first project that was remembered when this question was asked, was with regard to the government loaning money to ten villagers to buy buffalo. They were loaned 40,000 kip each. Their money was to be returned at the end of the year with an interest of 1,200 kip. This has not been repeated.

Nine wells were dug and two wells were drilled. The government provided the cement for the well lining and also the technicians to show them how to do the job. The villagers contributed the labor. The Cluster provided a tractor to haul logs and wood for fences and houses.

The medical center was built. However, the village still has a local practitioner and the villagers say that since it is a tradition to have a local practitioner he should stay.

The veterinarian has been giving vaccination to the buffaloes every year. He has also given much advice throughout the area.

The villagers also stated that the Cluster provided various vegetable seeds for experiment.

Two swine were given to villagers in Muong Phieng. It wasn't long before they died. Ninety Taiwan ducks were given to the inhabitants of Muong Phieng. This was the largest number given to any village. There is now a large duck population.

Muong Phieng was the scene of the Boy Scout Jamboree in 1964. This was a good start towards a Youth Program, but it died out very soon after that. There is no present evidence of the Boy Scout troop that was very active in Muong Phieng at that time.

Muong Phieng was the only village in which a crematorium was built. It had been planned to have five throughout the Cluster. Also 78 water-seal toilets were installed in Muong Phieng, by far the largest number of any village in the Cluster.

A number of classes in home economics were given in Muong Phieng.

Muong Phieng is the site of the biggest medical facility in the Cluster. The dispensary, which is located in the headquarters building, is literally open at any time. The medic is very devoted and will go to any house in Muong Phieng or Phone Sai at any time, upon call.

Muong Phieng is also the site of the multi-purpose community building, which was built near the headquarters.

Muong Phieng has received the benefit of school repair and construction.

Muong Phieng has the only market in the Cluster, which was built by self-help and assistance from the Cluster. This market was one of the first things that had been requested by the Chac Khoueng and the Provincial Council. It has yet to be dedicated.

Muong Phieng, of course, is the headquarters for the information program, the vehicle repair facilities and Cluster, Dan, Muong and Tasseng offices.

7. Villager Perceptions of Change:

One of the prominent people in the village said that before the Cluster the villagers did not understand the concept of working for the common good. When the government wanted them to do anything they had to be forced. The situation has improved because they have been taught and been given training in cooperation. Now when the government wants to persuade the villagers to help in the construction of the market or school the government officials call a meeting and use various methods of persuasion. The Nai Dan, for example, opened the meeting, the chief of the development area (that is the Cluster Manager) reported his view and then Maha Suvan, the man who runs the newspaper, also added his ideas about the development that was being proposed. Members were given a sense of participation.

They say the most evident change since development is that the road has become much better than before. The school is also bigger. Also the market was built. The village committee members said that the wells are better and cleaner, with lining and cover. Another committee man said that another change is that the children get better schooling. Previously they only had three grades, now there are six grades. In some case they

can go beyond to study at other places. It is also said that rice can be grown twice a year; this is a method "the villagers had never thought of before".

Clothing is different. Most villagers have given up cloth weaving; there are only eight or nine weavers left. The villagers prefer to buy ready made clothes. Villagers have also given up milling rice at home, instead they take their rice to the miller.

Earlier many disputes had occurred which involved quarrelling and physical assault. Now disputes are connected with land disputes and private property, which are caused by relatives fighting amongst themselves to get their share of land and property.

Earlier the villagers used to go to shop in Sayaboury. In some cases the villagers of Muong Phieng went to Ban Pak Lay to buy goods, which they then resold to traders from Sayaboury.

PHONE SAI

1. Location:

Phone Sai is the western half of the twin villages of Phone Sai-Muong Phieng. It is necessary to go through Muong Phieng in order to get to the main road. (see Figure 1).

2. Administration:

The tasseng and assistant tasseng of the Tasseng of Muong Phieng live in Phone Sai. They are, Ay Kham Phan (age 50) and Xieng Boun Thai. The Nai Ban, Ay Toomma Piengchan, age 40, first took the position in 1957 but resigned in 1965. The villagers re-elected him. The assistant Nai Ban, Ay Boonyoung Prakantai, age 33, was elected in 1965.

The Village Committee members are: Xieng Boonmee, 28; Nai Onta, 40; Ay Nid Onruen, 27; Xieng Duangchan Khantawa, 28; Ay Inta Khemyot, 45; Ay Ton Toomma, 42; Ay Sam Sodarak, 40; Ay Krueng Kanhoon, 46; Ay Na Taworn, 45; Ay Boonruen, 39.

3. Resources:

a. Land

Phone Sai shares with Muong Phieng the use of the best rice growing area in the Cluster. The area totals 360 hectares and has benefitted from irrigation since 1959. At that time the canal simply brought water to the western end of the area, after which the water distributed itself according to the natural drainage. In 1964-65 two canals were built. The first carried water along the western edge up to the northern tip. The second carried water across the southern end, onto the eastern most part of the area and beyond, into three separate areas on the eastern side of the Cluster. These areas total 32, 34, and 79 hectares, from north to south. The last area supposedly receives water from the 'low-line canal', but in fact does not.

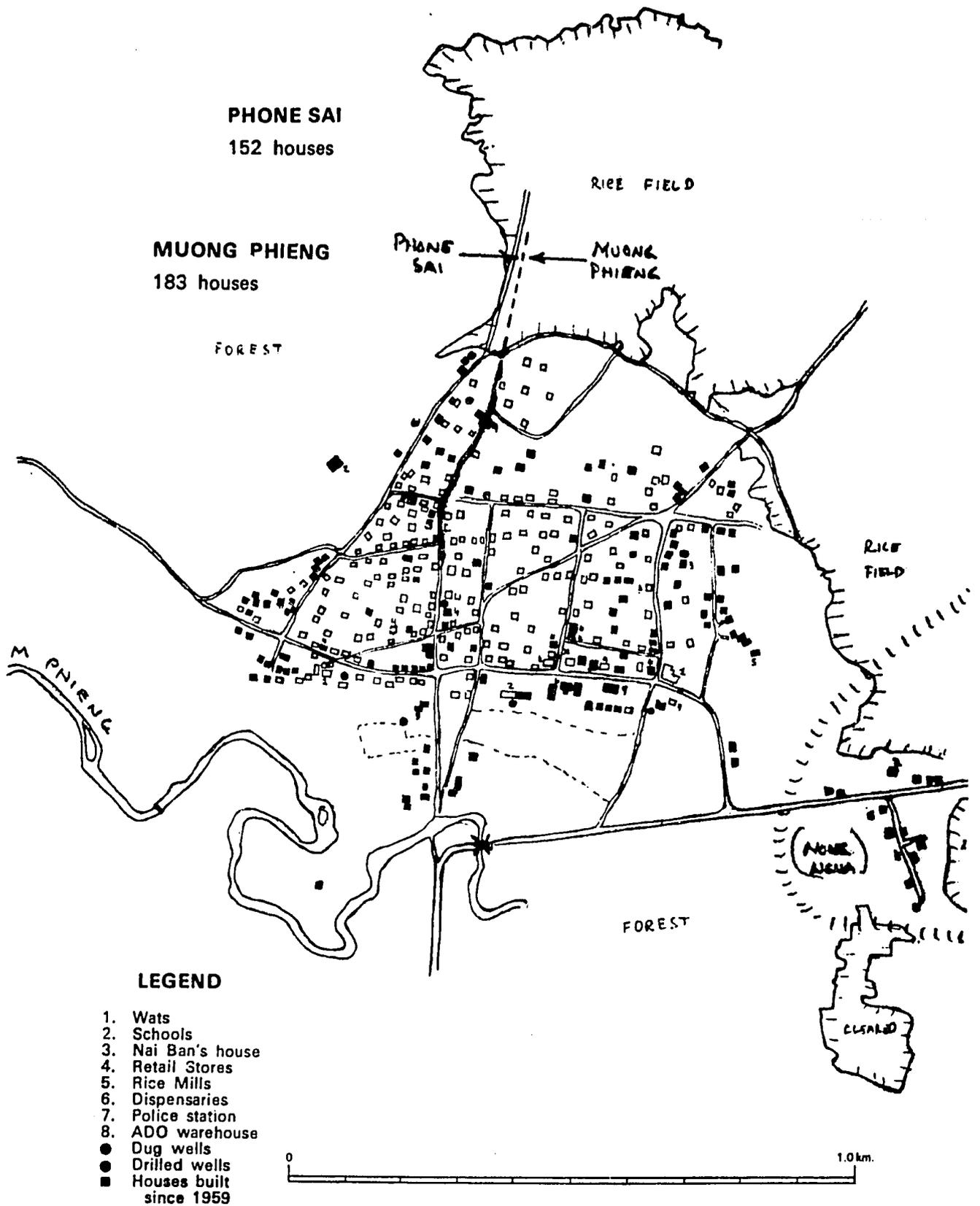


Figure 1 Muong Phieng & Phone Sai

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Most of the holders of paddy land are said to own about two hectares. Approximately 50 families are said to work only upland fields. They go to the Kew Kam area, where the upland farmers from village Muong Phieng also go. It is about three kilometers away. Two families have more than two hectares.

b. Manpower

The population of the village, broken down by sex and age group, is shown on Table 1. There were 131 families in 1963. There are now (1969) 173 families. There are approximately 140 Thai Dam (Phu Thai) who have moved into the village in the past two years. They have settled along the bank of the Nam Phieng.

VILLAGE POPULATION

Age Group	Village: Ban Phone Sai				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	1	-	-	-	-	1	.11
1	5	18	4	21	9	1.42	39	4.35
2	8	20	4	14	12	1.89	34	3.79
3	12	21	6	25	18	2.84	46	5.13
4	9	14	4	15	13	2.05	29	3.25
5	9	20	13	14	22	3.47	34	3.79
6	14	14	5	12	19	3.00	26	2.90
7	10	14	8	7	18	2.84	21	2.34
8	10	15	9	17	19	3.00	32	3.57
9	12	7	9	11	21	3.15	18	2.01
10	18	14	12	13	30	4.73	27	3.01
11-15	38	53	51	47	89	14.04	100	11.15
16-20	27	49	37	49	64	10.09	98	10.93
21-25	22	37	18	40	40	6.31	77	8.58
26-30	17	31	21	43	38	5.99	74	8.25
31-35	15	18	26	23	41	6.47	41	4.57
36-40	22	26	17	29	39	6.15	55	6.13
41-45	11	18	20	18	31	4.89	36	4.01
46-50	14	17	15	19	29	4.57	36	4.01
51-55	12	13	15	9	27	4.26	22	2.45
56-60	8	13	8	18	16	2.52	31	3.46
61+	17	8	22	7	39	6.15	15	1.67
No Age	1	3	-	2	1	.15	5	.56
Total	311	444	324	453	635		897	

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c. Roads

Village roads are poorly developed.

d. Airfield

The nearest airfield is approximately 12 km south at the site of the Nam Tan dam. The airfield at Sayaboury is 30 km to the northeast.

e. Potable Water

Three of the nine wells said to have been dug by the Cluster in Muong Phieng are located in Phone Sai.

f. Medical Facilities

Medical facilities located at the Cluster headquarters in Muong Phieng are used by Phone Sai residents.

g. Police Station

The nearest police station is in Muong Phieng, at the eastern edge of the twin villages.

h. Telephone System

There is a telephone at the house of the tasseng. It is not used in case of sickness because the dispensary is so near. It is used only for official business.

i. Rice Mills

There are three rice mills in Phone Sai, the only town having more than one rice mill. The oldest mill was started in 1966 by Ay Phim, a native of Phone Sai, and who is also a farmer. His mill is rated at 10 horsepower; he says he handles from 50 to 60 kalong a day during the harvest season, and 20 a day during the rest of the year. He uses 100 litres a month of gasoline.

The second mill was built by Ay Lom, also a native of the village, in 1967. His mill is rated at 8 horsepower; he mills 40-50 kalong a day during the harvest season, and 20-25 at other times. He says he uses 200 litres of gasoline a month. His customers come from Muong Phieng and Phone Sai. The third mill was started in the middle of 1969 by Thit Daeng, a store-keeper from Sayaboury. His mill is rated at 12 hp; he mills 40-50 kalong a day at harvest and 20-30 at other times. He says he uses 100 litres of gasoline a month. His customers are from Phone Hine, Kang, Nakok, and Phone Sai. None of these millers hire extra help.

j. Retail Stores

There are two retail stores in Phone Sai.

The first is also the oldest in the Cluster area, having been started by the owner, Yang Sor Yee, a Haw, in 1955. He sells mainly to people from Muong Phieng and from Phai villages in the hills. He has a fair stock—his is one of five stores in the Cluster to sell eye glasses. His prices are in line with those in Muong Phieng (which see).

The second store, owned by Mr. Kham Phan, a native of Phone Sai, has fewer items. For example, he does not sell kerosene, as does the first store.

k. Personal Equipment

There are 20 radio receivers in the village. The one sewing machine is owned by a Thai Dam trader who arrived two years ago—Ay Piang. There are ten to 15 bicycles—no motorcycle.

l. Schools

The building housing the last two grades of the Muong Phieng Groupe Scolaire is located in Phone Sai. It was built by the villagers, with Cluster assistance, in 1968. Children in the lower grades attend the school in Muong Phieng. Data is not available as to the numbers of students from Muong Phieng as opposed to Phone Sai in these shared schools. However, 23 per cent of the children of Phone Sai are of school age (6-14 years), as compared with 27 per cent of the children of Muong Phieng. There are said to be 50 children who cannot go to school because of lack of space. More rooms are needed.

m. Wats

There is one wat, but the monk is now in school in Luang Prabang. There are four novices and three others in school in Sayaboury. The "sarawat" is Nai Tid Khamha, age 55. He has been in office for 20 years. He was chosen from those knowledgeable about religious affairs and who had been in the monkhood. The Nai Ban called a meeting and suggested that Nai Tid ought to be "sarawat". The villagers agreed, without voting.

A number of boons are held every year. The most important is the "Kathin". Boons now include more entertainment than before the Cluster. Money earned at a boon ranges from 30,000 to 100,000 kips. The money is spent only for religious matters, and is held by the sarawat and the teachers.

4. Resource Utilization:

a. Rice Production

Farmers are said to plant 5 kalong of rice per two hectares of paddy for a yield of 400 kalong of paddy. It is said that those who own more than two hectares (only 2 families) can sell three tons a year. Those who own 2 hectares (said to be the average, but believed to be a high estimate) are said to sell about a ton. The price to ADO is

25 kip per kilo; traders from Sayaboury pay 300 kip per kalong for glutinous rice and 350 kip for non-glutinous. Two-thirds of the families are said to have surpluses for sale.

Twenty-seven families double-cropped. The crop is usually sold to ADO since the seeds came from ADO. The farmers return the same amount of seed they received, and get paid for the remainder, according to the villagers.

Between 50 and 70 families farm upland rice. They plant 4 kalong and harvest from 150 to 180 kalong.

b. Livestock Production

Buffaloes have been in short supply since an excessive number were sold to traders in 1964. Three years ago, five families borrowed 40,000 kip to buy buffaloes. About twenty additional families would like to do this now. In spite of this, others own enough buffaloes to sell about 10 a year from the village.

About 30 pigs are sold a year to traders from Sayaboury. A pig of 4 "Kham" (a measurement taken around the belly) gets 8,000 kip. Two of the rice mills raise from 10 to 20 pigs, while the third raises 20 to 30. Their main feed is rice bran.

Formerly there were many horses. Now only the tasseng has three, used to carry between the upland fields and the village. The other horses were sold to the Meo.

Four families have two cattle each; the tasseng is one of these owners. A few years ago there were seven or eight elephants. They were sold to villagers of Muong Tong and Hong Sa for approximately 500,000 kip each.

Many ducks are raised. The native ducks are tending to disappear as they are interbred with the Cluster-introduced Taiwan ducks. Chickens are highly regarded, but hard to raise. They seem to die during the dry season.

c. Other Production

Vegetables are grown, but only for subsistence. They include lettuce, cabbage, onions, garlic, chili, and melons. Also grown are coconuts, pomelo, mango, jackfruit, pineapple, banana and sugar-cane. Some villagers had tried to grow coffee just before or at the time of the start of the Cluster. They did not know what to do with the coffee beans, so gave up. Others had tried to raise 50 to 100 orange trees. A hail storm killed most of them as well as the project. The young trees were sold to a man from Sayaboury. Some of the villagers tried to grow large amounts of garlic for two years, but failed.

5. Security:

There had been a village protection group that was abolished in 1962, the year after it was established. Until recently, a home guard arrangement was active. Five watch

posts were set up, with six persons assigned to each post. Five or six persons are drafted for the army every year. So far, none has returned.

6. Project Participation:

The first development project was water wells and privies. Seventeen privies were installed. Most people did not want them. They now say they would want them, but have not asked for any.

Soon after, the Nai Bans and tasseng were given a course on administrative regulations and topics dealing with the work of other governmental sections, such the veterinarian, medic, police, and agriculturists.

The school was built in 1965. Villagers supplied either lumber or labor, or both. Most bought lumber from the sawmill because it looked better. The Cluster supplied hardware. The market was built in the same way. In this case, monetary contribution were acceptable. Villagers paid 200 kip; wealthy villagers paid 400 kip.

Two of the villagers, Ay Sam and Ay Uang, participated in the pig raising program. Their pigs died after 5 or 6 months.

7. Villager's perceptions of Change:

Farming was difficult before the development because of the lack of water. Muong Phieng dam was put in before the Cluster, but the canals were put in by the Cluster. Many more people now benefit from the dam. Second cropping has now become possible. Second cropping is said to be more productive because fertilizers and insecticides are used. It is said, also, that these are not needed during the rainy season, since the rain provides natural fertilizer.

Shopping used to be done in Sayaboury. Now it can be done in the village. ADO tools can be bought, although the villagers say that the tools that they used to buy from Nan (Thailand) were better quality. The merchants from Nan used to come to Muong Phieng valley up until last year.

The road has been improved. Earlier the village had to depend on the river for water. Now there are wells. Advice is given on use of fertilizer, raising of ducks, gardening and home economics. Religious affairs are encouraged; electricity is supplied to the bouns. Tractors are provided for hauling logs for housing construction.

Clothing is different. Villagers no longer like to weave their own clothe; they buy ready-made clothing.

One thing has not changed. The villagers still help each other in housing construction and in farming.

Ay Nid says that the girls have changed their hair style and clothing, but the men had nothing to change.

Before the development program, no one had taught the villagers how to think about problems. Now they can go to the Nai Dan or the Cluster management for help in solving problems.

The assistant Nai Ban said the character of the people has changed. They have become less obstinate and are cooperative. However, he added, only one-third have changed; the other two-thirds are the same

Following are problems that they cite:

Need more well water. Water in the river is undrinkable since the Meo made it unsanitary (sic).

Need more permanent and bigger medical center. Although not too many villagers go to the medical center, according to Ay Nid, he would like a new one because every time he goes there all he sees are sick Meo.

The Nai Ban says they need a new addition to the school; more privies are needed. One of the committee members feels that some bridges are needed over the canal dikes, since the buffalo keep breaching them.

PHONE HINE

1. Location:

The village of Phone Hine is in the process of transition. It is moving physically about 400 meters eastward to form a strip development along the main Cluster road, just south of Muong Phieng village. It is also absorbing a group of Thai Dam, or Phu Thai who moved here from Muong Tong. The old village is located about one half kilometer west of the main road on a small hill at the edge of the paddy plain, and is on the right bank of the Nam Phieng, just across from Muong Phieng and Phone Sai.

2. Administration:

The village is in Tasseng Muong Phieng, and, of course, is in the Dan of Muong Phieng. The Nai Dan lives in the village. The Nai Ban is Xieng Son Wanpen, age 27, who has been in the position for 6 years. Village Development Committee members are Xieng Duangdee Panom, 42; Ay King Asa, 42; and Ay Kon Poomma, 49. There is some question as to which village has jurisdiction over the new group of Thai Dam. The Nai Dan has said that a new village will be established and will be called Phone Thai. It will include the area of new dwellings growing along the main road. The Thai Dam are not refugees. They seemed to move here of their own volition; some had enough money to purchase paddy land.

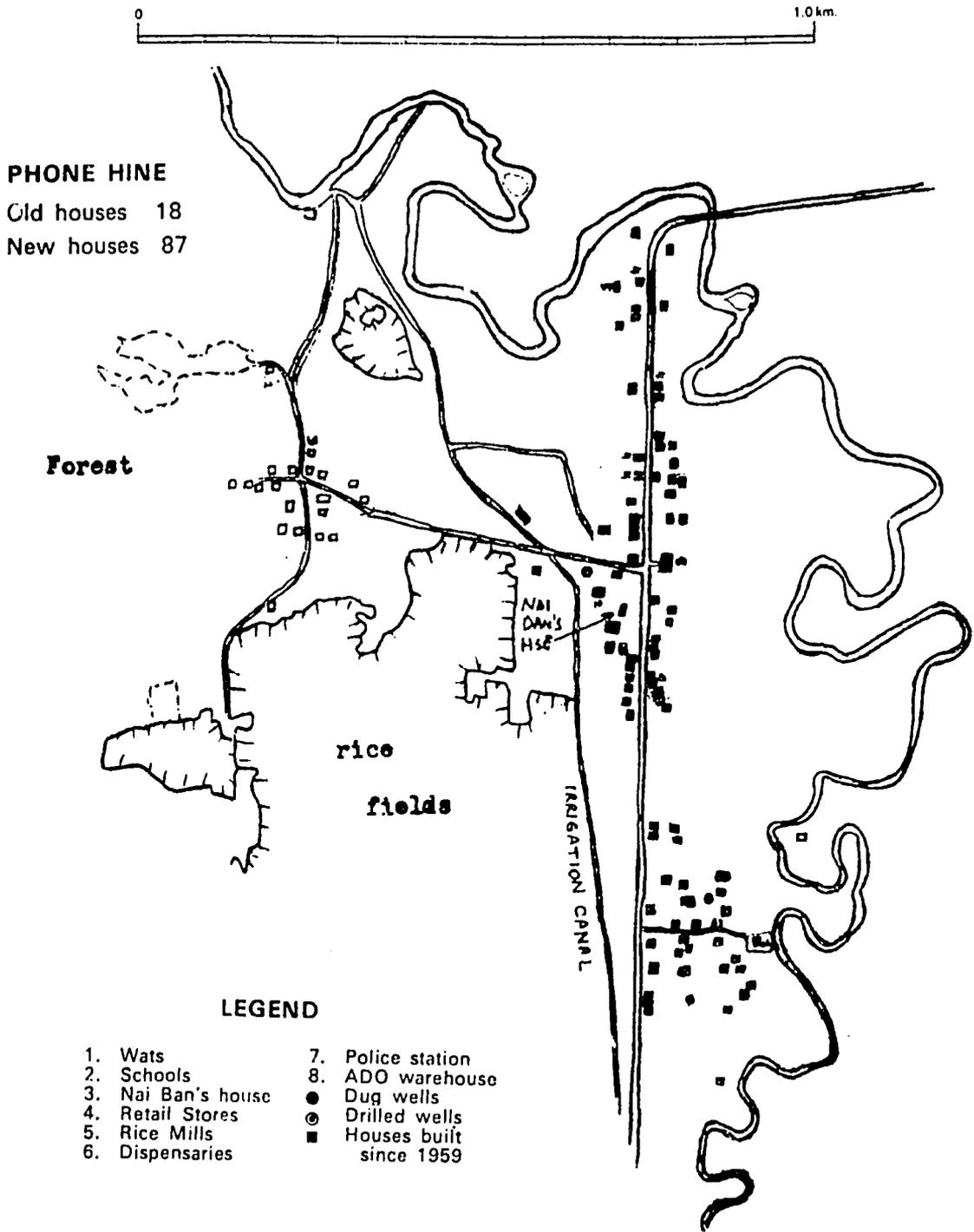


Figure 2 Phone Hine

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3. Resources:

a. Land and Irrigation

Twenty-eight families farm the land at the northern end of the Hia-Nakok system. Three families have three hectares of land, while the average is said to be about two hectares. From 7 to 11 (depending on the source) families do not have paddy and are forced to work upland rice. This year they went about one kilometer; some years they go as far as two kilometers.

b. Manpower

The table shows the comparative populations, 1962-3 as against 1968. There were 33 families in 1963 and 40 in 1968. Approximately 30 new Thai Dam families have since arrived. The 1968 population does not include the Thai Dam. Probably 150 Thai Dam have now moved into this area. They may have been attracted to the area by the community of Thai Dam who live just across the Nam Phieng river in Phone Sai.

c. Roads

The equipment park of the Travaux Publics sub-division in the Cluster is located on the short stretch of road from the village to the main road. They help keep the road in good shape. When the Nam Phieng is low, access to Muong Phieng and Phone Sai can be made directly by a ford on the old main road.

d. Airfields

It is about 11 kilometers to the Nam Tan airfield, and 31 to the one in Sayaboury.

e. Potable Water

Because old Phone Hine was located on a hill, there were no wells. A new well was to be constructed at the school, under Activity Plan 26. It was started, but has not yet been finished.

f. Medical Facilities

The villagers use the facilities at Muong Phieng.

g. Police Station

The villagers have access to the station at Muong Phieng.

h. Telephone System

The Nai Ban has complained that although the scheme for the telephone system shows a phone at his house, the phone is actually located at the house of the Nai Dan. The Nai Dan has explained that when he gets enough wire he will have the phone run to the Nai Ban's house (see village chart for location of the Nai Ban).

i. Rice Mills

There is no rice mill in Phone Hine. Villagers use the mill of Nai Thit Daeng, in Phone Sai.

j. Retail Stores

There are five stores in Phone Hine. All were built since 1968 and all are located in the new strip development along the main road. Nai Daeng, the miller of Phone Sai, also owns one of the Phone Hine stores. He is a Lao from Sayaboury. His store is small, carrying only 16 to 20 items. The biggest store is that of Thao Outhong, who came from Luang Prabang. He is the ADO agent, and is the only store in the Cluster to sell a wide range of farming tools. The next largest store is that of Ay Phao who came from the same village as Thao Outhong (Ban Naxiengdy) in Luang Prabang province. He sells about 30 items, as does the store of Ay Eng, who came from Hong Sa last year. The last store is owned by Thao Pang, a Lao from Ban Xiengdy in Luang Prabang. He sells approximately 25 items.

k. Personal Equipment

Nine families have radio receivers. Two families have bicycles; none have motor cycles. There are no sewing machines in old Phone Hine, although there is at least one in the new Phone Thai area.

l. Schools

The old school was built in 1962 and was in the grounds of the wat. In 1963 there were 25 students, all in the first grade. A new school was built self-help with Cluster assistance in 1968. It has 2 rooms and had 47 students in 1968; 26 in the first grade, 10 in the second, and 13 in the third. The teacher is Mr. Somchit Soukphaly. A new school is now needed because of the Thai Dam children. Total attendance in 1964 was said to be near 100.

m. Wats

There is one wat, with one monk. However, he is temporarily in Vientiane, studying. There are now only two novices in attendance. The wat committee man (sarawat) is Tid Yong, age 65. There is said to be no change in the number of bouns, each year, but now there is more entertainment—cinema, ram wong, etc. The main ceremony is Boun Kaopuak.

4. Resource Utilization:

a. Rice Production

The average yield from the so-called average two hectares is 300 to 400 kalong. Three families have 3 hectares and are said to get 600 kalong each. Upland rice yields are approximately 150 kalong, using 5 kalong of seed. Only four or five families are

said to double-crop because of the buffalo problem. Some of these families do not own buffalo, and those who normally rent out their buffalo will not do so in the dry season because of the undue strain on the buffalo. It is said that four to five tons of rice are sold in the dry season.

The above are the figures reported by the Nai Ban. In 1969 the CRA workers made a census of the village. Average family production (both paddy and upland) was said to be about 300 kalong, which is not too far from the Nai Ban's estimate.

VILLAGE POPULATION

Age Group	Village: Ban Phone Hine				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	1	1	-	3	-	-	4	2.03
1	2	3	5	-	7	4.29	3	1.52
2	4	8	5	2	9	5.52	10	5.08
3	5	3	3	3	8	4.91	6	3.05
4	3	3	1	5	4	2.45	8	4.06
5	3	2	3	1	6	3.68	3	1.52
6	5	7	-	1	5	3.07	8	4.06
7	3	3	-	-	3	1.84	3	1.52
8	4	1	-	5	4	2.45	6	3.05
9	3	1	1	5	4	2.45	6	3.05
10	2	4	2	3	4	2.45	7	3.55
11-15	11	12	6	6	17	10.43	18	9.14
16-20	8	10	6	11	14	8.59	21	10.66
21-25	7	8	5	7	12	7.36	15	7.61
26-30	7	4	4	7	11	6.75	11	5.58
31-35	4	3	5	7	9	5.52	10	5.08
36-40	7	6	4	4	11	6.75	10	5.08
41-45	2	3	5	-	7	4.29	3	1.52
46-50	8	6	5	6	13	7.98	12	6.09
51-55	2	1	3	-	5	3.07	1	.51
56-60	2	4	1	5	3	1.84	9	4.57
61+	3	4	4	-	7	4.29	4	2.03
No Age	-	10	-	9	-	-	19	9.64
Total	95	107	68	90	163	-	197	-

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b. Livestock

There is a scarcity of buffaloes for farming, according to the Nai Ban. Four families who own rice fields do not own buffalo. Ten families own one each and others between 2 and six. Two families who do not own rice fields own two buffaloes each. They rent them to others. Payment is made in rice. The CRA report 66 buffaloes in the village. Two families have many buffaloes and can sell 5 and 2 each year, respectively.

The village sells about 16 hogs a year, mainly to merchants from Sayaboury. Some chickens are sold everyday to their own villagers or to members of other villages.

Each family is said to grow four or five pigs and some chickens and ducks. A pig of 4 "kham" is said to bring 11,000 kip.

c. Other

The villagers grow lettuce, garlic, beans, cabbage, corn, pumpkins, and melons in plots along the Nam Phieng river. Some fruit trees are in the old part of the village, but only a few, 4 or 5 coconut and mango trees.

5. Security:

The Nai Ban and the committee said in early June they were not afraid of the enemies because they did not believe they would harm the village. Even though the village is near the dam (Hia-Nakok) the people were not afraid because it is small. They felt it was safer in their village than at Nam Tan.

By middle July their attitude had changed. They had heard that the PL were at the Pai village near Muong Phieng. They had been guarding their village but now had to stop because they had to sleep at their rice fields. (July, 1969).

6. Project Participation:

The village gets five copies of the Cluster newspaper every month. The Nai Ban gives them to those who are literate and to the members of the Village Development Committee.

The Nai Ban went to a training course in 1965 at Muong Phieng. He said this was very useful training; he could understand things better than he had before. They also had the Village Development Committees introduced. After the elected members were trained, they came back to hold meeting for the villagers to encourage them to join together and work for the whole village. For example, they were to raise lots of chickens and ducks and swine so that, they would be able to supply the army even though this is a very small village. Last week they sent a buffalo to the soldiers at Nam Tan and haven't yet been paid.

With regard to village participation—this village has had a family who moved here from Houa Na some 5-6 years ago but who would not participate in any village activi-

ties. Finally, after having been fortified by the VDC course, the Nai Ban told the man that he would have to move back to Houa Na because he was a bad example for the entire village. The family moved.

The major project has been the Hia-Nakok dam and canal system. Phone Hine is located at the end of the area closest to the dam and is less critically in need of water from the system than are some of the people of Nam Hia or even Kang. Fewer families from Phone Hine have engaged in double cropping than from the other two villages.

Since the VDC, the Nai Ban now says he lets the committee members settle disputes that previously came to him for adjudication. He mediates only when they are unsuccessful.

The Nai Ban says that there is more cooperation than before. The people from the old village go to help people build their houses in the new part of the village.

7. Villagers' Perceptions of Change:

(These are the villagers' statements):

Rice farming is better and there is more water. Rice can be grown twice a year. Another change is that the road is more convenient. Young people no longer weave cloth; only a few elderly men do now (?).

Smoking habits are different. The people stopped using tobacco rolled with tobacco leaves. They prefer cigarettes bought from the government. A committee member said that incomes have raised because the villagers can sell their rice.

The villagers used to go to Sayaboury to shop. Now some go to Sayaboury and some buy at the shops on the road. Farming equipment is bought from the ADO at cheaper prices than at the market.

KANG

1. Location:

Kang is located about two kilometers south of Muong Phieng, and is also on the left side of the Nam Phieng. It is situated on the bank of the Nam Tome river, and is about one-half kilometer east of the Nam Phieng.

2. Administration:

Ban Kang is in Tasseng Muong Phieng and the Dan of Muong Phieng. The Nai Ban is Nai Thit Bounthanh. He has two assistants, Thao Khamla and Thao Thanh. The members of the Village Development Committee are Thao Pheng, Nai Pha, Nai Panh, Xieng Vandy, Nai Sai, Nai Simma, Nai Kong, Nai Say, Nai Panya, and Nai Sing.

3. Resources:

a. Land and Irrigation

The villagers of Kang benefit from two irrigation systems; Muong Phieng No. 1 and the Hia-Nakok. In the first system, all of their land lies along the southern or low-line canal, which gives them adequate supplies for both wet and dry season cropping. They shared, with the villagers of Phone Hine, the only cleared paddy land in the area of which was later developed into the Hia-Nakok system. Their land was and is along the western edge of the area, lying south of the Phone Hine holdings. At present, 27 Kang families have been allotted an average three hectares in the Hia-Nakok system. Probably much of the newly allotted land has not yet been cleared. Present cleared holdings in both systems are said by the Nai Ban to average two hectares. Ten to 15 families grow only upland rice. Many of those who have paddy land also grow upland rice.

The Nam Tome river flows across the southern side of the village. Some years ago this river had been dammed to provide water for Kang, Nakok and Nasom Noi villagers. Persons in all three villages have expressed the desire to revive this system, since the Muong Phieng system sometimes does not provide as much water as Kang inhabitants would like, and never as much as the Nakok people want. At present, the low-line canal crosses the Nam Tome via a flume which was built in 1965, and which flows 12 to 15 feet above the Nam Tome stream bed.

b. Manpower

In 1963 there were 102 families; in 1968: 123 families. Details of the population in both years are shown on the table.

c. Roads

The access road runs two kilometers almost straight north to the main road. The villagers now want another access road which goes west to meet the main road, thereby saving them some five kilometers on a trip to any village except Muong Phieng and Phone Hine.

d. Airfield

The airfield at Nam Tan is about 15 kilometers by road; that at Sayaboury is 31 kilometers.

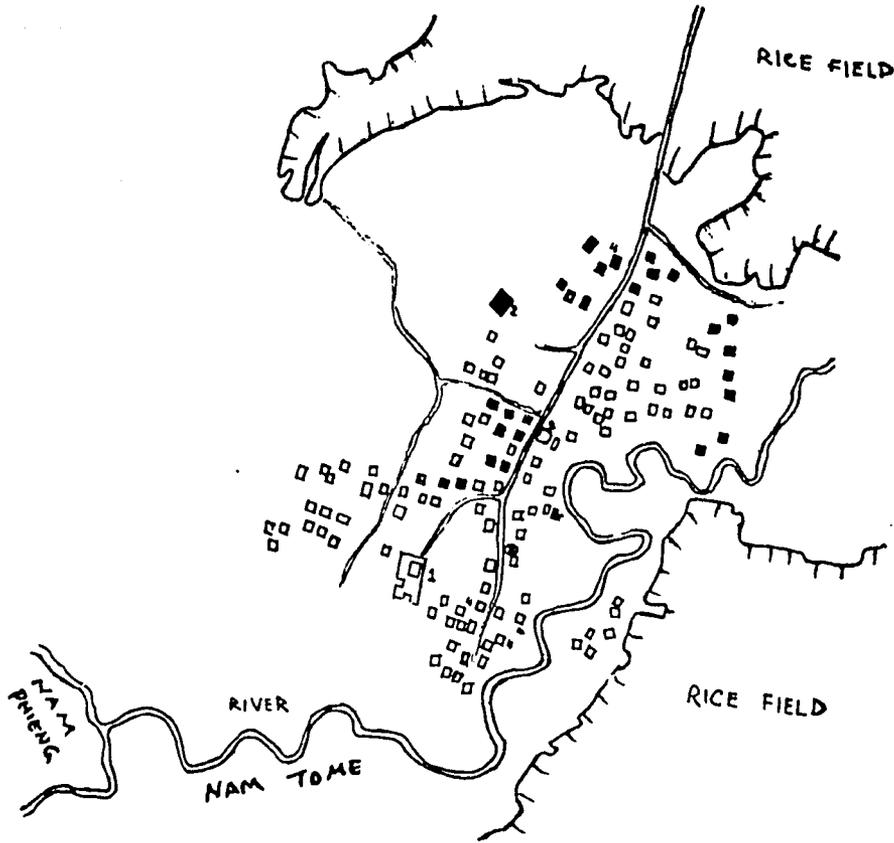
e. Potable Water

There is a shortage of water at the village. Eight wells were dug to a depth of ten meters, but satisfactory supplies of water have not been obtained. A concrete-lined well has been dug which is said to supply water in the rainy season. A well will be dug at the site of the new school, which was finished in July.

f. Medical Facilities

Facilities at Muong Phieng are used.

KANG
130 houses



LEGEND

- 1. Wats
- 2. Schools
- 3. Nai Ban's house
- 4. Retail Stores
- 5. Rice Mills
- 6. Dispensaries
- 7. Police station
- 8. ADO warehouse
- Dug wells
- ⊙ Drilled wells
- Houses built since 1959

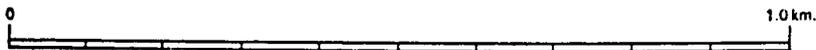


Figure 3 Kang
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g. Police Station

The station at Muong Phieng can be called by telephone.

VILLAGE POPULATION

Age Group	Village: Ban Khang				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	3	-	12	-	-	15	2.60
1	7	11	9	8	16	3.24	19	3.29
2	6	12	8	8	14	2.83	20	3.47
3	6	17	8	5	14	2.83	22	3.81
4	4	4	4	4	8	1.62	8	1.38
5	2	10	3	13	5	1.01	23	3.98
6	5	7	3	6	8	1.62	13	2.25
7	5	7	9	11	14	2.83	18	3.12
8	4	13	13	9	17	3.44	22	3.81
9	13	7	8	12	21	4.25	19	3.29
10	17	6	15	11	32	6.48	17	2.95
11-15	40	31	28	35	68	13.77	66	11.44
16-20	29	25	16	32	45	9.11	57	9.88
21-25	13	21	17	35	30	6.07	56	9.70
26-30	21	31	30	35	51	10.32	66	11.44
31-35	12	4	15	8	27	5.47	12	2.03
36-40	13	20	15	20	28	5.67	40	6.98
41-45	11	6	7	10	18	3.64	16	2.77
46-50	15	18	14	10	29	5.87	28	4.85
51-55	7	12	5	3	12	2.43	15	2.60
56-60	10	10	10	3	20	4.05	13	2.25
61+	11	7	6	5	17	3.44	12	2.08
No Age	-	-	-	-	-	-	-	-
Total	251	282	243	295	494	-	577	-

h. Telephone System

The one phone in the village is at the Nai Ban's house.

i. Rice Mill

The one rice mill is owned by Xieng Tong Di, who is from Sayaboury. The mill was installed in 1967, is rated at eight horsepower and is said to handle 40 to 60 kalong of

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paddy per day during the harvest season. Approximately 100 litres of gasoline are used per month. The customers are from Kang and Nakok. The miller raises from 20 to 25 pigs.

j. Retail Stores

There are four stores in Kang. The oldest was opened in 1962 by Xieng Van Dy, a member of the Village Development Committee and a native of Kang. He sells only cloth, blankets, dresses, cigarettes, and kerosene. By far the largest store was opened in 1964 by Ay Seang, also a native of Kang. He sells over thirty items including beer and whisky. The third store was started by Thao Hueng just after he finished school in 1966. He also comes from Kang. He sells about 8 items. The other store was opened by Thit Phan a Kang native, in 1968. Six items are sold.

k. Personal Equipment

Before the Cluster, 2 or 3 families had radios. Now approximately 20 have radios. There are one sewing machine, eleven bicycles, and no motorcycles.

l. Schools

The old school was built in 1950 by the villagers. In 1963 there were 35 students; 20 in the first grade, 10 in the second, and 5 in the third. In 1968 there were 68 students; 46 in the first grade, 13 in the second, and 9 in the third. The teacher is Mr. Smat Khambue. A new school of two rooms was built in 1969 with Cluster help. Last year eleven students went to the Groupe Scolaire in Muong Phieng for grade 4, 5 and 6.

m. Wats

There is one wat, with four novices, but no monk. There is at least one boun a year. The Nai Ban takes care of the money gained from the bouns.

4. Resources Utilization:

a. Rice Production

Average family production of paddy is about 300 kalong. The average for the second crop is said to be about 200 kalong, principally because they do not plant all of their respective fields. Production of upland rice ranges between 100 and 200 kalong. In 1968, ten families sold about 200 kalong to ADO, and 2 families sold 400 kalong. Sales to ADO started two years ago. The villagers prefer selling to tradesmen, who are said to buy only by volume, while ADO insists on establishing different prices for rice strains.

b. Livestock Production

Last year about ten buffaloes were sold to merchants from Sayaboury and Luang Prabang. The price is 30,000 to 50,000 kip per head. They also sold about 30 pigs in the same year to Sayaboury merchants. Chickens and ducks are sold almost everyday,

either amongst themselves or to other villagers. The Nai Ban has said that ADO wants to buy a number of Taiwan ducks to send to Savannakhet. The price they offer is 350 kip each, but the villagers want to hold out for 400 kip.

c. Other Production

The villagers say that although the Cluster taught them how to plant melons, beans and cabbage, the villagers don't want to do this because they feel that it takes a lot of time. They say they have to spend time on other matters like farming

5. Security:

Sometime before 1964 they had village soliders (Tahan Ban) in which 11 villagers joined the group. This is probably the same group that was in Muong Phieng and Na Kheme, because this group also was disbanded after one year. It is said that the 11 people who joined were then made regular soldiers in the army

6. Project Participation:

The villagers see 10 copies of the Cluster newspaper. These are given to the Village Committee Members and those who are literate. Anyone who has not received one can always borrow one from somebody who has one. Although this village did not participate in the swine breeding program in early 1964, they did receive 78 Taiwan ducks.

A new school was built this year for the village.

7. Villager Perceptions of Change:

The following are quotes from interviews:

Before the development era the villagers did not like to do rice farming because of the low yield of rice, due to the dry weather and shortage of water. Those who did not do rice farming got their food from the forest by digging for tubers and for taro. After the development era, the weather seemed to be more favorable and rice farming yielded more rice crops. The villagers became more eager to cultivate rice, but it was difficult for them to expand their rice fields. Only two of the three sectors of rice fields were irrigated by canals. In 1967 only seven farmers worked on double cropping. Last year 27 farmers performed double cropping.

Before the development era an amount of rice was sold mainly to those who did not have enough rice. The Nai Ban said that now the villagers all seemed to get along very well together. He said that if there was a dispute between the villagers it was the Nai Ban who decided the matter. If no compromise could be reached the parties in dispute would go to see the Tasseng.

Formerly the elders had to preside over the cultivation of any plants and the first planting of the rice. Now the villagers grew any plants they wanted at anytime.

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Nowadays, wild animals are very scarce. They just disappeared. This might be due to the increase of the population. It is said that even fish could not be found in the waters anymore.

Nowadays women do not have to do hard work as before. They do not have to weave their own cloth, seeing that they could buy this anywhere at the present time.

Formerly if a man wanted to buy anything he had to go buy it at Sayaboury and it would take him the whole day for both trips going on foot. Now the travel was very quick by taxi.

One of the elders said that formerly villagers used home made torches for lighting, now they use kerosene lamps.

BAN NAKOK

1. Location:

The village is located on the left bank of the Nam Phieng River at the southern extent of the series of Muong Phieng plains. Access is gained to the village from a point three and one-half kilometers south of Muong Phieng on the main road. The access road is about one kilometer long and crosses the Nam Phieng River. Prior to the construction of this access road, in 1967, the only access from Nakok was by trail up to Ban Kang and then from Ban Kang to the main road an additional distance of two kilometers. As the crow flies, Ban Nakok is three and one-half kilometers directly south of Muong Phieng. The center of the village is at military grid 667 105.

2. Administration:

Nakok is in the Tasseng Muong Phieng. The Nai Ban is Xieng Sone. His assistant is Thit Son. Nai Thit is also the Sarawat as well as being a member of the Village Development Committee. Other members of the Village Development Committee are Xieng Phoumi, Nai Seun and Xieng Phan.

3. Resources:

a. Land and Irrigation

The people of Nakok probably share the large 70 hectare plot of land that is located at the far end of the Muong Phieng low-line canal. This land is located south of the Nam Tome River. The low-line canal crosses the Nam Tome River and opens into a canal which has been very poorly kept up. The villagers say that there is no point in keeping the canal up, because the water never gets that far. The people of Nakok also do quite a bit of upland growing. Under the CRA census taken in 1969, there were 30 families that did only upland rice. There were 11 families that did only paddy, low-land rice, and there were 40 families that did both.

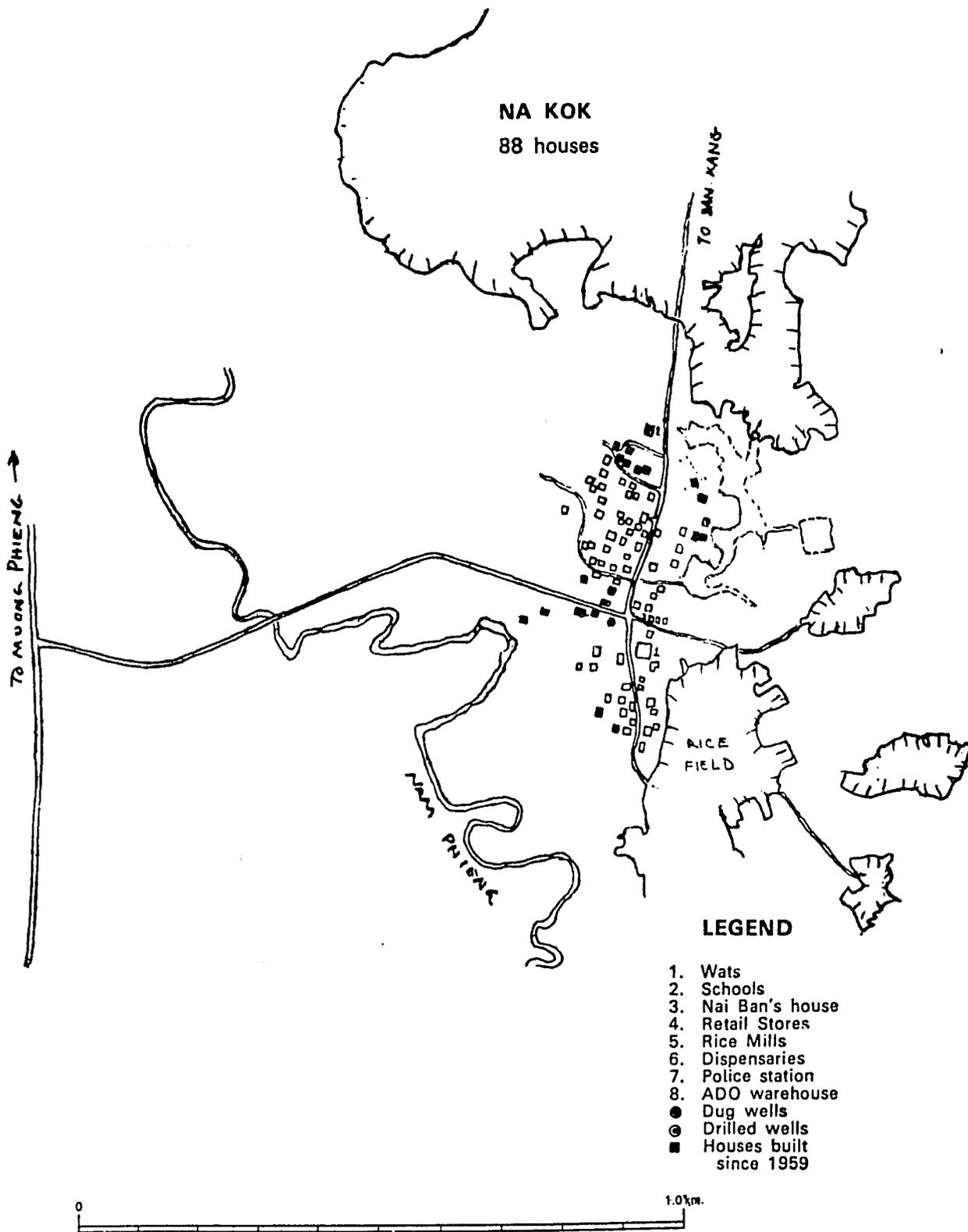


Figure 4 Nakok

2.10

Although the Hia-Nakok system has the name Nakok in it, there is only one holding in the entire system that is identified with a Nakok resident. It has been said that the Nakok area had been served by irrigation water from the Nam Tome river and that a dam had been installed there many years ago. The Nai Ban of Ban Kang has stated that he has tried to get the people of Kang, Nakok and Nasom Noi together to rebuild this dam. They hope to get started on it next year.

The average size of paddy land holdings, which is said to be two and one-half hectares, is probably high. This was the village that in the first interview said that there were 3,000 hectares belonging to the village. They say the walk to the upland fields is between one and two kilometers.

b. Manpower

In 1963, there were 76 families and in 1968 there were 82 families. Reference should be made to the table which shows the age-sex distribution for this village in the two years, 1963 and 1968.

c. Roads

As mentioned under "Location", the road situation in Nakok has improved markedly in the last two or three years. Previously they had to cross a ferry at the Nam Tome River to get to Ban Kang and then take the road directly north to the main road. Now they have only to go one kilometer to the main road directly west, crossing the Nam Phieng on a bridge.

d. Airfields

The airfield at Nam Tan is approximately 10 kilometers south of the village. The airfield at Sayaboury is about 35 kilometers north.

e. Potable Water

Although two wells have been dug at the village to the depth of about 10 meters, neither was successful. The main water source is still the stream which is about a half kilometer from the village.

f. Medical Facilities

The closest place for the people of Nakok to go for medical facilities is at Nam Hia. However with the dilapidated condition of the Nam Hia dispensary, it is probable that they make the somewhat longer trip to Muong Phieng.

g. Police Station

The people of Nakok can telephone to Muong Phieng to the police station there. There is also a police station at Nam Hia with two policemen, to which they can go if they so desire. It is probable that they can also telephone this station.

VILLAGE POPULATION

Age Group	Village: Ban Nakok				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	1	-	3	-	-	4	1.05
1	11	6	12	6	23	6.44	12	3.13
2	9	9	9	6	18	5.04	15	3.91
3	3	7	6	7	9	2.52	14	3.65
4	1	5	5	2	6	1.69	7	1.83
5	2	3	1	7	3	.84	10	2.60
6	5	11	4	6	9	2.52	17	4.43
7	1	-	5	5	6	1.69	5	1.30
8	4	9	6	7	10	2.80	16	4.17
9	5	5	1	1	6	1.69	12	3.13
10	7	6	5	12	12	3.36	18	4.69
11-15	20	17	26	16	46	12.90	33	8.50
16-20	13	22	34	30	47	13.20	52	13.50
21-25	13	8	17	28	30	8.40	36	9.38
26-30	10	17	21	34	31	8.68	51	13.30
31-35	8	13	9	6	17	4.76	19	4.95
36-40	10	18	9	13	19	5.32	31	8.07
41-45	10	3	7	2	17	4.76	5	1.30
46-50	12	10	7	10	19	5.32	20	5.21
51-55	6	3	3	1	9	2.52	4	1.05
56-60	5	2	3	-	8	2.25	2	0.52
61+	10	1	2	-	12	3.36	1	0.26
No Age	-	-	-	-	-	-	-	-
Total	165	176	192	208	357	-	384	-

h. Telephone System

Nakok is on the telephone system. The telephone is located in the house of the Nai Ban.

i. Rice Mill

There are no rice mills in Nakok. The people from this village go to the rice mill at Ban Kang.

j. Retail Stores

There are no stores in the village of Nakok. However, they can go one and one-half kilometers north to Kang to any of the four stores there. They can go a little over three kilometers to Ban Nam Hia where there are five stores, they can go about five kilometers to Phone Hine where there are five stores, or if they ford the Nam Phieng River they can go one kilometer further and go to the nine stores in Muong Phieng.

k. Personal Equipment

Twenty families have radios. Two families have bicycles. There are no motorcycles or sewing machines in the village.

l. Schools

This year the children in Nakok went to a school that had been built in 1957. In 1963 there were 33 students, of whom 24 were in the first grade, six in the second, and three in the third. In 1968, there were 41 students, of whom 29 were in the first grade, six in the second, and six in the third grade. Their teacher was Mr. Somboun Phothirack. Another school is now being built. This school suffered something of an unusual experience. After all the cement tile had been placed on the roof, some of the villagers inadvertently removed a number of the bracing supports for the wall and the entire structure fell to one side and collapsed. All of the cement tile were broken. The Nai Ban was fairly seriously injured in the leg. The villagers recovered, however, and have probably finished construction of the new school by this time.

Six students from Nakok have gone on to higher studies, that is the 4th, 5th and 6th grades at Nam Hia. They go to school riding bicycles.

m. Wats

There is one wat in the village with seven or eight novices, but no monk. They have tried for a number of years to get a monk to stay in the wat, but so far have been unsuccessful. When they have a religious ceremony the villagers have to invite a monk from Muong Phieng or from Ban Kang.

4. Resources Utilization:

a. Rice Production

It is said that the average paddy product per family is about 300 kalong. Two families get 500 kalong each year. The average for the second crop is only 50-80 kalong. Only one family has more than three hectares, this is the Nai Ban, who has five hectares. Eight families layed in a second crop last year. It is said that these are the only families who got water from the irrigation canal.

b. Livestock Production

In one year they are liable to sell from four to five buffaloes to merchants from Sayaboury or to villagers in other villages. According to the census taken by the CRA workers in 1969, there were 275 buffaloes owned in the village. The largest number, 16, was owned by a family in which the father was 30 years old and the mother 23, and there were four children. Two families had 11 buffaloes and two families had ten buffaloes. In all of these cases these families worked both upland and paddy fields. In the six cases where only one buffalo was owned, four of these cases found only upland rice being worked, and the other two cases were working both upland and paddy fields. They sell about 11 hogs per year. This does not include suckling pigs, of which quite a few are sold. It is said that they slaughter buffaloes or pigs in the village only when they have a boun. Many ducks are also raised. This village received a number of Taiwan ducks in connection with the livestock project in early 1965.

c. Other Production

Seeds were received from the Cluster management for cabbage, lettuce, onion, and garlic. These are grown only for subsistence needs. The village had an orchard in which a number of fruit trees were growing. A number of the trees had to be cut down when the road was straightened in the village. No attempt was made to replace these fruit trees. The villagers themselves remarked that earlier, their parents would have replaced the trees at some location.

5. Security:

The men say they used to wear knives up until about six or seven years ago. Now they only wear them for ceremonial occasions. There was no other comment made about security conditions.

6. Project Participation:

A new school is now under construction. The villagers have grouped themselves into five groups of fifteen villagers each. They rotate with supplying self-help labor for the school. When the school is finished they will have one additional teacher over the one they have at the present time.

They say that last year the social welfare people came to the village and said that the government was going to help the farmers who did not have buffalo. They asked the

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Nai Ban to give them the names of those who needed them. The Nai Ban gave them two names, but nothing has been heard since then.

They get ten copies of the Cluster newspaper every month. In addition they get five copies for the wat.

This village did not receive any hogs under the Livestock Development program in 1964-65. However, they did receive 36 Taiwan ducks. They seem to have been well appreciated.

In addition to having a new school now, their old one was repaired by the Cluster management back in 1965.

7. Villager Perceptions of Change:

The villagers say that formerly rice traders came from Sayaboury to buy their paddy rice. However, in the past two years the villagers have sold all of their rice to ADO and they say they got a better price than the one proposed by the rice traders. Both here and in Ban Kang they say the rice traders have not been back.

When they wanted to buy commodities, before the Cluster, it was very difficult to get to Sayaboury because there was no road. Now they can buy things they want in Muong Phieng, Sayaboury or Nam Hia.

Villagers say that the number of pigs and chickens of local bred, as well as ducks, which are being grown, are more than before. They say the reason is because the village received advice from the veterinarians who came to the village every two or three weeks. They say that now if an animal is found to be suffering from any disease, a telephone call can be made immediately to the veterinarian who will come to make a check. Formerly such a sick animal would be left to die.

Nai Ban said that formerly the religious ceremonies were neither pleasing nor entertaining, because there was only the monks praying. Now there was a lot of fun during such religious occasions, because the villagers could borrow the amplifier from the Cluster headquarters and the generator. There were songs, mohlam and other types of entertainment, including movies, so that the villagers wished the ceremonies could be held very often.

The Nai Ban and the Village Development Members stated that formerly there were cases of dispute and quarrel among the villagers. Now, all of them are on good terms. Before they quarreled amongst themselves and with the villagers of other villages. In the past days the population of Ban Nakok and that of Ban Kang did not get along well together. They are now on good terms with each other. According to the Nai Ban the fact was that in the old days the distance between the two villages seemed to be very far because there was no road. Now they seem to be very near to each other, because

of the existence of the road, whereby communications could be easily be made. Formerly if a man wanted to go out from the village, he had to be armed with a knife or gun. Now there was no need to carry any weapon. Existence of an easy means of communications lead them to feel that everybody belonged to the same village, because they met each other so frequently.

According to the Nai Ban there was also a change in the manner of food supply. Formerly, when there was a forest around the village and even though not enough rice could be produced, the villagers went into the forests to find food which could be abundantly obtained. Now this practice has become difficult because a major part of the forest has been cleared. Thus only a small quantity of food was available. Formerly there were plenty of fish in the streams and water sources, and now there were literally none. This was felt to be due to the construction of the dam. The Cluster advised the villagers to breed fish in ponds. However, this advice could not be followed at Nakok because there was not enough water.

The Nai Ban said that before the Cluster period contacts with government officials were primarily with the Tasseng. Now they go directly to the Nai Dan. Also in the olden days when there was no access road, no governmental officials came to the village. Only the Tasseng came once in a long while.

They say that they help each other even more nowadays then before. They say as an example of this fact is that those who do a second crop can still depend on help from others who are not involved in second cropping at that season.

NAM HIA

1. Location:

An inspection of the map of the Muong Phieng Cluster will show that the irrigable land is roughly in the shape of an hour glass, the top part contains the irrigable land of the two irrigation systems, Muong Phieng No. 1 and Hia-Nakok. There is then a separation of about two kilometers from the bottom (southern end) of those two systems to the top of the Nam Tan Irrigation System. The village of Nam Hia lies right in the middle of that small non irrigable and non-arable area. The village is just about 5.5 kilometers directly south of Muong Phieng. The military grid coordinates are 650 087.

2. Administration:

The Nai Ban is Wa Dua Lok. He is 39 years old. The assistant Nai Ban is Chongher Mua, he is 40 years of age. Another assistant Nai Ban is You Eher, 35 years of age. When the Meo moved to this location in 1962 and 1963 the population included parts of many villages. The group that finally settled here had a large number of Nai Bans who were here with portions of their old villages. Not until 1966 was the competition for leadership resolved. There was an election and the present Nai Ban was elected.

He had been the leader of the group from Xieng Khoueng. There had been two other main groups of people in the area; they were the group from Luang Prabang and the group from Muong Sai. The leaders of both of these groups had been competitors for the position of Nai Ban. The Nai Ban, when elected, selected the leader of the group from Luang Prabang to be his assistant. He did not, however, select the Nai Ban from Muang Sai to be his assistant, although this man has since grown into a position where he is considered to be one of the respected elders of the village. The Nai Ban says that the situation had been rather difficult when they first arrived. It was difficult to work collectively. He says that now the situation is better, only one-third of the village remains obstinate.

The village secretary is Jai Pao Thao. He is 46 years old. Other Committee Members are Yu Yee Song, Sa Lee Song, Mua Ju, Jue Pao Thao, Sai Tung Mua, Yai Pao Moe, Kuaja Pang Lee, Yong Tua, Yu Yee Hur, Yia Veeva, Yia Tu Hur, Yia Tone Mua, Yua Yia Ja, Si Vang, Yua Meng Her.

3. Resources:

a. Land and Irrigation

The land directly around the village is arable for some upland crops and is good for vegetable growing and for some fruit trees. Eighty-six families have been awarded plots in the Hia-Nakok irrigation system. Some sixty-four of these are irrigable. Twenty-two of the plots are problematical. It could be that with extensive leveling and the addition of other canals and possibly some water lifting, these can be made into good paddy lands. The Meo here also do a great deal of upland farming.

b. Manpower

A separate study is being made of the build up of this village and of the history of the participants of this build-up. At the start of the Cluster in 1964 relatively few Meo had arrived. In 1963 there were 33 families and about 258 people. Since that time there have been some additions in that new arrivals in the Nam Pang area have moved up into Nam Hia. It was not possible to make sex categories, although whole-population age-groups could be determined. We do have a breakdown by sex for the Nam Pang group, however. It was the proportions reflected in this group of Meo that was used to make a estimate of the same proportions of the Nam Hia Meo in the overall table which appears in the main report.

c. Roads

The main Cluster road goes right through the center of the village. In fact the village is a strip on both sides of this main road. The village roads themselves are very poor, except for the one road which goes northwest from the main road to the new school.

d. Airfield

The village lies about 7 kilometers from the airfield at the Nam Tan Dam. The village is about 36 kilometers from the airfield at Sayaboury.

168 houses

LEGEND

- 1. Wats
- 2. Schools
- 3. Nai Ban's house
- 4. Retail Stores
- 5. Rice Mills
- 6. Dispensaries
- 7. Police station
- 8. ADO warehouse
- Dug wells
- Drilled wells
- Houses built since 1959

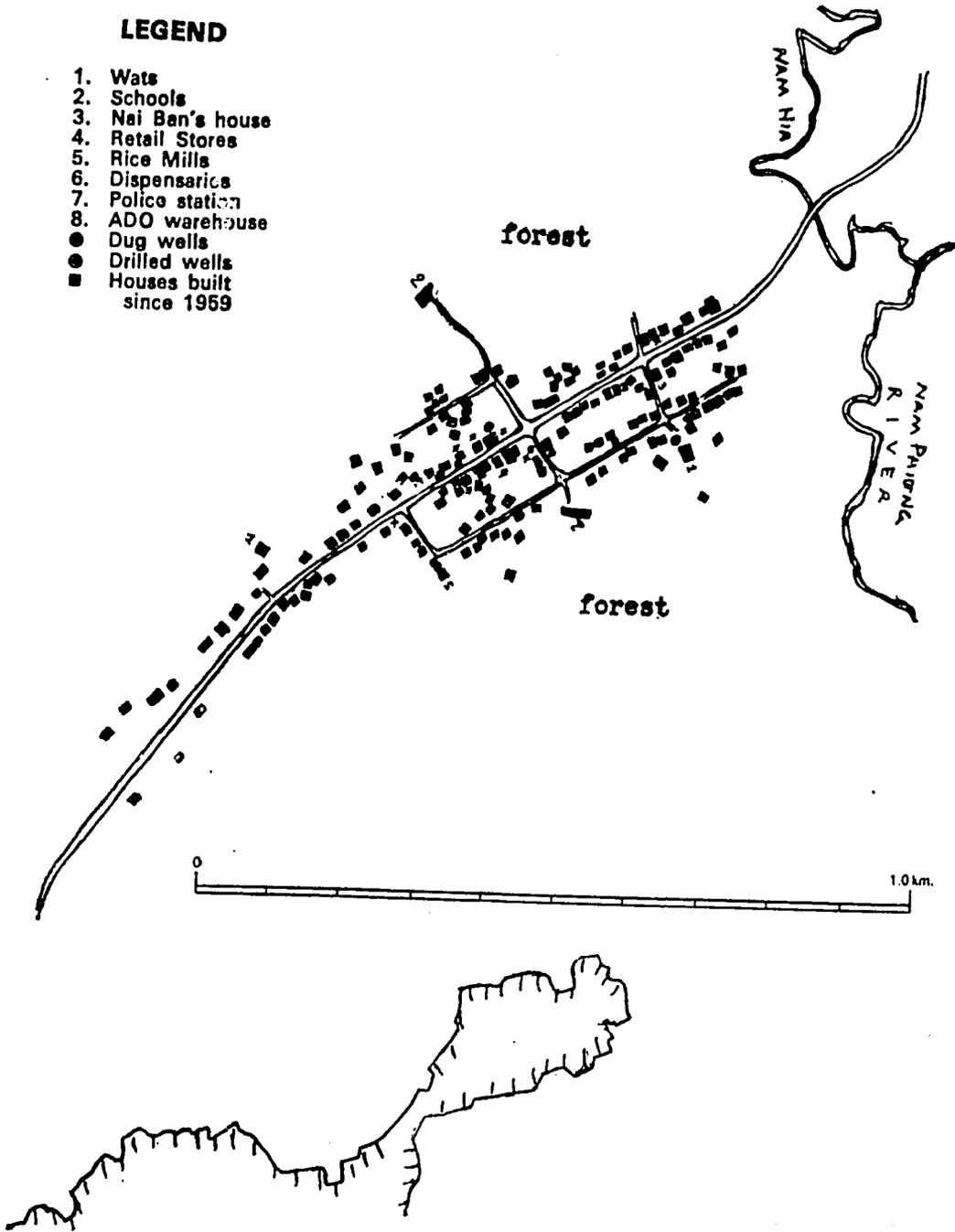


Figure 5 Nam Hia

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VILLAGE POPULATION

Age Group	Village: Ban Nam Hia				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	-	-	-	10	3.73	5	0.52
1	-	-	-	-	15	5.60	40	4.17
2	-	-	-	-	11	4.10	76	7.92
3	-	-	-	-	15	5.60	50	5.21
4	-	-	-	-	20	7.46	41	4.28
5	-	-	-	-	12	4.48	28	2.92
6	-	-	-	-	15	5.60	46	4.80
7	-	-	-	-	20	7.46	31	3.23
8	-	-	-	-	10	3.73	41	4.28
9	-	-	-	-	8	2.99	33	3.44
10	-	-	-	-	11	4.10	27	2.82
11-15	-	-	-	-	22	8.21	88	9.18
16-20	-	-	-	-	28	10.50	118	12.30
21-25	-	-	-	-	9	3.36	61	6.36
26-30	-	-	-	-	23	8.58	61	6.36
31-35	-	-	-	-	11	4.10	51	5.32
36-40	-	-	-	-	10	3.73	69	7.19
41-45	-	-	-	-	5	1.87	28	2.92
46-50	-	-	-	-	1	0.37	18	1.88
51-55	-	-	-	-	2	0.75	12	1.25
56-60	-	-	-	-	1	0.37	19	1.98
61+	-	-	-	-	9	3.36	16	1.67
No Age	-	-	-	-	-	-	-	-
Total	-	-	-	-	268	-	959	-

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e. Potable Water

Four wells were dug for the village under Activity Plan No. 9. Two of these wells have covers and pumps installed; one is no longer operative. Three wells were drilled by the Refugee Relief and Rehabilitation program at the time or shortly after the beginning of the village. Only one of these wells is now operative. It was also planned to dig two wells at Nam Hia under the Activity Plan No. 26. Neither of these has yet been started. Six open, unlined wells were dug without Cluster assistance.

f. Medical Facilities

This village has had a clinic or dispensary almost since its start. This clinic has been used by nearby villages of Nam Pang and Nasom Noi. A replacement clinic was planned for this year. There has been some difficulty in getting the Meo to supply the self-help that they had promised when the project was proposed. The Nai Ban has thrown up his hands and left the problem with the Nai Dan. It is interesting to note that in the interview with the Nai Ban and his Village Committee the people said that although many of the Meo were sick when they moved to the village and that many died because of the weather and diet, those who were cured were lured by traditional methods. It is said that only those who have been converted to Protestantism or to the Roman Catholic faith go to see the doctor.

g. Police Station

There is a police station in Nam Hia and two policemen are stationed there.

h. Telephone System

Nam Hia is on the telephone system.

i. Rice Mills

There is one rice mill in Nam Hia. It is owned by Ay Chan, a Lao from Sayaboury. He is also a taxi owner and has two Land Rovers. He started the mill in 1967. The mill is rated at 10 horsepower. He says that he processes between 50-60 kalong of rice a day during the harvest season and from 20-40 kalong during the ploughing season. His customers come from Nam Hia, Nakok, Nasom Noi, and Nam Pang. He uses about 150 litres of gasoline per month. He raises between 30-40 pigs. His price is the same as all the other mills in the Cluster, 20 kip per kalong if the rice bran is left and 25 kip if the owner of the rice removes the rice bran.

j. Retail Stores

There are five retail stores in Nam Hia. The first was built in 1965 by Mr. Chan Pan. He is a Lao from Muong Houn. He sells about 30 items. The second store was started in 1966 by Mr. Kham Keo, who is a Lao from Muong Sai. Mr. Kham also has a buffalo that he rents out. Mr. Kham seems to sell a few more items than Mr. Chan does. The third store started in 1967 by Ay Khouang who is also a Lao from Muong Houn.

NAM PANG (MEO AND LAO)

No. of houses 1969

Old Meo 52

Houei Sec 44

Lao Thoueng 82

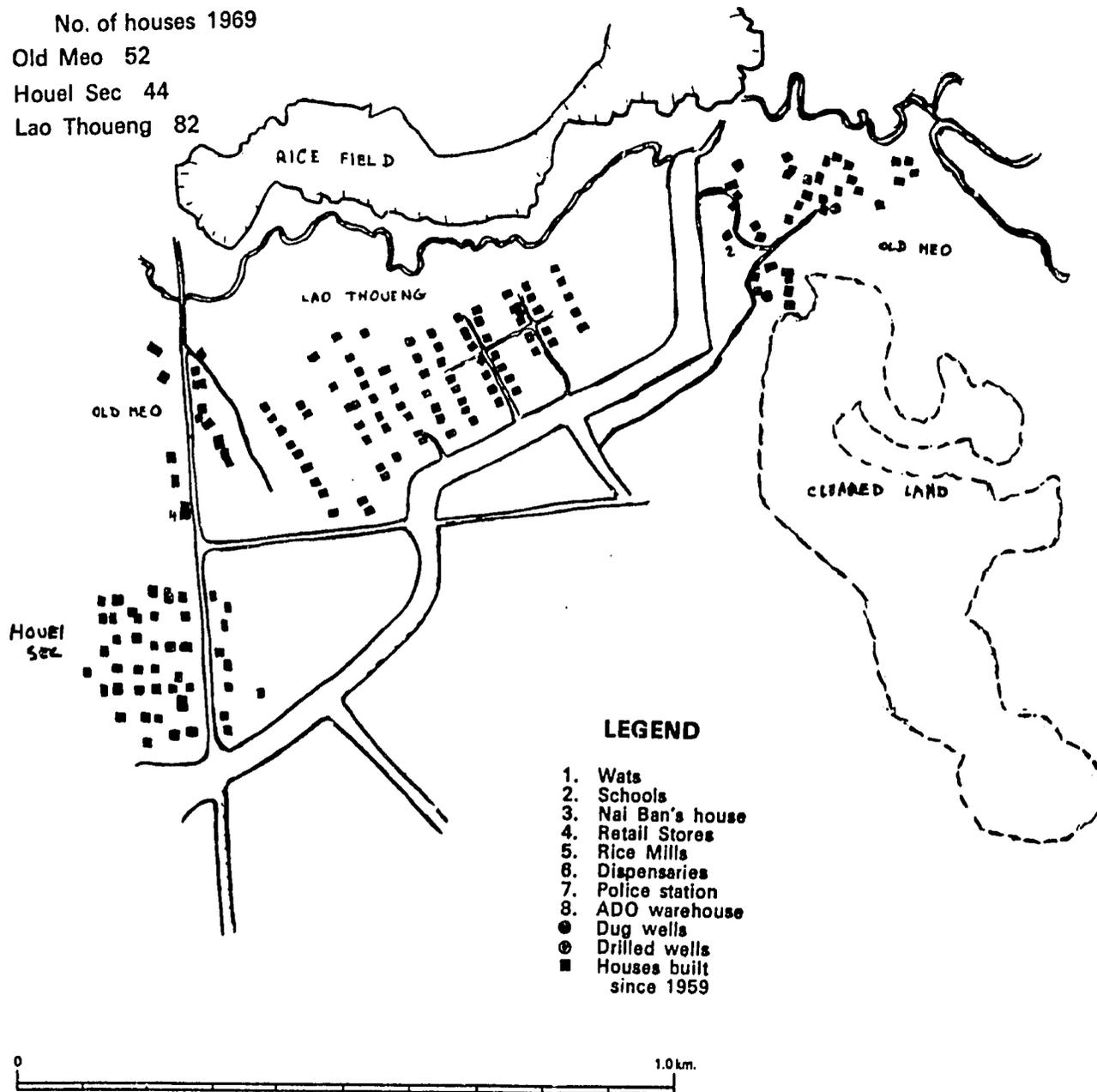


Figure 6 Nam Pang

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He has the only shop at which you can buy prepared food. Handles about 25 items. Fourth store was started by Thao Beng who comes from Muong Thek; this store is also stocked with over 30 items. Mr. Thao Beng is a Yao. The sixth store was started in early 1969 by Thao Somphone. He is a Lao from Nam Tha. This store is also as well stocked as the best in Nam Hia.

k. Personal Equipment

Eight bicycles were reported as owned in 1966, at which time there were also two radios. It is believed that both of these numbers will understate the actual conditions at the present time. Two automobiles (taxis) are owned by one of the store keepers. Mr. Tom Xerri told me that a few months ago one of the other meo entrepreneurs had bought a car to use as a taxi. He drove this car very carefully and had a driver who was a Lao. He usually stayed with the Lao when they drove anyplace. One day he allowed the Lao to take the car by himself for some errand and the Lao drove too fast and completely wrecked the car. Mr. Xerri was quite surprised at the philosophical way in which this Meo took this loss.

l. Schools

In 1963 there was 1 school with 50 students, probably most of them were in the first grade. The teacher was Mr. Sao Cha Thao. This school had been built in 1963. Two rooms were added in 1965. In 1968, a new school was built on the other side of the town. The addition of this school permitted Nam Hia to have, by 1968, six grades or the equivalent of a Groupe Scolaire. It lacks certain of the other requirement for a Groupe Scolaire and is called a demi-Groupe Scolaire. In 1968 there were 283 students with seven classrooms. The first grade had two classes, each with 48 students, taught by Mr. Yanthai and Mr. Leck Bokeo. Second grade had 56 students taught by Mr. Panluly. Third grade had 49 students taught by Deng Sayasouk. Forth grade had 36 students, taught by Mr. Yang Toua. Fifth grade had 22 students, taught by Mr. Ounh Homdaick. Sixth grade had 24 students taught by Mr. Yang Neng. The top three grades at this school also included students from Nasom Noi, possibly from Nakok and Nam Pang. In 1968, 25 students took the graduation test; of these 17 passed.

m. Wats and Churches

There are two churches in the village. One church is a Catholic church which has an Italian Father. The church is located on the west side of the road. On the east side of the road is a Protestant Church. The Protestant minister is, Ea Lao Sao, a Meo. This church has been supported by the Chirstian Alliance since the late 1950's. There are said to be 20 families who are Catholic and 65 who are Protestant. The rest of the Meo are animists.

There are also five Buddhist families. These are the Lao or Thai Dam who have their shops in Nam Hia. There is no wat in the village.

Although the Meo language does not have a written form, both of the Christian churches have transcribed the language into Roman transliteration.

4. Resource Utilization:

a. Rice Production

Before moving to Nam Hia, and when conditions were more settled, the Meo had grown rice, both non-glutinous and glutinous, as well as wheat and opium, when they were living in the mountains. The Meo from Xieng Khoueng had also raised buffalo. The Nai Ban says that they really did not like to raise rice and much preferred raising cash crops, such as corn and opium. He said they also liked to stay in the mountains, because it was cooler. Since moving to Nam Hia they have continued to grow upland rice in the hills and mountains surrounding the valley. As mentioned earlier some 80 families have been given land in the Hia-Nakok irrigation system. Of these, some 64 families have irrigable land. 1967 was the first year that the Meo tried to raise wet rice here in this area. They were given a great deal of support from the Cluster who supplied them with tools and furnished on-the-job-supervision and training, as it were, and also provided loans for the purchase of buffalo for all of those who participated in that first year. The first year, because of many circumstances, a number of the families had to plant their rice too late and had crops which could not be considered satisfactory. However, they have persisted and continued to clear the land and now many more families are raising rice in the Hia-Nakok area. Last year 20 families also double cropped during the dry season. By 1969, 51 families had put in double crops totaling 49 hectares.

b. Livestock Production

It is said that every family probably raises two or three pigs. At Nam Hia, as in all Meo villages, it is felt that a pig should be sacrificed to the spirits occasionally to keep harm or sickness from the family. In early 1965, the villagers of Nam Hia had taken the largest number of pigs under the livestock program. They took 10. Many of them became sick very soon and died. Some of those that were sick were taken away by the veterinarians and the villagers say that nobody ever told them what happened to them. The Nai Ban has said that he didn't want to raise these pigs because they eat too much; he said he preferred to raise buffalo. The number of buffalo in the village is very small, so that no buffalo are sold at the present time.

The village did not officially receive any of the Taiwan ducks, however, they did get some unofficially from other villages. The Meo do not, at least at Nam Hia, raise many ducks. The Meo have made a number of attempts to raise fish. Early in their arrival in the area they put a dam on the Nam Hia river to construct a pond. Also very early in the Cluster two ponds were dug and stocked by fish by the Cluster. In all three cases the fish that were stocked were eaten by predator fish or snakes. After about a year all the fish had been lost.

c. Other Production

The Cluster gave cabbage, lettuce, garlic, onions, beans and possibly carrot seeds. They said that they were the kinds that they had had before, except for the carrots.

In 1964 and 1965 the villagers sent to Sayaboury, by the Cluster truck, a load of vegetables for sale. Only a few were sold however, and this pretty well stopped the attempt to raise vegetables for sale.

5. Security:

There seems to have been no direct threat to the security of the Nam Hia village. Most of the Meo inhabitants of the village carry side arms or rifles. Their lives have been insecure for at least the past ten years, so that threats to security are something they take in stride. The main threat to the village of course, is the large amount of Meo's in the military at the present time. It has even been noted that some of the Meo fields are being worked by Lao who have been hired by the Meo families to do the work since the men in the family are fighting in the army.

6. Project Participation:

The Meo who originally came here in 1962 and 1963 came under the auspices of the Refugee Relief Program of the Rural Development Division. They were given a great deal of assistance during the first two years by this organization. This included, rice, a certain amount of clothing, and tools. With the inception of the Cluster in 1964, Nam Hia took its place as one of the villages in the Cluster area.

One of the first projects that they participated in was the swine project. They were given 10, as noted above. This project was not successful and the swine have all died out.

There are four wells with concrete linings and there are six without linings in the village. There are also three drilled wells, but only one of these is now in use. As mentioned earlier it was planned that two wells be dug under Activity Plan No. 26. One of these would be at the school. Neither of these has yet been started.

The three-room school is a Cluster activity. There has been a good deal of talk about increasing this three-rooms to six rooms, so that there would be a new school for the entire Groupe Scolaire students. Major project participation of course, has been in irrigation. Meo contributed a large, if not more than a majority, proportion of the some 2,600 man-days of self-help labor that went into the Hia-Nakok system.

Two classes in the home economics courses were given at Nam Hia in clothing construction and in the general home economics activities. In general, the women in Nam Hia have been quite responsive to the home economics activities.

The dispensary at Nam Hia has been of great help to the village and to other villages nearby. It has also been the point at which courses have been given in maternal and child health.

The people in Nam Hia contributed much self-help to the construction of the market at Muong Phieng.

Three of the fifteen students of the agricultural training course, given under Activity Plan No. 20, were from Nam Hia.

The village of Nam Hia did not participate in the privy program. They now say they would like some assistance in the matter from the Cluster.

7. Villagers Perceptions of Changes:

The people of Nam Hia have probably been subjected to and have absorbed more change than the people in the other villages. For them it is somewhat difficult to distinguish between the changes that have occurred to them since the Cluster started and the changes that have occurred in their lives over the past 10 years.

One of the major changes of course is the fact that they are now growing low-land rice. Another change is the fact that they are also growing second crops in the low-land rice.

They say that their clothing has changed. Many of the people now dress in the modern style, however, walking in the area it still seems to be more normal to see the Meo dressed in their usual black and red costumes.

The Meo say that the new road has made transportation and traveling far more convenient.

They say that their house style has changed. Now their houses have two levels. Previously, in accordance with the houses they had in the mountains, houses were built directly on the ground. Now they tend to be built on stilts like the Lao.

One villager says that when he was at Luang Prabang, money was earned easier and anything could be sold for a good price. He says that is not so here. There are few buyers. He says he would like to go back to Luang Prabang because he can earn money easily there.

NASOM NOI

1. Location:

Nasom Noi is located on the right bank of the Nam Phieng River about eight kilometers directly south of Muong Phieng, as the crow flies. The access road to Nasom Noi leaves the main road at Nam Pang and continues southwest-ward for about two kilometers to the village. The center of the village according to military grid coordinates is 662 062.

2. Administration:

Nasom Noi is in Tasseng Muong Phieng. The Nai Ban is Sithan Chanpoh, he is 45 years of age and has been in the position for seven years. Committee Members are Nai

Phet, Champaban, Xieng Sitan, Tan Seeda, Nai Zi Sipha. This village was made up originally of villagers who had lived in Nasom Nyai and moved to this new location about 30 years ago when the other village became too large. Nason Noi has a small satellite village, Ban Nong Bua, which is on the other side of the Nam Phieng River and about one and one-half kilometers east, slightly north. There are fifteen families here.

3. Resources:

a. Land and Irrigation

There are three families who have large rice fields, that is about two and one-half hectares; they do not plant upland rice. The general average size for holdings in this area, according to the Rural Development Division people, is about one and one-half hectares. Upland rice is grown at a distance of about one to two kilometers from the village. According to the census taken by the CRA workers in 1969, there are seven families who do only upland rice. In this census there is only one family that does only paddy rice. There are 29 families who do both. This includes the family who has the largest production, which is about 600 kalong. Nobody has the benefit of irrigation in this village. However, the village is located at the northeast edge of the Nam Tan area and some of the villagers are in line to be allocated plots in the Nam Tan area. Present fields will be irrigated. (Note the contrast between CRA and villager reporting regarding planting of upland rice.)

In 1968, 26 people provided self-help labor in the construction of the Nam Tan system. They are said to have gone every day for quite a period. They were not called this year, so the villagers have not gone again. It seems possible that some papers have either been lost or there has been some sort of a mix up.

b. Manpower

In 1963, there were 34 families in Nasom Noi. In 1968, including the families in Nong Bua, there were 40 families. Breakdown of total population is shown in the table. Population in 1963 was 171, in 1968 it was 245. It is probable that the 1963 figure does not include the population of Nong Bua.

c. Roads

The road to the main road, which is a little over two kilometers long, has been slightly relocated so that part of it goes on the bank of one of the laterals of the Nam Tan system. Prior to the construction of this road, the only road access was the trail south to Ban Nasom Nyai.

d. Airfields

Nasom Noi is about seven kilometers from the airfield at Nam Tan dam. The first airfield was located within just a few hundred meters of this village along the right bank of the Nam Phieng River. This area has been returned to paddy.

NASOM NOI

31 houses

LEGEND

- | | |
|--------------------|---------------------------|
| 1. Wats | 7. Police station |
| 2. Schools | 8. ADO warehouse |
| 3. Nai Ban's house | ● Dug wells |
| 4. Retail Stores | ⊙ Drilled wells |
| 5. Rice Mills | ■ Houses built since 1959 |
| 6. Dispensaries | |

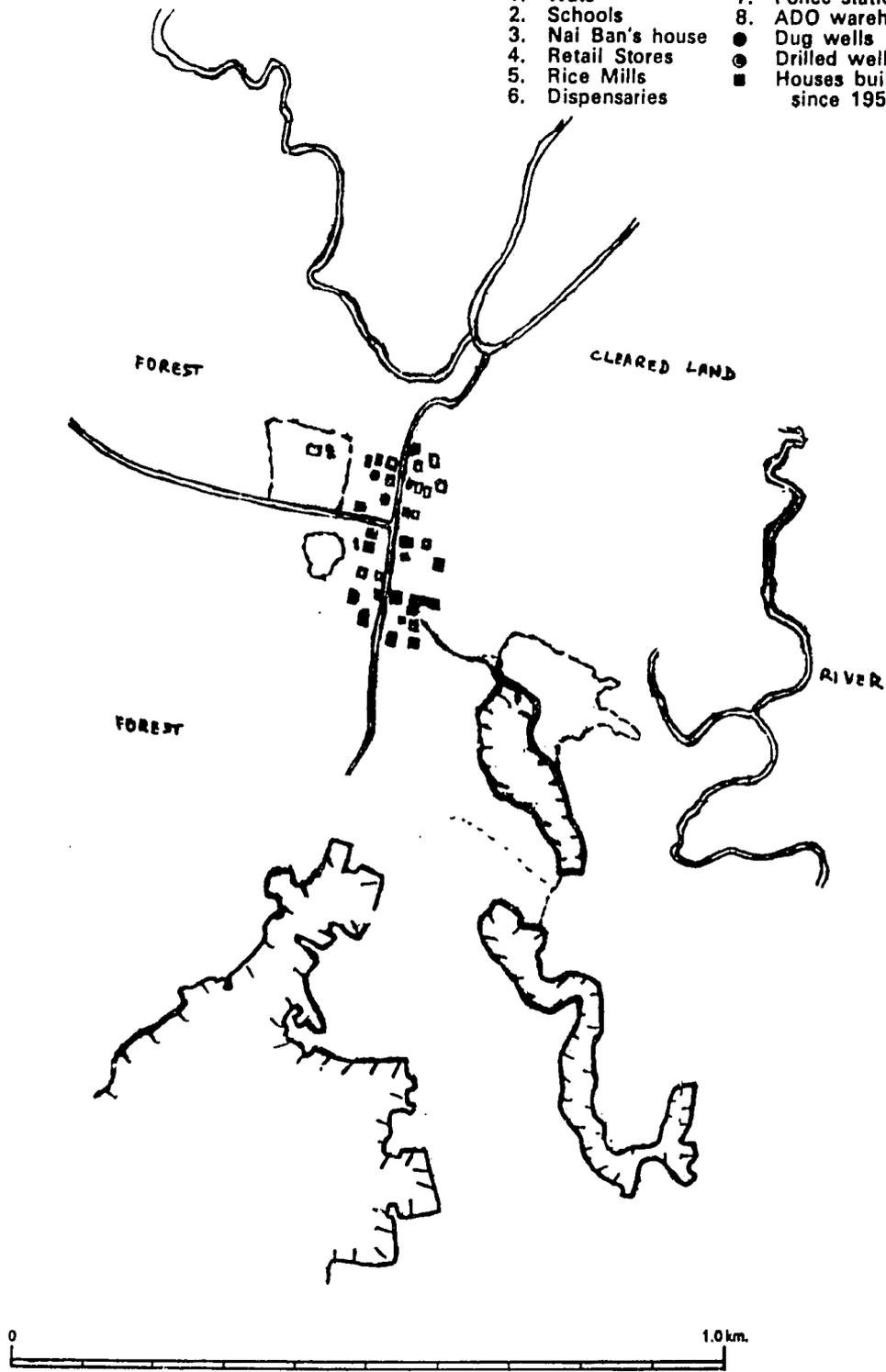


Figure 7 Nasom Noi

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VILLAGE POPULATION

Village : Ban Nasom Noi					Total			
Age Group	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	-	-	-	-	-	-	-
1	2	5	6	2	8	4.68	7	4.22
2	2	8	3	3	5	2.92	11	6.63
3	5	3	4	4	9	5.26	7	4.22
4	2	9	7	1	9	5.26	10	6.02
5	-	-	3	4	3	1.75	4	2.41
6	2	4	5	3	7	4.09	7	4.22
7	4	1	3	4	7	4.09	5	3.01
8	2	4	4	4	6	3.51	8	4.82
9	1	2	4	4	5	2.92	6	3.61
10	3	2	4	5	7	4.09	7	4.22
11-15	4	9	11	12	15	8.77	21	12.65
16-20	6	5	5	5	11	6.43	10	6.02
21-25	8	1	8	6	16	9.36	7	4.22
26-30	5	6	8	9	13	7.60	15	9.04
31-35	8	2	7	6	15	8.77	8	4.82
36-40	3	8	4	8	7	4.09	16	9.64
41-45	4	4	4	-	8	4.68	4	2.41
46-50	3	3	2	2	5	2.92	5	3.01
51-55	4	1	3	-	7	4.09	1	1.52
56-60	1	3	3	1	4	2.34	4	2.41
61+	3	2	-	1	3	1.75	3	1.81
No Age	1	-	-	-	1	.58	-	-
Total	73	82	98	84	171		166	

e. Potable water

The Cluster provided one cement-lined well for the village. A drilled well was attempted. It went 31 meters deep, but no water was found. The Nai Ban said they probably dug at the wrong place. They have not been asked to come back. The Nai Ban says the villagers do not believe in drilled wells, but would like more cement-lined dug wells.

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f. Medical facilities

This village uses the medical facility at Nam Hia

g. Police station

This village goes to Nam Hia to summon the police.

h. Telephone system

When the villagers were asked whether they wanted to have telephones, they were told that they would have to provide poles. This village did not provide the poles until too late, and they were told that they could not have the telephone. The Nai Dan told them that they were close enough to Nam Hia, so that they could walk there if they had an emergency.

i. Rice mills

The rice mill at Nam Hia is used by this village.

j. Retail stores

People do most of their shopping at Nam Hia. However, they also go to the other villages including Muong Phieng and occasionally to Sayaboury. In one recent case where a family wanted to borrow money to buy some land they went to the merchant at Nam Hia and borrowed about 20,000 kip.

k. Personal equipment

Four families have radios and one family, that of the Nai Ban, has a bicycle. There are no sewing machines or motorcycles.

l. Schools

At the time of the beginning of the Cluster the school was held in the wat compound and the teacher was a CREC teacher. In 1963, there were 23 students, sixteen in the first grade and seven in the second grade. A new school was built in 1966 with the aid of the Cluster. There are now 37 students in school of which ten are in the first grade, 18 in the second grade and nine are in the third grade. The teacher is Mr. Bounthy Kamhphoubong.

m. Wats

There is one wat with one monk and two novices. This village has always had a monk. Last year there were two monks. The villagers of Na Tane invited one to come to their wat, and he accepted. The small village of Nong Bua also has a wat and also has a monk. The bouns have been much better since the Cluster started. The Cluster supplied electricity and shows movies. This village can get from 40,000 to 50,000 kip from a boun. They say that a larger village can get as much as 80,000 kip. The people come from other

villages. Before the Cluster period the merit ceremonies were purely religious and there was no entertainment. Very few other villagers ever came to join in the boun at this village.

Ten years ago, when this wat was built, the villagers asked the Nai Dan to help them get some roofing material. He told them to get it from the Chao Khouang at Sayaboury. The villagers walked to Sayaboury and carried the metal roofing back on their backs.

4. Resource Utilization:

a. Rice Production

Average rice product per family is between 200 - 300 kalong. This is for rice field which probably average about one and one-half hectares. The land at this village is said to be very good and it is highly productive. Three of the families are said to get between 400 - 500 kalong. According to the CRA census, one family farms both upland and low-land rice and has a total of 600 kalong. This family also has 13 buffaloes, the largest number in the village. This is a relatively young family since the father is only 30 years old and the mother 25, they have four children. According to this census two of the families get a total of 500 kalong and two get 400 kalong. One of the latter farms only low-land rice. Average family product from up-land rice is 100 - 150 kalong. Nobody at this village has second-cropped.

b. Livestock Production

According to the census of the CRA workers, there are 157 buffaloes owned in this village. There are said to sell about 10 buffaloes a year to merchants from Sayaboury. They are also said to sell between 20 and 25 pigs each year to the merchants. They also grow native ducks, Taiwan ducks, cross-bred ducks and some chickens. The ducks are said to be very healthy and give quite a few eggs. They are said to sell quite a few eggs to officials. They sell for 100 kip per five eggs. The native breed ducks sell for 500 kip and the cross-bred ones sell for 400, because they are somewhat smaller and are not quite as tasty. There is one elephant which is owned by the Nai Ban. This is tied up at edge of the forest. It is used to haul logs to make charcoal or for hire to pull timber for housing construction. The fee ranges from 2,000 to 5,000 kip, depending on the size of the house.

c. Other Production

According to the CRA census, almost every house in the village has a garden. Vegetables they grow are; lettuce, onion, garlic and carbage. They do not grow any for sale, just enough for subsistence. They also grow mangoes, oranges, pomelo, and coconuts.

5. Security:

The Nai Ban says they have had no real problems concerning security. However, the villagers heard from others that they were afraid and the villagers themselves have now become afraid. They hear the shooting at the Nam Tan construction site, and this

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worries them. They used to have guards for their village, which were broken down into five groups of four people each. Guard units have not worked for some time. The Nai Ban also said that there were village "soldiers" about ten years ago, but he didn't know what happened about them. This is probably the same unit that has been reported in connection with Na Kheme and Muong Phieng.

6. Project Participation:

Nasom Noi received six of the swine when they were distributed in early 1965, they died after a few months. They also received 36 of the Taiwan ducks. They seem to have been very successful.

As mentioned before, they have one well that was dug for them, one well that was drilled, which was unsuccessful, and they are scheduled to have another well dug for them in connection with Activity Plan No. 26.

The school was another Cluster contribution, in part. The Cluster gave nails and roofing. Villagers supplied the labor and lumber.

There seems to be some sort of a mix-up about the participation of these villagers in the Nam Tan dam construction. A number of people have worked on the site, but have not been called back to work there again. It is possible that their contributions will have been overlooked and these people may not have been given the land they should get.

Early in the history of the Cluster they were given seed for vegetables. They say they didn't know the names of them and they soon stopped growing them. It seems that one reason they stopped growing them was that the same vegetable seeds were grown at Nam Hia and the Cluster provided a truck to take these vegetables to be sold at Sayaboury. They did not do that for Nasom Noi, and it is possible that there was some resentment.

7. Villager perceptions of Change:

The elders say that the number of deaths have decreased. Although there is now a medic the villagers still, unless they are seriously ill, use the local practitioner, who prescribes tree roots, etc.

The amount of land for farming has not changed during the period of the Cluster. However, land is being cleared. That which lies between the village and the main road is allocated to the Meo. The Nai Ban complains that these immigrants have caused many troubles. He says they throw grenades into the water to kill fish. This has forced the villagers now to catch frogs for food.

The Nai Ban says that the road that was built to the main road has brought progress to the village.

Before the development period the bouns were purely religious. Now there is much entertainment and many people like to go to them. People from nearby villages also come to their bouns.

The Nai Ban says that since the development of the Cluster he has now been able to attend training courses which have helped him to give him ideas and help him learn how to solve problems. For example they have presented the problem that they would like to have a road to go to Ban Nakok. This would then pass nearby Ban Nong Bua and would generally open up an area in which they have a good deal of interest as well as farming land. The Nai Ban says that they sent a petition to the Nai Dan asking for this, but he told them that the villagers would have to wait.

Before the Cluster era the villagers used to go to see their Tasseng for problems. Now however, they go to Muong Phieng to the Development office and see Maha Bouarith, Maha Suvan and the Nai Dan. (The term Maha is a relatively exalted Buddhist rank. Both Mr. Bouarith and Mr. Suvan, who runs the information program, formerly held high positions in the Buddhist hierarchy in the province of Sayaboury).

They state that wild life game is much less available now than before. The Nai Ban says also that since the Cluster there is much less quarreling and less stealing of ducks and chickens. He says there is also less feuding about land. The Nai Ban says that the villagers now get along very well. If there is a dispute the Nai Ban mediates.

NASOM NYAI

This is to be distinguished from the smaller village, called Nasom Noi which was an off shoot of this village.

1. Location:

The village is located nine and a half kilometers directly south of Muong Phieng and about four and one-half kilometers directly east of the dam at Nam Tan. The village is about 1 kilometer west of the Nam Phieng River and is about 1 kilometer east of the main Cluster road. Military grid coordinates of the center are 655 045.

2. Administration:

Nasom Nyai is in the new Tasseng of Na Tane which was started in 1967. The Nai Ban is Xieng Sing Thong, who is 42 years old. The village secretary is Thit Muon. Members of the Village Development Committee are Xieng Sorn, Nai Na, Xieng Hanh, Nai Ping, Nai Ma, Chan Chouay, Thit Nan, and Chan Hom. The Nai Ban says that this village was founded about 75 years ago. The settlers moved from Na Tane, led by a Nai Sine Phimoon.

NASOM NYAI

89 houses

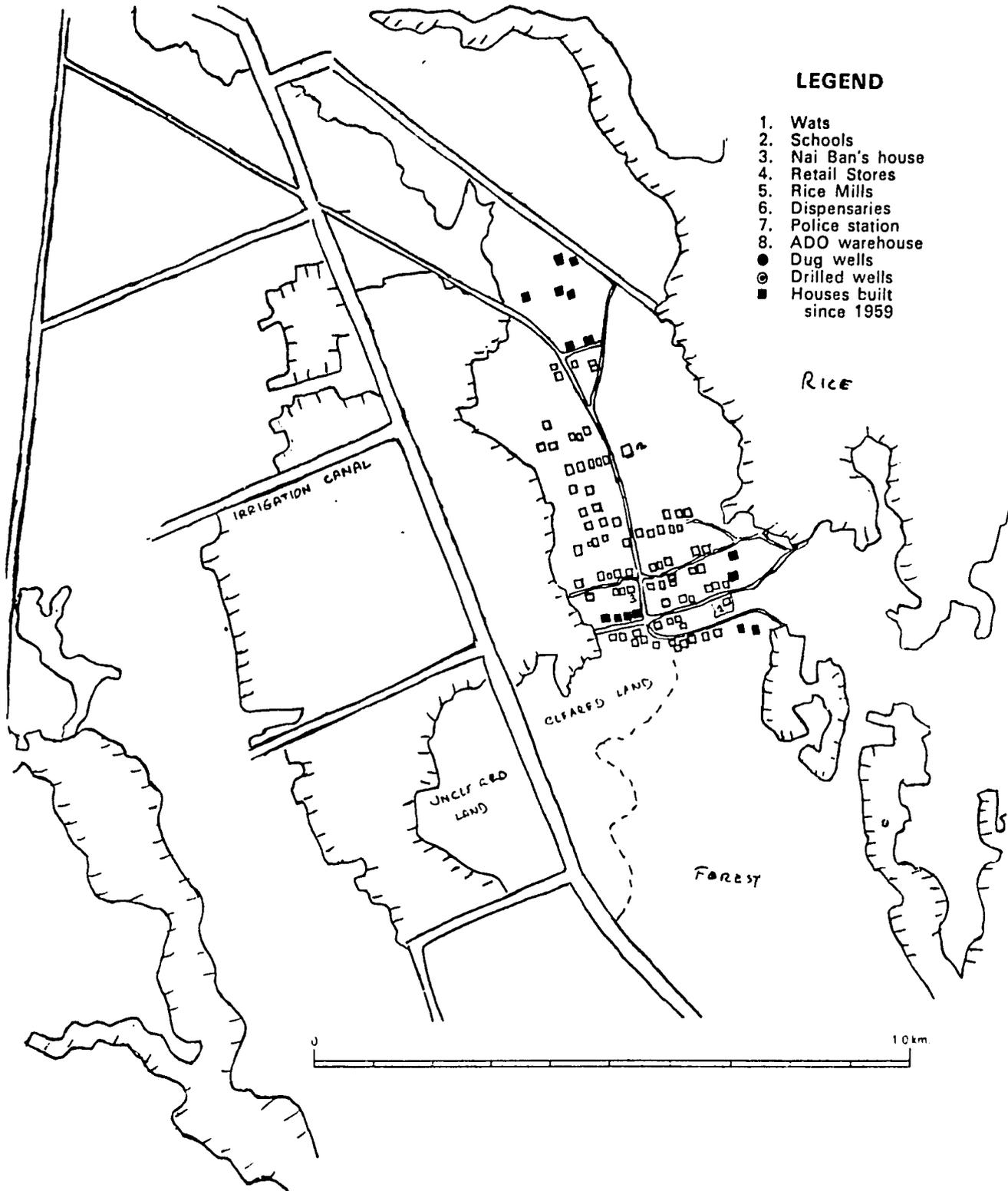


Figure 8 Nasom Nyai

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3. Resources:

a. Land and irrigation

There are two paddy field areas that are worked by the village. One is on low ground which is often flooded when there are heavy rains, damaging the rice plants. Another is situated on higher land which became barren when there was no rain. The villagers therefore usually got rice from either one of these fields, rain or no rain. Once in a long while there might be a fair amount of rain which would be adequate for both fields, in which case they would have a surplus. This village is close to the center of the Nam Tan Left Bank irrigation area. It is also very close to a large field that has been let lie fallow for a number of years. This year, for the first time in many, an attempt is being made to raise rice on it again. As yet no irrigation water has been received in this area. The Nai Ban says that no one has more than three hectares of land and that only two families have as much as two hectares. The average is said to be from one to one and one-half hectares. On the basis of the measurements made in connection with the Nam Tan Irrigation area, holders in this general area were found to have an average of about 1.5 hectares. According to the CRA census for 1969 there were 13 families who did only upland rice, 26 families who did only low-land rice, and 42 families who did both.

b. Manpower

In 1963, there were reported to be 65 families with a total of 409 people. In 1968 there were 80 families with 529 people. The attached population table breaks down both of these totals by sex and age group.

c. Roads

The access road to the main road is about one kilometer long. However, throughout the area of the Nam Tan, the tops of the canal embankments of the main laterals can also be used for roads. This increases the access from point to point throughout the area. When all the canals are finished there will be at least two alternate routes by which the people from Nasom Nyai can get to the airport at the dam.

d. Airfields

The village is about six kilometers from the airfield at the Nam Tan dam site. It is about 41 kilometers to the airfield at Sayaboury.

e. Potable water

According to the teacher, this village has never gotten as much as one well ring. They have requested wells for a number of years. They were first supposed to get them in 1967, then 1968, then 1969, and they say they still don't have any wells. Many of the villagers have dug their own wells, but they have expressed a desire for concrete rings. They feel that the wells they have dug are unsanitary. There does not appear to be any difficulty in finding water.

VILLAGE POPULATION

Village: Ban Nasom Nyai

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	-	-	-	-	-	-	-
1	14	13	11	15	25	5.97	28	5.30
2	5	12	10	11	15	3.57	23	4.36
3	9	8	9	12	18	4.30	20	3.79
4	9	13	9	11	18	4.30	24	4.55
5	8	6	11	10	19	4.53	16	3.04
6	6	16	8	11	14	3.34	27	5.11
7	9	7	7	10	16	3.82	17	3.22
8	8	20	7	8	15	3.57	28	5.30
9	5	3	6	5	11	2.63	8	1.52
10	7	15	9	12	16	3.82	27	5.11
11-15	26	31	23	37	49	11.69	68	12.88
16-20	19	27	16	30	35	8.35	57	10.80
21-25	13	11	12	12	25	5.97	23	4.36
26-30	3	24	10	24	13	3.10	48	9.09
31-35	10	9	20	7	30	7.15	16	3.04
36-40	8	7	11	20	19	4.53	27	5.11
41-45	14	25	7	19	21	5.01	44	8.33
46-50	10	-	11	-	21	5.01	-	-
51-55	9	15	6	7	15	3.57	22	4.17
56-60	10	-	4	-	14	3.34	-	-
61 +	6	4	3	1	9	2.15	5	.95
No Age	1	-	-	-	1	.24	-	-
Total	209	266	210	262	419	-	528	-

f. Medical facilities

With the creation of the new tasseng at Na Tane, the dispensary that had been at Nasom Nyai was moved to Na Tane. It is said that the medic at Na Tane now declines

requests to go see sick persons, saying that it would be useless in as much as he doesn't have any medicine. The health unit is allotted 500 tablets of aspirin monthly, while according to the teacher, about 100 patients a day are liable to ask for it.

g. Police station

The nearest police station is at Nam Hia, approximately five kilometers north.

h. Telephone system

The village is connected to the telephone system. The telephone is in the house of the Nai Ban. It is said that during the attack on Nam Tan in March of 1969, the wires to this village were cut.

i. Rice mills

The villagers can mill their rice either at Na Sing or Nam Hia. If they go to Na Sing they have to carry the rice themselves. However, if they go to Nam Hia, the miller there also owns two taxis and presumably makes it easier for them to haul their rice to his mill.

j. Retail stores

The villagers can go to either of the five retail stores at Nam Hia or to any of the four retail stores at Ban Na Sing. The stores at Ban Na Sing are probably about one kilometer closer than those at Nam Hia. Both sets of stores seem to be well stocked with many items. The possible advantage of Nam Hia is that one of the shops there also serves prepared food.

k. Personal equipment

Twelve families have radios, three families have sewing machines, and there is one bicycle. There are no motorcycles.

l. Schools

The school at Nasom Nyai was built in 1955 and repaired by the Cluster in 1965. In 1963 there were 30 students, of whom 20 were in the first grade, 7 in the second and 3 in the third. In 1968, there were 40 students, of whom 18 were in the first grade, 7 were in the second and 15 were said to be in the third. This last is something of a discrepancy. The teacher since 1963 has been the same one, Mr. Khamphieng. There are six students who have gone on to further study in the 4th, 5th and 6th grades at Na Kheme.

m. Wats

There is one wat in the village, with one monk and 10 novices. Nai Ban says that villagers do not like to enter the monkhood, but they do like to organize religious ceremonies that have a lot of entertainment. The man in charge of the religious activities

is the Salawat who is Chan Hom Soda, who is 40 years old. He has served as salawat for the past nine months. One of the villagers has complained, however, that when they arrange their boons, the mohlam team from USIS has never come to this village, although they go to others.

4. Resource Utilization:

a. Rice Production

The average rice production is said to be about 200 to 230 kalong. There are also said to be three or four families who get more than the average, possibly as much as 400 kalong. Villagers here help each other, both in upland and low-land farming. According to the census of the CRA for 1969, there was one family who farmed both upland and low-land rice who had a total of 600 kalong. This family also had the largest number of buffalo, 25. Four families were said to produce 500 kalong each. One of these families had 21 buffaloes and the others had more than 10, except for one which had only 6. It is impossible to distinguish between the proportion of the total family product that came from upland as opposed to the wet-rice. Total rice production according to these figures was 21,680 kalong, roughly 216 tons. Using the 550 grams per day requirement per person this would leave a surplus in the nature of 35 tons for this village. These CRA figures, however must be taken with a great deal of caution in as much as their kalong are almost all rounded into hundreds; there are a few 50's, but almost everything is reported as 200, 300, 400, 500, 600 and so forth.

b. Livestock production

Buffaloes, pigs and ducks and chickens have been raised continuously since before the Cluster period. Three purebred Yorkshire pigs were accepted during the early part of the Cluster period. They died and have had no further effect on the livestock growing in the village. Taiwan ducks were received as part of an early livestock raising project. These ducks have been more successful. The comment that is made is that there are many more eggs produced nowadays, and that these eggs are now sold to travelers. The Nai Ban has stated that there have been epidemics as far as the livestock have been concerned and that these had not occurred before the Cluster. He feels that this is probably due to the access road and that the diseases were carried by motor vehicles. Previously transport was by the use of elephants and horses. None of these are left in the village. According to the CRA census, there are 479 buffaloes in the village. From 10-15 buffaloes are sold each year to merchants from Sayaboury and Luang Prabang. It's said that the merchant from Luang Prabang comes to this village about four times a year. They sell 20 - 30 pigs a year to the Sayaboury merchants. They also say that they sell quite a few chickens during October and November, but that in January most of the chickens die. They say that the veterinarian gives the chickens injections, but it doesn't do any good. They slaughter pigs and buffaloes only when they have a boon or when there is a marriage or house construction.

c. Other production

Early in the Cluster history the village was given seeds for cabbage, melons, onions and lettuce. They say that these seeds were different from the old ones that they used to plant. They would like more. They say they have gone back to the Cluster, but the Cluster has said that they don't have any more. Some corn is grown and other vegetables. These are only for household consumption, not for sale.

5. Security:

There have never been village soldiers - "Tahan Ban" for this village. They say they used to guard the village before the PL attack at Nam Tan in March of this year. When they were guarding they didn't have any guns, they just watched so that they could report what happened. Eight people were required per night and this was cycled every seven days. After the attack of the PL at Nam Tan, this stopped.

6. Project Participation:

As mentioned above seeds were given early in this village, but have not been given for a number of years.

Three purebred Yorkshire hogs and 42 Taiwan ducks were given to this village under the livestock project. The pigs died but the ducks have been successful.

In 1965 the existing school building was repaired. In 1959 the RLG and USAID had earlier given corrugated metal roofing for this school.

In 1964 a dispensary was installed in Nasom Nyai. This was moved to Na Tane when four villages of Na Tane, Na Bouam, Na Sing and Nasom Nyai were made into a Tasseng of their own.

The Village Development Committee for this village has nine members. The villagers feel that with the new Development Committee they now have a mechanism whereby they can at least express problems and state their needs. A major project that has affected the village is the Nam Tan Irrigation System. The teacher was quite vocal about this problem. He says that the charge of 50,000 kip per hectare for clearing is much too high for the village. He also says there are many problems with regard to whether or not the villagers will get any land at all. He says that this is because they didn't send the request form to ask for more land to the Nai Dan on time. The teacher says that there were 74 people who provided self-help labor at Nam Tan, with the understanding that they would get new land. Early in the development of the project the villagers were informed that if they wanted any land, they should go look for it, make out an application, and pay 300 kip. They went out and looked for land they wanted and filled out the forms, gave them to the Nai Ban, and the Nai Ban sent them to the Nai Dans office. It is said that some of the villagers went to the extent of hiring people to clear the land they had chosen and spent 10,000 to 20,000 kip. They also understood that if they worked self-help on the Nam Tan Project they would get water for irrigation for

both their old as well as their new land. This is presumably the explanation why some people did work, but did not make an application for new land. They felt they were simply protecting their own interest in getting water for their own land. When they asked about the first forms they had submitted, the Nai Dan told them that until the land had been surveyed and permits granted nobody could take any land. They felt that they were now in a weak position with regard to the land they had already worked and the applications they had sent in. Forty families were concerned about this. The present status of these applicants is unclear.

The village used to get 20 copies of the Cluster newspaper every month. For the past four or five months however, they have only gotten 10 copies. The teacher says he used to give the papers out to students so they could take them to their homes at night and read to their parents. They were then to bring them back the next morning so that another student could do the same thing. The teacher also said that the mobile library is not as good now as it used to be. When Maha Suvan was responsible for the mobile library he used to come to the village and with his microphone he would ask the villagers to come borrow books. The villagers say that the new man now simply drives into the village and sits and waits, hoping the villagers will come and borrow books. The teacher says that very few now borrow books.

7. Villagers perceptions of change:

The teacher has said that nowadays the villagers can earn money very easily, but the money can also find its way out of their hands very quickly too. Earlier, they didn't spend much money because there was nothing to buy, and if they wanted to buy anything they had to go to Sayaboury.

The teacher, who has been in this village since before the Cluster period, said that he felt the villagers of nowadays were more intelligent and healthier. He said that they knew how to earn money, even young boys and girls, who gather shrimp in the swamp on Saturdays and Sundays and sell them to the bus passengers.

The manner of dressing has changed. Instead of weaving their own cloth, the villagers buy ready made clothes from the market with one day's earnings. The teachers says that to make cloth by weaving would have taken more than one day. One of the Village Development Committee members said that the houses are constructed in a modern style. When a man wants to build a house, his neighbors come and help him and no pay is required.

The villagers now use a fish sauce and food seasoning powder, NamPa and monosodium glutamate, instead of salt as done previously. Earlier they had to get their salt from Nan Province in Thailand. The villagers used to use home made torches instead of kerosene lamps.

The teacher says that the children of today are braver than those of before. They are not afraid of strangers or government officials. In the olden days when such persons came into the village the children would run away and hide.

The Nai Ban says that the villages are much more tranquil. He says there is a sense, of unity among the villagers that is better than the olden days. There are now few disputes and no theft in the village. He feels that this can be attributed to the better standards of living.

NA BOUAM

1. Location:

Na Bouam is located along the western side of the Cluster at about the middle of the western side of the left bank Nam Tan Irrigation area. It is located just east of the Nam Tan river and is about one and one-half kilometers west of the main road, to which it is served by a new access road. It lies just a little over a kilometer to the east of the Nam Tan Dam. The center of the village is located at military grid coordinates 628 039.

2. Administration:

Na Bouam is in Tasseng Na Tane. The Nai Ban is Phi Si-On who is 47 years old. He has been in the job since 1967. Two village clerks are Khian Khamphoumi, who is 37 years old; and Vat Daman, who is 35 years old. Members of the Village Development Committee are Phan Kounboumprachanh, who is also a teacher, (30 years old), Soon Sinasai, 25 years old and also a teacher, Proma Siribok, 50 years old; Chantha Dukong, 47 years old; Pia Ounbouth, 40 years old; Soon Si-On, 51 years old; La Lingda, 45 years old; Xieng Bountan Lammy, 45 years old; Bai On-thong, 50 years old; Xieng Son Bounsanit, 25 years old; and Somnid Tassanaphan, 30 years old.

3. Resource:

a. Land and Irrigation

The Nai Ban says that there are 47 families who do not possess any paddy fields. They grow upland rice. He says that there are somewhere between 15 and 20 families who get enough rice from the paddy so that they don't have to grow upland rice. Other farmers who have paddy also have to farm upland. Said that 68 families were represented in the self-help in the irrigation project. Those families who did not help were those whose fields were situated in areas which irrigation water would not reach. Others just didn't like change. These last two groups were said to total about 30 families. 33 of the families who helped in the canal have already been granted a piece of land and 13 have not yet been provided with land. The remaining 17 families who participated have not applied for additional land. The Nai Ban said that he had explained that it was necessary to apply if they wanted new land, but these families decided that they either didn't want the land or didn't have enough labor to work the extra land.

b. Manpower

In 1963, Na Bouam had 109 families and 522 persons. In 1968 they had 125 families and 726 persons. The age-sex breakdown of this population in both periods is shown on the accompanying table.

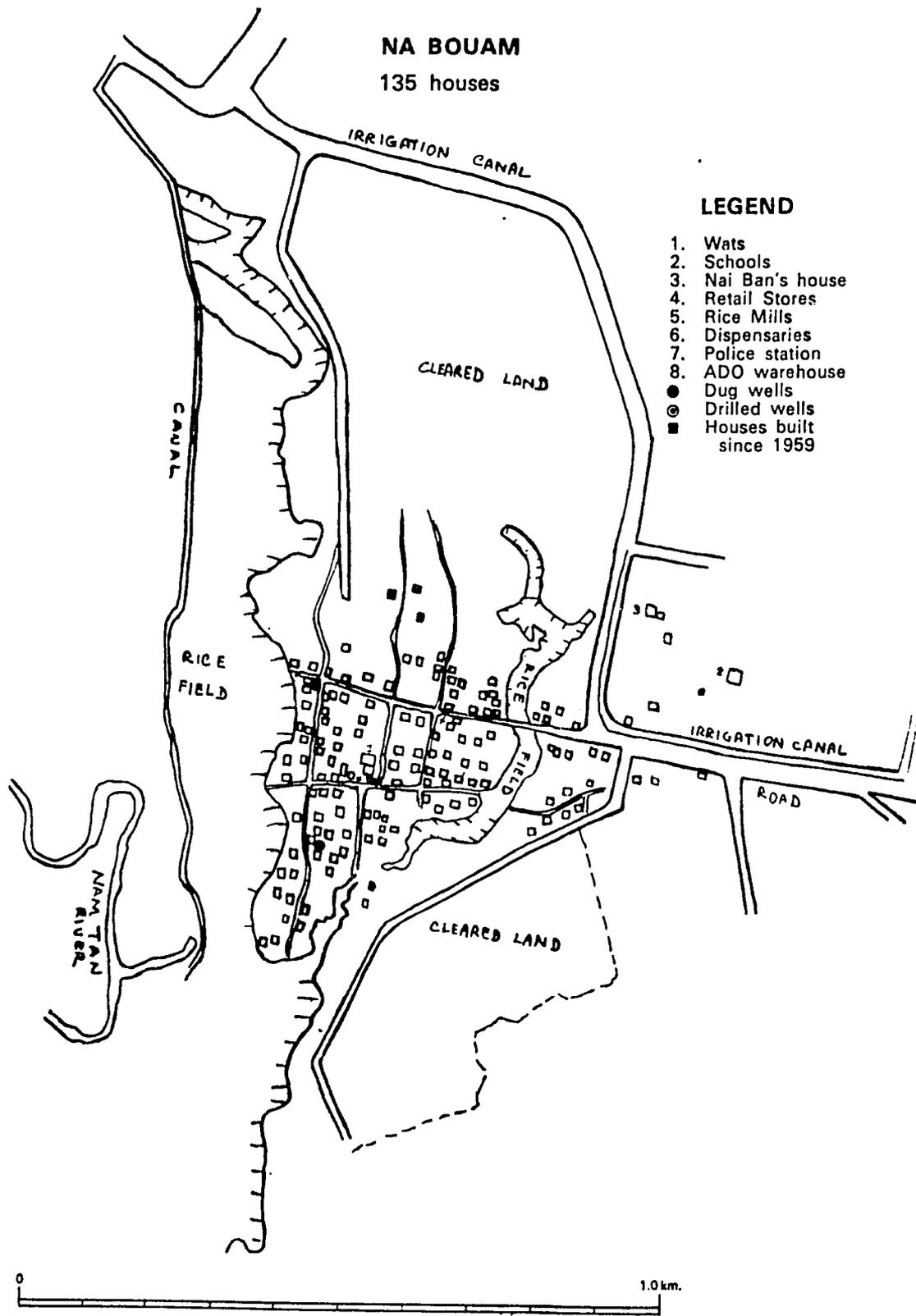


Figure 9 Na Bouam

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c. Roads

Most of the access road from the village to the main road is located on the bank of one of the main canals, Lateral no. 2. This in effect provides the village with a second access to the main road. It can also take the Lateral no. 2 northwest-ward to the main canal and then proceed on the road that is on the bank of the main canal to reach the main road at the Nam Pang village.

d. Airfield

Using Lateral two as a road, Na Bouam is about two kilometers from the airfield at the Nam Tan dam site, and about 43 kilometers from the airfield at Sayaboury.

e. Potable water

Dug wells were placed at Na Bouam under Amendment No. 2 of Activity Plan No. 9 and two wells were drilled in Na Bouam under Amendment No. 1 of Activity Plan No. 9. Na Bouam was scheduled also to receive three more wells under Activity Plan No. 26. One of these wells at the school was completed except for the roof and the fence. One at a wat is incomplete and the second one has not be started. Na Bouam has been the second most-favoured village as far as wells are concerned under the activity plans of the Cluster. In total number of wells supplied by USAID and RLG help, Nam Hia ranks second, but a number of these wells were supplied under the Refugee Relief and Rehabilitation Activity Plans.

Two concrete-ring wells existed from the time when the area was under Thai rule. Both wells that were drilled during the Cluster are inoperable. The responsibility for repairing these wells is with the Travaux Publics in Syaboury. Although a request has been sent asking for assistance, no help has yet been forthcoming.

g. Police Station

The nearest police station is at Ban Na Tane. However for governmental assistance, the village of Na Bouam is much closer to the military camp at the Nam Tan dam site.

h. Telephone System

Na Bouam is not on the telephone system. There are radio facilities at the Nam Tan construction site and messages can be transmitted from there probably more readily than by trying to hook into the telephone system at Na Tane, which would otherwise be the nearest point.

The village had been told that they would get a telephone installed and they were asked to collect poles. The poles were collected and installed but so far they don't have the phone. The Nai Ban has said that he does not want to ask for it since it is up the officials to decide whether or not to give it to them.

VILLAGE POPULATION

Village: Ban Na Bouam

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	-	-	-	-	-	-	-
1	2	18	3	21	5	.96	39	5.37
2	6	16	7	17	13	2.49	33	4.55
3	5	13	3	14	8	1.53	27	3.71
4	6	23	14	9	20	8.83	32	4.41
5	10	5	10	8	20	8.83	13	1.79
6	10	19	12	19	22	4.21	38	5.23
7	10	8	14	5	24	4.60	13	1.79
8	4	21	1	19	5	.96	40	5.51
9	6	4	4	2	10	1.92	6	.83
10	16	22	9	20	25	4.79	42	5.79
11-15	27	31	35	45	62	11.88	76	10.47
16-20	26	31	23	48	49	9.39	79	10.88
21-25	16	25	16	22	32	6.14	47	6.47
26-30	13	21	19	38	32	6.14	59	8.13
31-35	14	18	24	15	38	7.28	33	4.55
36-40	20	20	22	24	42	8.05	44	6.06
41-45	18	18	12	6	30	5.75	24	3.31
46-50	19	25	7	15	26	4.98	40	5.51
51-55	7	9	17	2	24	4.60	11	1.52
56-60	12	12	7	15	19	3.63	27	3.72
61 +	10	1	6	-	16	3.07	1	.14
No Age	-	-	-	2	-	-	2	.28
Total	257	360	265	366	522	-	726	-

i. Rice Mills

There is no rice mill in Na Bouam. The villagers here use the rice mill at Na Sing.

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j. Retail Stores

There are no retail stores in Na Bouam. The villagers use the four well stocked stores at Na Sing.

k. Personal Equipment

The Nai Ban says 23 families have radios. Eight to ten families have bicycles. There no motorcycles nor are there sewing machines.

l. Schools

The old school was built in the late 1950's and was repaired by USAID in 1965. A new school was built in 1968 in connection with the Cluster and with self-help labor. In 1963 there were 35 students of whom 20 were in the 1st grade, 10 in the 2nd and 5 in the third. The teacher was Mr. Sichanh Sisena. In 1968 there were 65 students; of whom 36 were in the first grade, 17 on the second, and 12 in the third grade. There are two teachers Mr. Phan Kounboumprachanh, who is also a member of the Village Development Committee. and Mr. Soon Simasai, who is also a member of the Village Development Committee. Three pupils have gone on to the upper grades at Ban Na Kheme.

m. Wats and Churches

There is one wat in the villager, with one monk and 4 novices. It is said that a number of men were ordained from this village but they left and are now in wats in other villages. The "salawat" is Mr. Promma Siribok. Although the religious ceremonies, as in other villages, have been much more attractive recently and more money has been earned, the villages were asked recently by the government to reduce the scope of the entertainment for fear of harassment by the PL.

4. Resource Utilization:

a. Rice Production

Average rice production per family of paddy rice is about 250 kalong for which they use 2-3 kalong for planting. Average rice product for upland rice is said to be about 200 kalong for which about 5-6 kalong are used for planting. They say that it is sometimes necessary to go as far as four kilometers for their upland fields, although they say they now go about 1 to 2 kilometers. Ten families are said to grow ADO-distributed rice seed. They are said to sell between 80-100 kalong to ADO of their product. Last year the rice yield was said to be low because of the shortage of water. This was due in large part to the blocking of the normal flow by the canal construction activities. They say that fertilizer here is used only by those who get the ADO rice, and that fertilizer used is only for non-glutinous rice.

b. Livestock Production

The village is said to sell about 20 buffaloes a year to merchants from Luang Prabang. They say that whereas the price at the beginning of the Cluster was 20-25,000 kip, the

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price now is about 50,000 kip. They say that they normally did not slaughter any pigs or buffalo unless they had a marriage or were constructing a new house. However, since the construction crew arrived at the Nam Tan project, this village says they have killed about 10 buffaloes in order to sell the meat to the workmen. They say they sell between 50-60 pigs each year to merchants from Syayaboury. The Nai Ban says that there are about 20 families who will need buffalo and they hope they can get government loans to buy the buffalo.

The Salawat says that there are few chickens left in the village due to the epidemic. He says this has been going on for the past three years. He states, as many other villagers have in other villages, that this is probably due to the motor vehicles who have brought the chicken disease. He says that two families living in an area far away from the village and in the forest are continuing to raise large flocks of chickens.

Although this village did not receive Taiwan ducks on the initial distribution they do have a number of Taiwan ducks and cross-breed ducks. These ducks were undoubtedly received as eggs or as ducklings from other villages. No one has ever suggested that the presence of the Taiwan ducks may be responsible for the chicken disease.

There are two elephants in the village. They are hired to haul logs at the rate of from 200-1,000 kip, depending on the distance. No horses are now being raised in this village.

c. Other Production

Many of the homes have vegetable gardens where they grow lettuce, cabbage, garlic, onion, pumpkins, gourds, corn, chili, eggplants, and yams. These are grown next to the house and not in the rice fields. They also have fruit trees such as mango, orange, lemon pomelo, tamarind, Indian jujube, coconut, papaya, banana and sugar cane which are also planted in the gardens. Many of these fruits are sold to the workers at the Nam Tan Dam, to government officials, and to natives of other villages.

5. Security:

The villagers in this village are quite concerned about the Pathet Lao because the village is located next to Nam Tan. There was a PL attack on this construction camp in March of 1969. The teacher says that some of the families have now dug trenches under their houses. On the night when there was a suspected second attack, many of them jumped into these trenches.

Before the soldiers were at Nam Tan and were able to provide protection the village had provided its own guard. They broke their guard duties down into nine groups of ten people each. They also had six of their villagers in the "village soldiers" group that was established mainly in Na Kheme and Muong Phieng. This was disbanded six or seven years ago.

6. Project Participation:

This village received neither hogs nor ducks under the early livestock programs. As stated earlier, they do have many of the Taiwan ducks now in their village.

The first schooling help was received before the Cluster period. At that time the Chao Khoueng was able to supply them with corrugated iron roofing sheets for the school. 110 sheets were made available and the villagers walked to Sayaboury and carried two sheets of roofing each all the way back. This school had three classrooms. The latter had originally been designed as a two classroom building, but each of the rooms has been divided into two to make four classrooms.

The access road is considered to be one of the most important contributions of the Cluster period.

The village receives 12 copies of the Cluster newspaper each month. This is shared with all who are literate. It is said that when one has read the newspaper, he is supposed to pass it on or tell the illiterate people about what they read in the paper.

The Nai Ban says that they never did receive any vegetable seeds that were being distributed earlier during the Cluster. He says that only Muong Phieng got the seeds. He says that they didn't dare ask because they thought it was up to the Cluster to offer them the seeds.

Three of the villagers participated in the livestock training course. They were; Xieng Khene, Ay Son Dee, Xieng Boon Chan. The Nai Ban said that they were trained about 7 or 8 weeks but after they finished the course they still did the same old ways. He said that if anyone should be interested enough to ask them, they will explain how to feed livestock, but the villagers feel that it is very complicated so they still do everything in same old manner.

The women of the village participated in two home economics courses. Two of the ladies went to Muong Phieng and participated in the course for village assistants. The Nai Ban says he didn't know what kind of training they got. The second course they got was in blouse making. The Nai Ban says that at first there were about 20 women who were interested, but when they found they had to buy their own cloth to make five different blouses, there were only about 5 or 6 persons who continued. The others had no money to buy cloth.

They say that they were ordered privies back in 1966. At that time they didn't want them because they could go to the forest. Now they say they would like to have the Cluster help them. However, they say they are waiting for the Cluster now to offer help.

The Village Development Committee Program in the village were started by Nai Dan explaining to them that they would select the committee. After that, the CRA workers

called meetings and worked up the list of about 20 candidates. The election was held and 15 persons were selected. They have had at least two meetings since that time. During the first one they agreed to work on repairing the access road to the main road. They didn't get any response to their request to the Cluster management for assistance, so they held another meeting. After this meeting it is said that the Cluster then sent some drainage pipe so that they could go ahead and finish repairing the road.

7. Villagers Perceptions of change:

The salawat says that one of the changes is that the villagers now wear modern style dress. They don't wear locally made dress now.

Nai Ban said that the access road to the village is a sign of change. He said that other changes were the ringed wells, the drilled wells, the new school building with more teachers and a bigger playground, the new improved rice seed and the foreign breed ducks which lay more eggs than the local breed.

The Nai Ban said that the most important change is the existence of the Nam Tan Dam. One of the Village Development Committee members wanted to emphasize that the villagers were most assisted by the existence of the access road. He said they now could go to Muong Phieng by bus at 100 kip fare and Sayaboury for 300 kip fare.

They say that formerly the villagers went to cast their votes at Sayaboury but now they cast their vote at Na Tane.

The use of the mobile generator for lighting and for other entertainment devices at bouns was remarked.

Formerly the villagers went to Nan Province in Thailand to make all of their purchases. Now they are said to do their purchasing at Na Sing and Sayaboury.

The Nai Ban says there have been problems in connection with the Nam Tan project. In the first of the two major problems, Ay Phomma and Ay Fang lost part of their land for canals. They got some new land but it was too high to receive water for irrigation. They have complained but so far have not received any redress. Another case that the Nai Ban considered serious is that which happened to Xieng Boun Than. His rice field was taken in order to make an airfield. It is said that Mr. Wagner told them that he would give Mr. Boun Than a new plot of land to replace the land that had to be used for the airfield. He has finally been awarded some land but it appears that it has not been adequately cleared for farming use. He is now left in a position where it is too late to plant, he says, and he has no land.

NA SING

1. Location:

Na Sing is located about eleven kilometers south of Muong Phieng. It lies on the main road and is just about one kilometer before the main road crosses the Nam Tan River.

The village is located in just about the center of the widest part of the Muong Phieng Valley. The military grid coordinates of the center of the village are 640 030. This village has had a history of a good deal of movement in the last few years. Sometime before the Cluster period they had been living at Ban Na Ngiu, which was located at the foot of the mountains near Ban Na Bouam. They moved so they would be a little closer to the river. However, at about the time of the Cluster development they were asked to move closer to the main road, which they did. They just recently moved from their location on the main road to another location about one and one-half kilometers north, also on the main road, where they are at the present time. There are still eight families left at the old location, a kilometer and one-half down the road. It is said that when the villagers had moved they went to ask permission of the Chao Khoueng, the Governor of Sayaboury. They say the Chao Khoueng became very angry and threatened to come and tear all the houses down with a bulldozer because they moved without his permission. Furthermore, in moving they had built many of their houses within fifteen meters of the road, which is against the current zoning regulations. Every road now has a 40 meters right-of-way. In addition to this they had moved into an area where there was a good deal of canal construction. No planting or construction of any kind is permitted within three meters of the edge of a canal. These and some related problems will be discussed later under Resources.

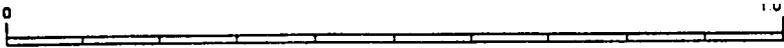
2. Administration:

Na Sing is in tasseng Na Tane. The Nai Ban is Xieng Boonsee Boonmee, age 55, who has been in the position for a little more than a year. The assistant to the Nai Ban is Thit Wanna and the members of the Village Development Committee are; Xieng Somsri, Xieng On, Ay Peng, Kham Phan, Ay See.

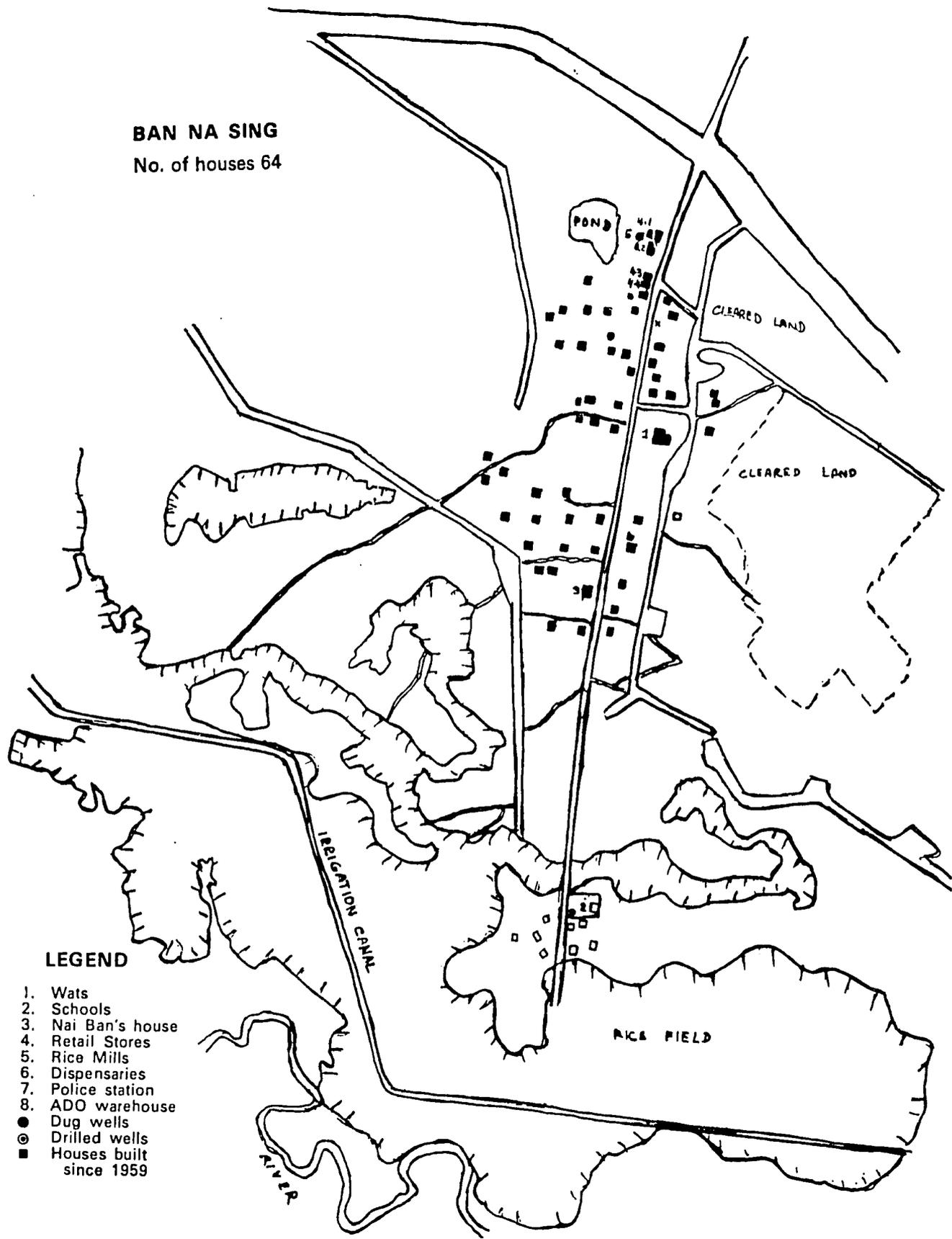
3. Resources:

a. Land and Irrigation

Four families are said to own more than three hectares thereby depriving them of the possibility of getting additional land under the Nam Tan re-distribution system. There is however a good deal of confusion as to the ownership status of most of the rest of the villagers. All have applied for additional land to build their holdings up to three hectares, as in permissible under the Nam Tan Irrigation System distribution plan. However, there is some doubt as to whether or not applications have been placed accurately and at the right time and a number of the villagers seem to be very uncertain as to what their holdings will actually be when the distributions are finally made. In addition to this, this village is in the center of a good deal of canal construction and some of the villagers have suffered loss of the use of their land because of canal construction. The Nai Ban says that there are about 26 villagers who have lost a small piece of their rice field in order to construct canals and that these people have not gotten any land to replace the pieces lost. Furthermore, there are four owners whose land is now flooded beyond the use for irrigation purposes when there are heavy rains. This is because these lands lie up-stream or higher than some of the canal embankments that were built, which means



BAN NA SING
No. of houses 64



LEGEND

- 1. Wats
- 2. Schools
- 3. Nai Ban's house
- 4. Retail Stores
- 5. Rice Mills
- 6. Dispensaries
- 7. Police station
- 8. ADO warehouse
- Dug wells
- ⊙ Drilled wells
- Houses built since 1959

Figure 10 Ban Na Sing

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that as the water flows in the natural course of drainage in rainfall, it builds up behind the banks of the canals and floods these lands. These lands are now unusable under rainy season conditions. These owners plus some of the other owners, to a total of 8, petitioned to their assemblymen in Vientiane to have the work stopped until they could get some equitable settlement of their problems. When the assemblyman expressed his opinions back in Sayaboury, this created a good deal of bad feelings on the part of the local officials in the area. At the present time there has been no resolution of this problem.

The Nai Ban says that all families do some upland rice and that they have to go five kilometers away from the village because the village's central location in the valley. On the other hand the CRA workers census of all of the families in Na Sing in 1969 showed that only two families did upland rice and all of the others had plots of low-land or paddy. This discrepancy was not recognized until after the field work had stopped so it should be checked up again in the field by the local people connected with the Cluster. Average size of paddy holdings in this area is about one and one-half hectares, according to the surveyors of the Rural Development Division's refugee relief and rehabilitation activity.

b. Manpower

In 1963, Na Sing had 54 families and a population of 253. In 1968, Na Sing had a population of 52 families, and 283 persons. However, it is believed that this does not include the eight families who are still located in the old location. The age-sex breakdown of this population is shown on the accompanying table.

c. Roads

Na Sing is located on both sides of the main Cluster road and as such has no road problem.

d. Potable water

There are six wells in the village that were dug by the villagers themselves and have no linings. There is one well with a cement lining and there is one drilled well. They say that there is enough water all year round, but are unhappy about the unlined wells which they consider to be unsanitary. They would like more wells with lining.

f. Medical facilities

The medical facilities at Na Tane are a little over one and one-half kilometers away, and are available for these villagers. If the access road to Na Tane is closed, for any reason, they can go to Na Kheme, which is about four kilometers south on the main road, or to Nam Hia which is about six kilometers north on the main road.

g. Police station

The nearest police station is four kilometers south on the main road at Na Kheme. There are three policemen stationed at this post.

VILLAGE POPULATION

Village: Ban Na Sing

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	-	-	-	-	-	-	-
1	1	6	1	16	2	.71	22	6.77
2	3	9	3	5	6	2.13	14	4.31
3	7	8	5	6	12	4.25	14	4.31
4	1	8	-	4	1	.35	12	3.69
5	8	9	4	4	12	4.24	13	4.00
6	7	2	4	5	11	3.89	7	2.15
7	4	10	5	6	9	3.19	16	4.92
8	3	4	2	3	5	1.77	7	2.15
9	6	3	3	3	9	3.19	6	1.85
10	3	8	1	4	4	1.41	12	3.69
11-15	10	21	9	18	19	6.71	39	12.00
16-20	13	15	11	14	24	8.49	29	8.92
21-25	20	8	23	12	43	15.19	20	6.15
26-30	18	8	17	15	35	12.37	23	7.08
31-35	3	6	9	9	12	4.22	15	4.62
36-40	7	2	6	8	13	4.59	10	3.77
41-45	2	9	4	10	6	2.13	19	5.85
46-50	9	4	6	4	15	5.31	8	2.46
51-55	13	8	13	8	26	9.19	16	4.92
56-60	6	6	7	1	13	4.59	7	2.15
61 +	4	9	2	7	6	2.13	16	4.92
No Age	-	-	-	-	-	-	-	-
Total	148	163	135	162	283	-	325	-

h. Telephone system

Although Na Sing is on the main road, it is possible that the telephone line from Na Kheme cuts off the main road, follows the old road to Ban Na Tane, where there is a

telephone, and then follows the new access road from Ban Na Tane back to the main road. If this is the case, the line would by-pass Na Sing.

i. Rice mill

There is one rice mill in Na Sing, owned by Ay Pheng, a member of the Village Development Committee and who came to Na Sing from Sayaboury in 1968. His mill is rated at 15 horsepower and he uses 200 litres of gasoline per month. This makes his mill one of the largest producers in the Cluster. His is the main mill for all of the villages in Tasseng Na Tane. He is said to mill between 40 to 60 kalong daily during the harvest season, and from 10 to 20 during the remainder of the year. He says he has between 50-60 hogs and the Nai Ban in another interview thought that he had 70.

j. Retail stores

There are four retail stores in Na Sing all run by people who came from Sayaboury in 1968. This is the year when the village moved to this location on the main road. All of these stores are well stocked. The store of Ay Pheng is very well stocked. In addition, he serves coffee. Ay Pheng is also the operator of the rice mill in the village. The store owned by Xieng Louy is also very well stocked and is the only one that also serves prepared food, noodles and so forth. The last store, that of Thit Phou, is very well stocked, but doesn't seem to be distinguished by any special merchandise.

k. Personal equipment

Six families are said to have radios. Six families are also said to have sewing machines. The Nai Ban pointed out specifically that they learned how to use these by themselves and not from the home economics agents. Four people have bicycles and there are no motorcycles. It is stated that two of the stores have one taxi each.

l. Schools

The school was built in 1961 and was repaired in 1967. This school is located at the old site of the village and is therefore a little over a kilometer from the present site of the village. The children walk to and from the school every day. In 1963 there were 35 students. Twenty-five were in the first grade, and approximately 10 in the second and the teacher was Mr. Kham King. In 1968, there were 44 students of whom 24 were in the first grade, 9 in the second and 10 in the third. The teacher is Mr. Sinthong Phongthay.

m. Wats

There is one wat in the village. This was moved to the new location when the village moved from the old one. There is no monk this year, but there are four novices. The villagers would like to invite a monk, but have not been able to find one so far. The salawat is Xieng Pannya. He was selected in the same way that they select the Nai Ban. They have a boun every year and the proceeds are used only for wat affairs. The salawat takes care of the money.

4. Resource Utilization:

a. Rice production

Details on rice production for this village are somewhat confused at the present time. This village has just moved, and there also seems to be some question as to the amount of land that is being worked in paddy and the amount that is being worked upland. Also some of the land that had been worked has now been taken out of production by the work of the Nam Tan Irrigation canal construction. Therefore, while many of the villagers feel that they own three hectares of land, it's probable that many of them have very little of this land in production, at least during this particular year. In any event, the total production for the village was listed as something less than 72 tons. The subsistence factor that has been used in this study, it would appear that something around 100 tons are needed simply for basic subsistence for the people in the village. It is possible that the CRA's statistics are not accurate. In any event it would appear that this village is a marginal producer of even subsistence rice. The Nai Ban reports that average production from upland rice is 100 kalong per family and that four or five families get as much as 300 kalong. He states that the average product from rice fields is 150 kalong.

b. Livestock production

The Nai Ban says that they haven't sold buffalo for sometime because they don't have enough for their own ploughing at the present time. The Nai Ban says that last year the Nai Dan sent them a letter asking that those people who wanted to borrow money for buffalo purchase be identified. Five families requested that this be done for them, but as of yet nothing has been heard. The Nai Ban says that the army has just sent an order to them for 1 buffalo and two kalong of milled rice. The Nai Ban says that last year they supplied six ducks, 1 kalong of milled rice and one pig at a rate which they considered much less than the rate at which the soldiers pay. This rate is 300 kips for each duck, 400 kip for a kalong of rice and 6,000 for a pig which measured 4 kham; these rates are all considered below the standard rates in the area. The Nai Ban says that normally they sell about 10 pigs a year, and not including the pigs sold by the owner of the rice mill.

The total number of buffalo reported under the CRA census for 1969 is 139. Three families are listed as having ten buffaloes each. Two have seven, three have six and the others have less.

5. Security:

The Nai Ban says that they used to guard their village every night. They had eight persons on duty every night in two posts. Now the FAR soldiers come every night to the village so that they don't have to guard it themselves.

6. Project Participation:

Na Sing did not receive any hogs under the early livestock program, but did receive 66 Taiwan ducks. They now have so many ducks, in spite of the increased demand at the Nam Tan construction site, that the price of the ducks has gone down.

The village received two wells, one dug well and one drilled well.

Along with all the other villages in the Cluster this village participated in the Village Development Committee activity. They have five members. Before this they had no committee of any kind, and depended upon the Nai Ban and the village elders to agree on proposed actions and if necessary to call meetings.

When the Nai Ban said that there had been no other help given to the village one of the elders corrected him. He said that back in 1961 the government had notified them that they would help them build a school and that corrugated tin roofing would be available. The villagers then walked from Na Sing to Sayaboury and picked up the tin roofing there and walked all the way back to Na Sing with it, carrying two sheets per villager.

The largest participation, of course, in the Cluster and related activities is in the Nam Tan Irrigation development. Na Sing is right in the center of this and is suffering both benefits and the disadvantages of having this major construction activity take place in their midst and on their land.

The villagers say that they were offered toilets back when the water-seal toilet program was under way, but that the villagers refused to have any. They now say that with the forests being cut down they would like very much to have some.

This village now has its own meetings and during these meetings they have decided that they want to move the old school from the old village to the new village and also they would like to clear pathways within the village.

7. Villagers Perceptions of Change:

The Nai Ban said there have been many changes and said that for example there is much more trade nowadays. Clothing is different in that the villagers now wear modern clothes. The Nai Ban said that the villagers used to smoke native cigarettes but now the cigarettes are ready-made, they are the "Rienthong" (Gold-Medal). He says that now there is no quarrel or stealing. He says that the villagers get along with each other very well. He said that there are more government officials. He also said home building is the same as it was before; the villagers still help one another in construction. Another change is that the villagers will now get more land. Those who had less than three hectares will now be given enough to build up their to three hectares. The Nai Ban also said that nowadays their bouns are much more productive. The officials of the village send out invitations to officials and other villages. They now have entertainment such as the ramvong and the Mohlam and movies.

NA TANE

1. Location:

Na Tane is located a little over 12 kilometers directly south of Muong Phieng. It lies mid-way between the main road and the Nam Phieng River. The road lies a little over one kilometer to the west and the river a little over a kilometer to the east. The village is the southern-most community in the Nam Tan Left Bank Irrigation System. The access road leaves the main road just before Na Sing and extends a little over a kilometer and a quarter southeast to the village. Military grid coordinates of the center are 649 022.

2. Administration:

The village is the chief village of tasseng Na Tane. The Tasseng is Thit Somsy, his assistant is Thao San. The Nai Ban of the village Xieng Bounma. His assistant is Chan Somdy. The Village Development Committee Member are Nai Phim, Xieng Khan Hah, Nai Kham Phoun, Xieng Sondy, Xieng Champha, Nai Sao, Xieng Phanh. It should be noted that the Tasseng and the Nai Ban are of the same family; the family names of both are Pholasa. The Nai Ban is 49 years old, and the Tasseng is 39 years old.

3. Resources:

a. Land and Irrigation

Nai Ban and the Tasseng say that two villagers, Xieng Khamdee and Ay Khamdee possess three and a half hectares and that some own one and a half hectares of land. The average is probably about 1.5 hectares. The rice growing area has not increased perceptibly since the start of the Cluster. However, since Na Tane is in the Nam Tan Irrigation System, those villagers who have applied for additional land will be given an additional amount so that their total holding may reach three hectares. According to the CRA survey the distribution of growers as between upland and paddy is quite unusual. There are 12 families who farm only upland rice, there are 60 families who farm only low-land rice, and there are only two families who farm both. This probably due to the fact that Na Tane is by far the oldest village in this area. It has been said that Nasom Nyai developed out of Na Tane some 75 years ago and that Ban Nasom Noi then some 30 years ago developed from Nasom Nyai. Presumably the families at Na Tane have been well entrenched in the area and therefore have this higher percentage of paddy land. At present it would seem that Muong Phieng and Na Tane are probably the villages with the most prestige in the Cluster, having the longest history and probably the most stability. Another candidate for a similar position would be Na Kheme, but enough data does not appear to be available to make this judgement.

b. Manpower

In 1963, Na Tane had 62 families and 333 peoples. In 1968 there were 88 families and 479 people. The age-sex breakdown is shown in the accompanying table.

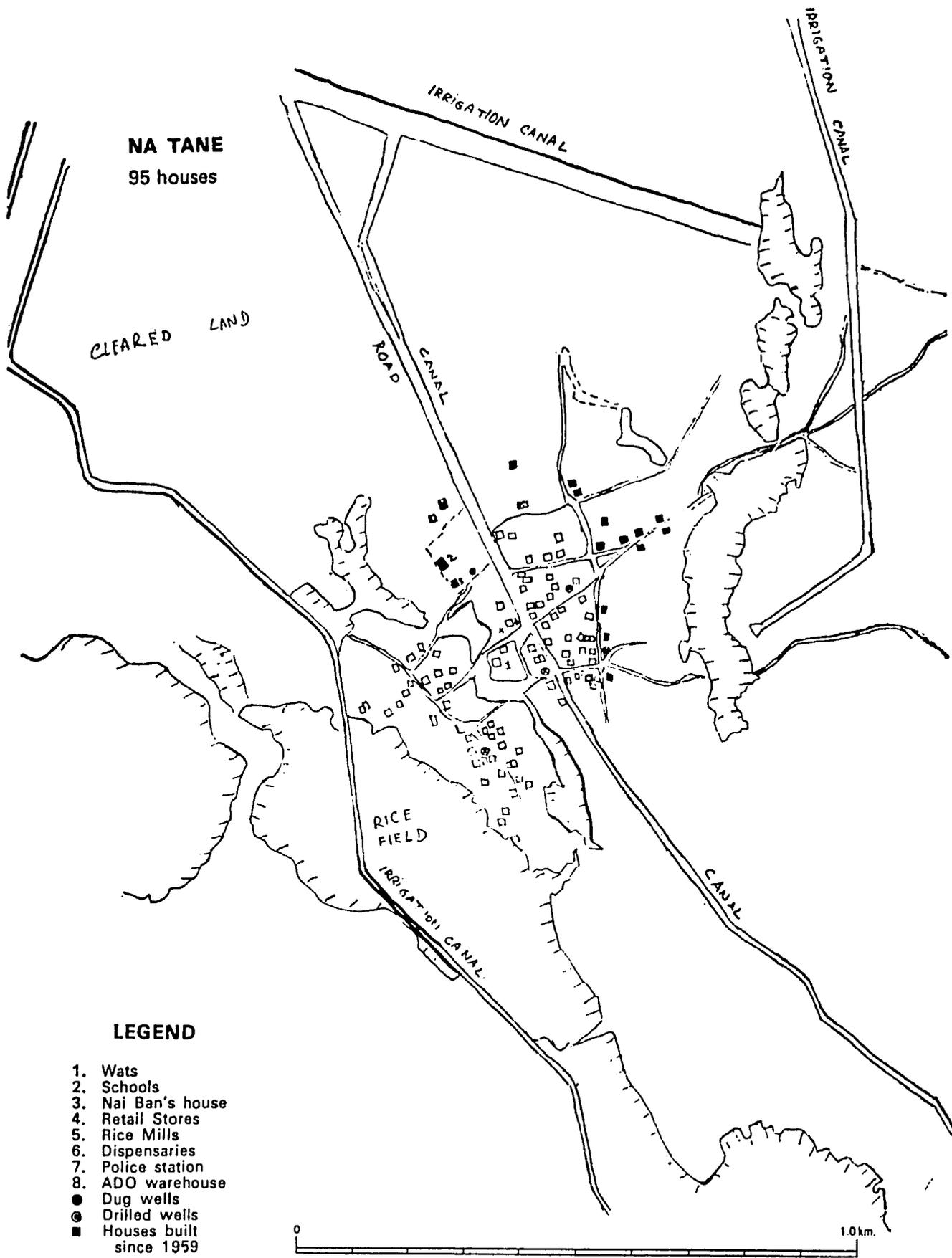


Figure 11 Na Tane

c. Roads

Before the Cluster era the village of Na Tane was pretty well buried in the forest. The villagers say that they had very little hope of ever having much access to other villages. They are now very appreciative of the road which takes them to the main road and the main road, of course, which provides access to Muong Phieng and Sayaboury. Previous to having these roads they found it necessary to make a four day trip in going to Sayaboury. They went to Muong Phieng, spent the night, and then went on to Sayaboury the next day. They spent the night there and then reversed the trip. The road to the main road is about one and one-half kilometers long, part of this is on the bank of one of the canals of the Nam Tan system.

d. Airfields

The village is something over five kilometers from the airfield at the Nam Tan Dam site. It is approximately 34 kilometers from the airfield at Sayaboury

e. Potable water

The Cluster has, with the help of the villagers, dug three wells in Na Tane and has drilled one well. The village however has never had any problem with regard to water, since a hole can be dug almost anywhere to reach water.

f. Medical facilities

When Na Tane became a Tasseng center, the clinic was moved from Nasom Nyai to Na Tane. This also coincided with the construction of a new school at Na Tane. The old school therefore was used as the location for the new dispensary.

g. Police station

The nearest police station is at Na Kheme.

h. Telephone system

There is a telephone located in the village at the house of the Tasseng. However, this line has been out of order for a number of months, although it is said to be in the process of repair. This telephone line extends to both the police station at Na Kheme and to the ones at Ban Nam Hia and Muong Phieng

i. Rice mills

There is no rice mill in the village; the villagers go to Na Sing. Na Sing is just a little over one kilometer away at the junction of their road with the main road.

j. Retail stores

There are no retail stores in Ban Na Tane. However, Na Sing, located on the main road, has four well stocked stores.

VILLAGE POPULATION

Age Group	Village: Ban Na Tane				Total			
	Male		Female		1963		1968	
	1963	1968	1963	1968	No.	%	No.	%
0	-	-	-	-	-	-	-	-
1	7	13	5	6	12	3.60	19	3.97
2	5	5	5	8	10	3.00	13	2.71
3	4	11	11	7	15	4.50	18	3.76
4	4	9	4	8	8	2.40	17	3.55
5	6	5	8	11	14	4.20	16	3.34
6	5	15	5	9	10	3.00	24	5.01
7	4	6	12	2	16	4.80	8	1.67
8	9	14	5	13	14	4.20	27	5.64
9	4	3	4	3	8	2.40	6	1.26
10	4	13	3	10	7	2.10	23	4.80
11-15	17	27	18	33	35	10.50	60	12.60
16-20	14	29	15	41	29	8.71	70	14.60
21-25	17	11	24	11	41	12.30	22	4.59
26-30	10	10	8	19	18	5.41	29	6.05
31-35	5	12	8	13	13	3.90	25	5.22
36-40	5	5	15	12	20	6.01	17	3.55
41-45	12	9	4	8	16	4.80	17	3.55
46-50	3	15	4	17	7	2.10	32	6.68
51-55	5	5	5	1	10	3.00	6	1.26
56-60	11	14	14	8	25	7.51	22	4.59
61+	3	2	2	3	5	1.51	5	1.05
No Age	-	1	-	2	-	-	3	0.63
Total	154	234	179	245	333	-	479	-

k. Personal equipment

There are approximately 20 radios in the village and 10 bicycles. Seven families own sewing machines. They were received only a few years ago and it is said that the owners learned to use them at home. There is one motorcycle in the village which belongs to the medic. This, of course, is an official vehicle.

l. Schools

The school that was in use in 1963 had been built in 1956. There were 32 students of whom 15 were in first grade, 10 were in the second and 7 were in the third. The teacher was Mr. Kouat. In 1968, there were 58 students in the school that was built with the aid of the Cluster in 1967. Thirty-three students were in the first grade, 12 in the second and 5 in the third. The teachers were Mr. Bounpheng, and Mr. Lit Phomma. The year 1957 marks the year when the school was re-activated. The school had actually been built during the period when this area was under the Thai. However, with the departure of the Thai, the schooling stopped for a number of years and then resumed in 1957. A new school was built in 1967. There was a large self-help input. A good deal of the lumber was sawn by the local villagers and they supplied the labor. When it came time to make the doors and windows the villagers thought it would look nicer to have pieces sawed at the mill. A total of 23,000 kip was collected amongst the villagers to buy this lumber.

m. Wats

There is one wat in the village with one monk and six novices. Although it has been hard to find a monk to stay in the wat the villagers themselves, according to the Nai Ban, have never failed to participate in merit making on every religious occasion. They give alms in cash and in kind. A portion of the cash proceeds is spent on the maintenance and repair of the building in the wat and another portion is saved for other community uses. The village, for example, has just spent 150,000 kip to buy an amplifier and generator to be used for their religious occasions. They felt that ultimately the Cluster management would leave, at which time there would be no source for this equipment. They found that the movies, ramvong, the mohlam and the other entertainment were so desirable that they don't want to discontinue them. They will make the equipment available to other villages. One major boun is given a year called "Boun Pravat". This fair is held for three nights and three days. It is said that the government last year asked them to cut down on the entertainment and prohibited the ramvong, because they said the country is in danger. This year's boon resulted in the collection of 160,000 kip. The salawat is Xieng Champ Petdee, age 45. He has been in the position for three years. The previous salawat had resigned for old age. Xieng Champ was selected in the same way that salawats are selected throughout most of the Cluster. That is, he was nominated by one person and the villagers then gave their unanimous assent.

4. Resource Utilisation:

a. Rice production

It is said that a field of two to three hectares will give about 350 kalong of rice. A field of one and a half to two hectares will give 200 kalong. Upland farming is said to

give about 50 - 100 kalong per family. It is said that 10 persons sell surplus rice. The amounts are from 50 - 100 kalong per family. It is said that Xieng Khamdee can sell as much as 300 kalong because he has only a few members in his family to consume the product. As noted earlier, the breakdown between upland and low-land rice is very uncharacteristic for this village. The CRA lists one family as producing a total of 800 kalong. This is the family of Xieng Khamdee, he also owns 20 buffaloes, two cattle and either owns or shares ownership of an elephant. The next largest production is 700 kalong, by a family who have 10 buffaloes and who also own or share ownership in an elephant. Total rice production, according to this estimate, is 180 tons for the village.

b. Livestock production

According to the CRA census there are 246 buffaloes in the village. The Nai Ban says that only four to five buffaloes are sold each year. He says that relatively few are raised in the village. He says that two or three pigs are raised per family and that a total of 30 are sold each year. A pig of four "kham" is worth from 8,000 to 10,000 kip. It is also said that chickens could be sold when they did not get sick. The Nai Ban says however, that since the road was built they have been dying with an epidemic. Before the Cluster period, a chicken was sold for 100 to 200 kip. They now sell for 500 to 800 kip. He noted that before the Cluster period the kip was also rated at 80 kip to the dollar as opposed to 500 kip to the dollar now. The Nai Ban also says that with the construction of the dam at Nam Tan, chickens have become even more expensive, because of the demand there. The Nai Ban says that 10 families were given six ducks under the livestock program which made the distribution in February 1965.

c. Other production

Lettuce, onions and garlic are grown for home consumption. The seeds were distributed by the Cluster Management over three years ago. Although some of the people went to attend courses in agricultural development at the Muong Phieng center, they were not able to utilize their knowledge because of the lack of water. They feel now that when the irrigation system is complete they'll be able to grow more vegetables and probably sell them to the people at Nam Tan.

5. Security:

Nai Ban says that he has received an order from the Chao Muong for the villagers to guard the village. He says that four persons take turns, two at a time for half of the night. He says they just sit and talk and carry no weapons. The Nai Ban and the Tasseng said that formerly the presence of the PL was unheard of in the area. (This does not accord with other facts that have been brought out on security.)

6. Project Participation:

This village received eight of the purebred Yorkshire pigs in February 1965. It wasn't long before they had all died. Although the project record does not show Na Tane as having received Taiwan ducks, the Nai Ban and the Tasseng say that they did receive some 60 of these ducks.

7. Villagers Perceptions of Change:

The villagers say that since the existence of the new road everything has been improved. They can go anywhere easily and although they have to pay taxi fare they will do it willingly, seeing that they can now earn money with less difficulty than before.

The village received a new two room school building. The village also received the three dug wells and the one drilled well. The one drilled well is not operable now. They also had nine waterseal toilets installed. Since that time they have expressed the desire for more of these, since now with the forest being cleared, they have a problem on finding a place to perform their toilet. According to the Nai Ban there was a change in the manner of dressing among the villagers. Formerly the villagers wore traditional clothes which were locally produced. Each man would wear a sheathed knife on his back. The sheath would be decorated with silver rings, indicating the status of the owner of the knife. After the development era such popular practice disappeared. The villagers now dress as in the rest of the country.

According to the Nai Ban, apart from the change in manner of dressing, there was also a change in habit and temperament. Formerly there were more cases of dispute and quarrel among the villagers than there are nowadays. The cases of theft and robbery are fewer.

The Nai Ban when asked about health, said that sanitary conditions were better than before. Formerly the villagers relied on the local practitioners. At that time, death of the mother and also the child on deliveries seemed to be a common case. This was now very rare. The villagers are very pleased with the existence of the medics and the availability of the midwife.

BAN HOUA NA

1. Location:

If a crow were to fly 14 kilometers straight south from Muong Phieng and then turn west and fly another four kilometers he'd hit Houa Na. The village lies on the extreme western edge of the valley floor at this latitude. It is located about two kilometers west of the main road to which it is connected by a good access road. About 1 and 1/2 kilometer east of the village, (or about 1/2 kilometer west of the main road) is a small community known as Nong Bua, which is the satellite village of Houa Na, statistics for which are included in the totals for Houa Na. The military grid coordinates of the center of the village are 662 003.

2. Administration:

Houa Na is in Tasseng Ha Kheme. The Nai Ban is Xieng Somboon Piana who is age 43 and has been in the position for 19 years. The assistants are Xieng Lai Panpa, age 44, who has been in the position since 1955, and Xieng Boonmee Boonyangdee, age 26, who was elected two years ago because the village needed additional help with

all the work in connection with the development activities. The Village Development members are Xieng Boonta, Khampa, age 60; Ay Pan Ooontong, age 72; Ay Ban Inkhan, age 43; Ay Mai Labkong, age 53; Ay Peng Moonpha, age 39; Ay Xieng Boonda Khampa, age 60. Other village Development Committee members whose ages are not known are Chan Thong Say, San Boun Tham, Xieng Chan Dee, Nai Pha, Nai Somboon, Nai Pheng, Nai Chan Pheng, Thao Kiane, Thao Sing.

3. Resources:

a. Land and Irrigation

It is said that about 1/4 of the families do not own paddy rice fields and must practice upland rice farming. It is also said that there are about 10 families who have surplus rice and can sell as much as 20-30 kalong apiece. Two families sell as much as 85 kalong because they buy rice from others and then sell it to ADO. The Nai Ban said that the soil here is not so good, because it is too sandy. He says that most villagers own from one to one-half hectares of paddy and that no one has more than two hectares. Many of those who have paddy farms also have to farm upland rice. They say in general the upland farms are about kilometer away. Some water is obtained from a small stream, Houei Houa Na. This village is in the right bank Nam Tan irrigation system area and should be one of those who benefit most from this system.

b. Manpower

In 1963 this village had 109 families and 663 people. In 1968 there were 787 people and approximately 130 families. The attached table show the age-sex breakdown for both populations.

c. Roads

Although the straight line distance from Houa Na to the main road is a little bit less than two kilometers the actual length of the road that provides access is 2.8 kilometers. This is a relatively new road put in by the Travaux Public sub-division for the Province. There is also said to be a trail which skirts the foot of the hills and goes down to Na Luak to the south.

d. Airfield

Because of a somewhat round about route that must be taken to get to the airfield, it lies about 10 kilometers away from Houa Na.

e. Potable Water

There are at least seven wells dug by the villagers themselves which are not lined. There was also one lined well which was provided under Activity Plan No. 9, three or four years ago. Under Activity Plan No. 26, seven wells were to be given to this village, the largest number for any village under this plan. One of these has been completed except for roof and fence and the one at the school is incomplete. The others have not

0 10km

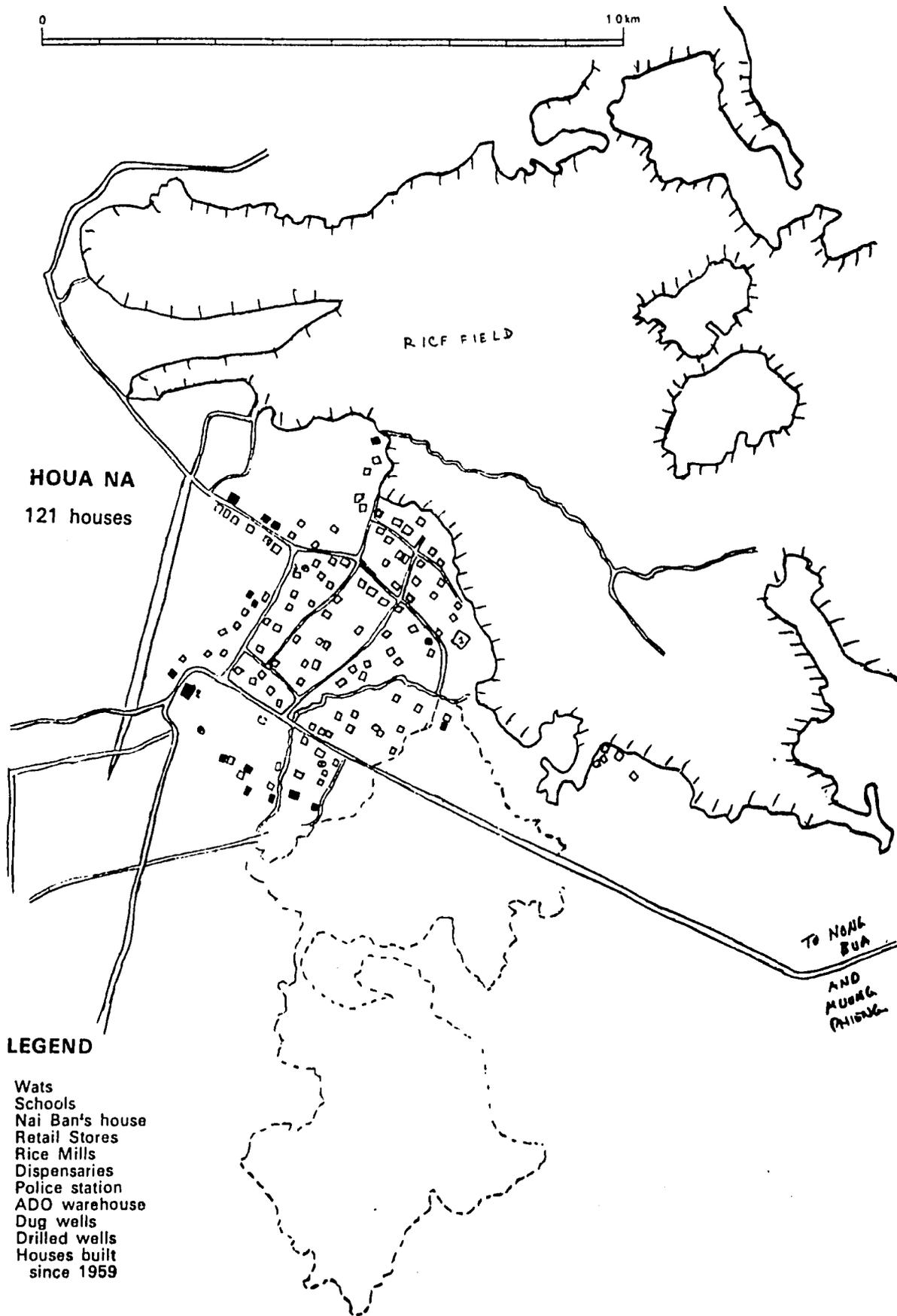


Figure 12 Houa Na

VILLAGE POPULATION

Village: Ban Houa Na

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	3	-	8	-	-	11	1.40
1	20	16	17	9	37	5.58	25	3.18
2	9	13	13	18	22	3.32	31	3.94
3	6	15	9	18	15	2.26	33	4.19
4	4	24	7	9	11	1.66	33	4.19
5	16	14	14	8	30	4.52	22	2.80
6	9	20	10	12	19	2.87	32	4.07
7	9	17	13	8	22	3.32	25	3.18
8	15	23	3	17	18	2.71	40	5.08
9	12	10	9	7	21	3.17	17	2.17
10	8	13	12	21	20	3.02	34	4.33
11-15	31	42	33	48	64	9.65	90	11.44
16-20	39	37	40	56	79	11.92	93	11.82
21-25	33	29	35	38	68	10.26	67	8.51
26-30	23	22	20	35	43	6.49	57	7.24
31-35	8	24	18	25	26	3.92	49	6.23
36-40	17	21	18	16	35	5.28	37	4.70
41-45	9	13	11	8	20	3.02	21	2.67
46-50	6	9	20	18	26	3.92	27	3.43
51-55	16	9	5	4	21	3.17	13	1.65
56-60	24	10	32	13	56	8.45	23	2.92
61 +	2	3	1	4	3	.45	7	.89
No Age	3	-	4	-	7	1.06	-	-
Total	319	387	344	400	663	-	787	-

been started. They say there is no problem about water in this village, because there are two small streams that flow out of the hills directly west of the village. In addition, water can be reached by digging three meters at almost any point in the area.

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f. Medical facilities

Villages from this village probably use the dispensary at Ban Na Kheme.

g. Police Station

This village probably goes to the police station at Ban Na Kheme, which is about four kilometers away by road.

h. Telephone System

This village is not connected to the telephone system.

i. Rice Mills

These villagers go to the rice mill at Na Kheme. However, a great deal of the rice is still milled by manual means.

j. Retail Stores

There are no retail stores in Houa Na. This villages can go to Na Kheme where there is the one good store or they can go just a little bit further to the north and go to the well-stocked stores at Na Sing.

k. Personal Equipment

Data was not collected on radios, bicycles, motorcycles or sewing machines. However in the 1966 survey they found three bicycles and 12 radios.

l. Schools

The old school was built in 1953. By 1963 there were 33 students, 19 in the first grade, 10 in the second, and four in the third. The teacher was Mr. Kom Soukphaly. In 1968, with Cluster help, a new school was built. This was a two room school, but it was subdivided to make three rooms out of it. In 1968 there were 88 students. There were two first grade classes 32 and 30 pupils respectively, taught by Mr. Phomma Sengkay and Mr. Sing Ounvong. This second grade had 14 students and the third had 12, both taught by Mr. Kene Siphanh. Twenty students go to the higher grades in Na Kheme, either by walking or going by bicycle.

m. Wats

There is one wat with one monk and four novices. The monk had been a novice in Na Bouam when he was invited to come here as a monk. The big boun every year is Boun Kao Pluak. The Nai Ban says that merit giving ceremonies were different in early times because now the village can earn money from the officials who come to visit the boons. He says that flower pins are sold. A container is placed on a high place and people can go up to put the money in as they wish. The villagers from other places also come. Before development the villagers attended only their own ceremony. Last

year Houa Na got about 30,000 kips at their boon. The Nai Ban says that some villages get over 100,000, such as Na Bouam, and Na Tane. The money can be spent for anything and does not necessarily have to be for religious uses, according to the Nai Ban. However the money that was earned last year has not been spent and is being held by the Nai Ban and the Salawat. The Salawat is Chan Tong sai, who is 26 years old. He has an assistant, Ay Ban and they both belong to the Village Development Committee. Although the Salawat was elected (or rather selected), he chooses his own assistant.

4. Resource Utilization:

a. Rice Production

The farmers use three to five kalong of rice seed in the paddy fields and get a yield of about 60-70 kalong per kalong of seed. Average yields run roughly 200-300 kalong. In upland rice they usually use about 4 kalong of rice seed and get about 140 kalong yield. The average yield per family is 100-200 kalong.

b. Livestock Production

It is said that about 10 buffaloes are sold per year to traders who come two or three times a year from Muong Phiang or Sayaboury. The price is said to be about 50,000 kip each. It is said that 40-50 pigs are sold each year to traders from Sayaboury who come in trucks four to five times a year. They say that the ducks and chickens are dying off this year because of the epidemic. It is said that local ducks are hard to find now, they have all been interbred with the Taiwan ducks and after the inter-breeding they all become like the Taiwan ducks. It is said that there are two houses which raise ducks for sale, and have about 50-60 each. They sell eggs to the traders from Sayaboury. Each family earns about 2,000 kip per day doing this.

There are two horses in this village, owned by Ay Ta. He will hold them for sale to the Meo or Yao or will rent them. The Nai Ban says that he used to have two horses but they were killed by a tiger a few years ago. It is interesting to note that some of the villagers have stated that tigers are no longer seen in the area. Before the forests started being cut down tigers were much more frequently seen. An elephant is used locally but it is the one that is owned by Xieng Boonta at Ban Na Sing.

c. Other Production

Vegetables are grown only for consumption in the family. These are lettuce, onion, parsley and garlic. And these have been grown since the time of their parents. Fruits are coconut, oranges, mango, banana, papaya and sugar cane. However there are only a few of these left. They have been sold to the development officials recently. It is said that only a very little fruit is sold to other villagers.

d. Security

There is no information on security in this village.

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6. Project Participation:

As stated earlier, this village received one dug well under Activity Plan No. 9 and it was planned to receive seven wells under Activity Plan No. 26. One of these latter wells has been completed and the one which is under way at the school is not yet complete. The others have not been started.

This village was given eight pigs under the livestock program in February 1965. They all died within about a year. This village was also given 54 ducks under the livestock program at about the same time. These ducks were quite successful and the ducklings were taken by the veterinarian and distributed to other families, 6 to each family until every family had gotten them.

Three of the villagers attended the livestock training program that was held in Na Kheme.

This village received a school under Activity Plan No. 23.

As in all of the villages, this village participated in the Village Development Committee program. There are fifteen members who were elected. One of the results of this committee was that at a recent meeting the villagers decided to build a house for the teacher. The Nai Ban suggested it and the villagers agreed. The villagers have not yet decided whether or not to ask the Cluster for help in this project.

Information teams used to come to this village two or three times a year, but have not been here for the past year. The local village development committee man said that when they come they have mohlam and movies and they talk to the people about development, cooperation, and progress.

There was one course here for sewing and blouse construction. One of the committee men said that he didn't think the women changed their ways after taking the course.

7. Villagers Perception of Change:

The first change that was mentioned is the fact that the road is much better for travelling.

The assistant Nai Ban said that earlier there was only the Nai Dan and his assistant to help the villagers, now they have the Committee men also who can discuss problems together and give advice and train the villagers in the development of their village. One of the committee men said that since the Cluster developers came, it was like being blessed because the village has progressed so much.

Another committee men said that the villagers no longer like to use grass or thatch for their roofs, but prefer to have corrugated iron instead. The Nai Ban said that before the development plan he never thought of any problems except that of starvation.

Most of the meetings were devoted to wat affairs or road improvement in the village. Nowadays cars come into the village because the villagers have been improving the road every year. Each villager works in the strip in front of his house.

NA KHEME

1. Location:

Na KHEME is about 15 kilometers straight south of Muong Phieng. It lies on the main road and it is just south of and above the end of the lowest flood plain of the valley of the Muong Phieng Cluster. The part of the valley from this point southward has a more uneven floor than the more northern plains. The military grid coordinates of the center of the village are 646988. The Nam Phieng River is about 1 kilometer to the east.

2. Administration:

Na KHEME is the capital of the tasseng of Na KHEME. The Tasseng is Nai Souk Sanaleuth, 36 years of age, who has been tasseng for two years. The Nai Ban is Nai Sida Onphinpha, who is 42 years old and who is also been Nai Ban for two years. The former Tasseng, Nai Sorn Sennan 55 years old, resigned two years ago. He has been considered to be extremely conservative and had not been as cooperative with the Cluster development plans as the villagers would have liked. This was also the case with the former Nai Ban, who was Nai Pheng Nakhet, who was 65 years old. The assistant Tasseng is Nai Thong Bai Koumpheng, he is 30 years old. The members of the Village Development are Chan Inpanh Panyakham, 44 years old; Xieng Khai Dunoj, 49 years old; Nai Kong Perdrom, 49 years old; Souphan Bouapha 39 years, Nai Tanh Thamma, 51 years; Nai Phanh Dony, 30 years, Nai Kong Phathanh, 42 years; Nai Nakhet 30 years; Nai Lae Khet, 30 years.

3. Resources:

a. Land and Irrigation

The Nai Ban says there are about 40 families who own paddy fields. About 20 families do not have paddy fields and grow upland rice. There are said to be six families who don't have to farm; two are soldiers and four are policemen. The upland rice is grown in the area to the east, about four kilometers away. This means they have to cross the Nam Phieng River.

It is said that five families own more than three hectares of paddy. Most of the villagers are said to own between 1.5 and 2.0 hectares. Na KHEME is at the lower end of the Nam Tan right bank irrigation system. As of the present time, this area is still being surveyed, but no construction or clearing other than for surveying has been performed.

NA KHEME

162 houses

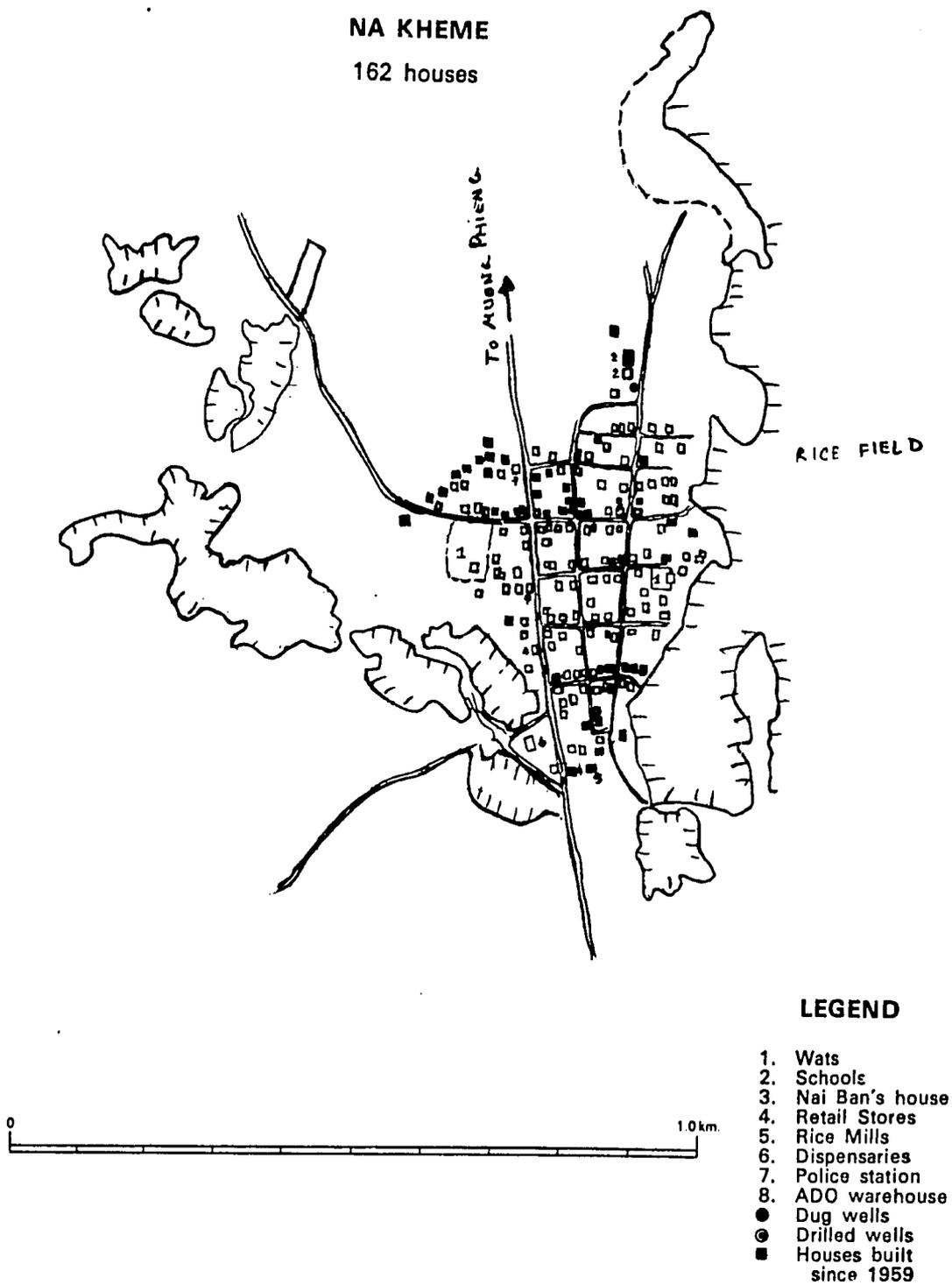


Figure 13 Na KHEME

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b. Man power

In 1963 Na Kheme has 119 families and 685 people. In 1968 there were approximately 150 families and 863 people. The age-sex distribution of this population in both periods of time is shown on the accompanying table.

c. Road

Na Kheme is located on the main road in the Cluster. There are two villages that are directly dependent upon it, Ban Na Luak and Nong Houng. As yet there has been no road constructed to these villages. The first village Nong Houng is about 1/2 kilometer to the west and the second village, Na Luak, is about 3/4 kilometer farther.

d. Airfield

Na Kheme is about 9 kilometers from the air field at Nam Tan Dam site, assuming that the road on Lateral no. 2 on the Nam Tan left bank is used part of the way.

e. Potable water

There are over 10 wells that were dug by the villagers without the help of the Cluster. It is said that as long as the wells are about 10 meters deep there is no problem in getting water. However the villagers say they prefer to have lined wells. They did not receive any wells under the Activity Plans.

f. Medical Facilities

This village has a dispensary. The old one is being replaced by a new one, utilizing self-help labor from all villages in the tasseng.

g. Police Station

Reported to have three or four policemen stationed at it. It is probable that one of these policemen has been temporarily assigned from Muong Phieng.

h. Telephone System

The telephone cable was cut when during the attack on the Nam Tan dam site in the last part of March this year. The telephone instrument has been returned to headquarters. It is said that the phone had not been used before it had to be returned.

i. Rice mills

There are two rice mills located in the village. However one has not been counted amongst the totals that have been reported for the Cluster so far. This is the one owned by Sao Pad, a widow. She built the mill four years ago but it has now been out of repair for a number of months. The indications are that it probably is not in condition to be started again.

VILLAGE POPULATION

Village: Ban Na Kheme

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	12	-	6	-	-	18	2.09
1	22	14	26	14	48	7.01	28	3.24
2	14	17	6	13	20	2.91	30	3.48
3	13	16	21	19	34	4.96	35	4.06
4	11	16	9	23	20	2.91	39	4.51
5	10	21	22	16	32	4.67	37	4.29
6	7	16	13	23	20	2.91	39	4.51
7	17	11	12	17	29	4.23	28	3.24
8	11	16	11	31	22	3.21	47	5.45
9	6	7	11	14	17	2.48	21	2.43
10	10	16	12	21	22	3.21	37	4.29
11-15	36	72	33	47	69	10.07	119	13.79
16-20	39	28	39	34	78	11.39	62	7.18
21-25	21	15	40	39	61	8.91	54	6.26
26-30	11	27	22	38	33	4.82	65	7.53
31-35	18	22	34	26	52	7.59	48	5.56
36-40	23	24	11	24	34	4.96	48	5.56
41-45	17	26	13	15	30	4.38	41	4.75
46-50	10	16	10	13	20	2.91	29	3.37
51-55	13	8	6	10	19	2.77	18	2.09
56-60	6	3	3	9	9	1.31	12	1.40
61 +	10	6	6	2	16	2.34	8	.93
No Age	-	-	-	-	-	-	-	-
Total	325	409	360	454	685	-	863	-

The other mill is owned by Xieng Suphan. He comes from Na Kheme, is a member of the VDC, and is also a store owner. He put in his mill in 1968. It is rated at 16 horse power which makes it the largest in the Cluster area. He says he mills between 70-100

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kalong per day of rice during the harvest season. This makes him the second largest after the mill in Muong Phieng in terms of volume of milling. He uses 200 litres of gasoline a month. He raises between 30-50 hogs. His milling rate outside of the harvest season is 20-30 kalong per day.

j. Retail Stores

There are three stores in the village. The oldest store is owned by Xieng Suphan, who started the store in 1960, and who is also the operator of the mill in Na Kheme. He is a member of the Village Development Committee and is a Lao from Na Kheme. His customers come from all of the villages in Tasseng Na Kheme. He has a very large stock, one of the largest in the Cluster. The second store was started in 1964, by Sao Pad, the widow who also ran the other mill that was located in Na Kheme. She sells probably two-thirds of the numbers of items that Xieng Suphan does. Her customers are said to come only from Na Kheme. The other store was started in 1966 by Chan Inpan, who is a Lao from Na Kheme. He is also a farmer. He sells almost as many items as Xieng Suphan.

k. Personal Equipment

The Tasseng has reported that 50 persons own radios, 50 have sewing machines, and there are 35 bicycles. He says that five own motorcycles. He says that ten families use their sewing machines to make clothes on order. A long-sleeve shirt and trousers each cost 300 kip. The equipment totals are so much higher than numbers reported for other villages that they are suspect. For example, the five motorcycles may be official motorcycles owned by the police or other officials. The 50 sewing machines and 35 bicycles could be extremely high. A survey that was taken in 1966 (and which has not been used because of the large amount of internal inconsistency within the reports) for comparison in this case, however, says that 10 women had sewing machines. The survey also reported that there were no bicycles, motorcycles and no radios in the village. This earlier survey, for further comparison, also said that all families have latrines and that all families boiled their water before drinking it. Both statements are exaggerated.

l. Schools

The first school was built when the village was under the rule of Thailand, some 21 years ago. In 1967, the Cluster team participated in building another school of two rooms. This was then divided into four rooms. With the old school building, there are now 6 classrooms which gives them room for the full six grades of the Groupe Scolaire. In 1963 there were 40 students of whom 15 were in the first grade, 15 in the second and 10 in the third. The teacher was Mr. Chanh Sirisombat. In 1968, there were 213 students: 57 were in the 1st grade, taught by Miss Somdy; 32 were in the second grade, taught by Miss Sengphet; 39 were in the third grade, taught by Mr. Souang; 25 were in the fourth grade, taught by Mr. Onane; 26 were in the fifth grade; taught by Mr. Bounchanh; and 24 were in sixth grade, taught by Mr. Phet. Students come to this village for the fourth to sixth grades from Na Tane, Houa Na, Na Bouam, Houie Om.

It is interesting to note that when the school was built by self-help by Cluster assistance in 1968 they found that they didn't have enough mill-sawed lumber for the school. The Tasseng then asked 17 wealthy villagers to contribute 1,000 kip each. This money was added to 25,000 kip which had been the proceeds or part of the proceeds of a recent boun. All of this was then spent for milled lumber. The Tasseng had told the villagers that if the villagers didn't get enough wood the developers (that is, the Cluster technician), might take their work elsewhere.

m. Wats

There are two wats in the village. One was built a long time ago and the second was built about 7 or 8 years ago. The old wat has one monk and 6 novices, and the new one has none. Each year they give a boun called Boun Kao Pluek. They also have ceremonies at Lao New Year and the end of Buddhish Lent. Two of the elders act as Salawat, one for each wat.

4. Resource Utilization:

a. Rice Production

The Tasseng's figures (already suspect for other items) on rice production are not very consistent. However, they will be cited and possibly they can be used as a basis for establishing a correcting factor. He says that 20 families get 600 kalong of rice per year and they use only three or 4 kalong for planting. The rest of the villagers he says get 200 kalong of rice from paddy. 60 families do up-land farming and use from two to five kalong of rice for planting. They say they get from 60-70 kalong of rice product for a kalong of rice seed. The Tasseng says that 6 or 8 years ago not many people farmed upland rice. They had a bad year at that time and many had to go into the upland to raise rice. He says the rice from the paddy farming is sold and the rice from the highland farming is consumed. He complains that nobody gives advice on upland rice farming but that there is plenty of advice for paddy farming. He says that the use of fertilizer has been pushed, but the soil is so fertile that not many people are interested in the use of fertilizer. He says that about 20% use fertilizer. He says that also that 15 families sell as much as 200 kalong of rice. He says its difficult to estimate the rest of it because the odd kalong or two is bartered with the traders from Sayaboury when they come bringing clothes and other items. He said the villagers prefer to barier these small lots of rice for other artik s.

b. Livestock Production

The Tasseng said, (and this is possibly inflated) that the village sells from 25-30 buf-faloes per year. He says the traders come from Luang Prabang or Sayaboury about 9 or 10 times per year. The price of a buffalo is 55,000 kip and he says the price is going up all the time.

He says that many pigs are sold every year. He says the miller sells 20-30 pigs at a time and almost every month (this is almost certain to be inflated). He says the village

as a whole sells about 20 pigs a year. Each family raises about 5 or 6 of the new Taiwan ducks.

c. Other Production

Some three or four years ago the village was given vegetable seeds by the Cluster. They were given to all who wanted them. However they were the same kind that the village had already been growing. They were not given any additional ones later. Villagers still grow these vegetable crops now. The plants they grow are corn, water melon, gourds, pumpkins, lettuce, onion, garlic, which are grown in gardens near the house during the rainy season. They are grown only for household consumption, not for sale. They also fruit trees such as coconut, banana, orange, jackfruit, pomelo, sugar apple, and mango which were planted a long time ago. They say that additional fruit trees are being planted for future generations.

5. Security:

The village has had a protection group for some time, consisting of about 40 members, according to the Tasseng. 28 are villagers from Na Kheme and the rest come from other villages in this tasseng. According to the Tasseng, it was dissolved four or five months ago because of lack of funds. Other information about the group says that it was dissolved after only about one year of operation. The two leaders are still living in the village. One was shot during the recent skirmish with the Pathet Lao. The skirmish occurred in March 1969 when a group of PL went through Na Kheme on their way to attack the Nam Tan Dam site. According to the Tasseng, this village heard about the possibility of an attack eight days before and were on guard continually. After the attack on Nam Tan, when the PL withdrew going through Na Kheme, the villagers were ready for them and slowed them up enough so they could be identified and so that the hostage they had captured could escape.

6. Project Participation:

One of the first projects that Na Kheme received was water-seal toilets. The Tasseng says that some of the villagers who have the water-seal toilets still don't know how to use them, and use a piece of wood to empty them instead of water. The Tasseng has said that there are 28 water-seal toilets, whereas the Cluster records indicate that 40 were distributed to Na Kheme. The other projects at about the same time were the livestock projects for pigs and ducks. Tasseng says that eight pigs were distributed; to himself, for one, and to the following; Xieng Khai, Ay In, Ay Tai, Ay Tong, Ay Wan, Xieng Nang, Nuen Somboon. They were not trained in how to raise them. He says that the Cluster people came to the Village and only showed them how to build an enclosure. 72 ducks were given to the village, 6 to each of 12 families. The offspring were given to other families.

The village was one of the first to have a school project, in that their school was repaired in 1965. Some two years later they were given a new school to replace the other

one. The old one was left in place and was still used so that they had the benefit of 6 classrooms for a Groupe Scolaire.

The villagers say that they should have gotten wells a long time ago. However the former Tasseng and Nai Ban were not interested in the village welfare, so they didn't ask for anything. Now however, under Activity Plan No. 26 they have already had the one school well dug and the well at the Tassengs house is being dug. There are three more scheduled.

The village also participated in the livestock training program. Six persons, two of whom were ones who had taken pigs in the earlier program went to Muong Phieng for a number of weeks. These persons were Muen Somboon, Xieng Nang, Ay Piew, Ay Seeda, who is the Nai Ban, Ay Sien, and Ay Terng. The first two had participated in the earlier program. The Tasseng says that the training was useless. 'The people still went on with their old method and did not teach anyone the new method.'

The clinic was built very early in the Cluster program. Tasseng says that recently the Cluster manager and the Nai Dan came to ask if the village needed a new medical center. All Nai Bans in the Tasseng were called to express their opinion. They all said they needed it. All villages agreed to supply a certain amount of self-help labor. As of now only the cement and the sand have been gathered together for the work. The other villagers have not yet supplied any labor.

The villagers are now participating in the Nam Tan dam project. Thirty persons from the village are already providing self-help work. There are five groups of six people each. Each group works for a period of three days and then rotates through until its turn again. It is said that everybody will get water from this irrigation project except the six families whose farms are on the other side of the Nam Phieng.

A group of women attended a course in home economics which included sewing, house care, and cooking. According to the Tasseng, only the sewing lessons were useful. Two women bought sewing machines and now make clothes to order. These women are Nang Ta and Nang See. They participate in the Village Development Committee. At first the committee members weren't sure of what their rights and privileges were. They wondered if they had the same rights as the Nai Ban. The Tasseng consulted with the Nai Dan who said it would be up to the villagers to decide. The Tasseng called a meeting of the villagers and everybody agreed to give them special rights in that they were exempted from some duties. The Tasseng said the villagers sympathized with them that they had to take time from their private work in order to work for the village.

The committee members were then taught how to study problems, find solutions, corrections and make decisions on priority and so forth. The Tasseng described one of the few problems that they brought up that was new. This was the problem he had himself encountered when he had to take his son to the doctor at Sayaboury. He had to

wait for a long time at Muong Phieng for a car to take him to Sayaboury. He then raised the problem that a car should be kept on hand at all time so that it could take emergency cases to Sayaboury. After it was agreed by the villagers that one car should be provided especially for the sick, other people disagree saying that if a car was used only for one person it would be impossible to send another person to the doctor. They called for the Cluster manager to come and explain the problem to them.

The Cluster manager explained that this was very complicated because as soon as one car went, the next emergency would be in the position that the first had been if there had been no car. The Cluster Manager said that he would try to improve this kind of service.

7. The Villagers Perceptions of Change:

The Tasseng says that the villagers life has been greatly facilitated since the existence of the road. Now they can go to Muong Phieng by taxi for 100 kip or Sayaboury for 300 kip.

The style of the house is changed. They used to build their houses on stilts, and the buffalo were kept under the house. Now this practice is tending to change. They also used to roof their house with thatch. Now they want to use corrugated sheet metal roofing.

There is a change in the manner of dressing. They used to wear sarongs and have their thighs tattooed in black, which was a popular sign of manliness. This practice ended just about the time of the start of the Cluster. The villagers now wear modern dress. Although weaving is still carried on, they hire others to make the dresses from the cloth that they themselves have woven. It is said that many women in the village now own sewing machines and have learned how to make dresses.

One of the elders said that formerly the villagers wore buffalo sandals. Now they all wear the rubber sandals.

Another change is in the use of kerosene for lighting. Formerly they used torches; now they use kerosene lamps. They say they even use this lamp for frog hunting.

They said that formerly when a villager was sick he went to the local practitioner. Now if they are sick they go to the medic and if they are too sick they get taken to Muong Phieng or Sayaboury.

They say that one-fifth of the villagers are still illiterate. Most of the older villagers can read Thai, but cannot read Lao.

Now the people from the Cluster headquarters come to the village and help them organize their religious ceremonies by lending them generators, amplifiers and other equipment.

NONG HOUNG

1. Location:

Nong Houg is located about 15 and 1/2 kilometers south of Muong Phieng and is about one-half kilometer west of Na Kheme. The military grid coordinates are 638986.

2. Administration:

Nong Houg is in Tasseng Na Kheme. The Nai Ban is Thao Mee Phanphiou and he is 31 years old. He has been in the post since 1966. The village committee members are Thao Pha, Oumsou, 65 years old; Xieng Thongsy Bounleuth, age 34 years; Thao Bounma Prompone, 35 years old; and Tao Sai Kantamoh, who is 45 years old. There is another committee member Xieng Si whose age is unknown. It is said that the Nai Ban is going to resign from his post because of the fact that he had been divorced from his wife. There has been much complaint from this village about their Nai Bans, they say they have had quite a number during the past few years. The villagers blame the fact that they have received very little aid from the Cluster management on the fact that the Nai Bans have not been aggressive enough to go out and ask for it.

3. Resources:

a. Land and Irrigation

There has been no change in the amount of land cultivated during the period of the Cluster. Some four to five families have no paddy, and those who do, have only a small area. Two to three families own not more than two hectares of rice field. Others probably had as little as seven or eight rai, or a little over one hectare (6.25 rai equal one hectare).

There is generally a shortage of water in this area for rice growing and the villagers are looking forward to the canals that will be put in by the Nam Tan Right Bank System.

b. Manpower

In 1963 there were 35 families in this village and 175 people. In 1968 there were 36 families and 199 people. All of the increase can be accounted for in the ages below ten years. Total population in this group increased by about 25 during this period. The age-sex distribution of this village during the two years, 1963 and 1968, is shown on the accompanying table.

c. Roads

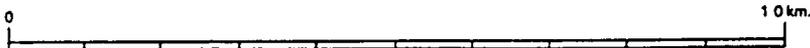
An access road probably is being built by the Sayaboury sub-division of Travaux Public from Na Kheme to this village. The director at Sayaboury says that it is in this year's budget to construct this road. This road will go to Nong Houg and beyond to Na Luak. The Nai Ban has said that a road is the one thing that is desired by the villagers more than anything else. He says that the villagers have themselves built a

NA LUAK

21 houses

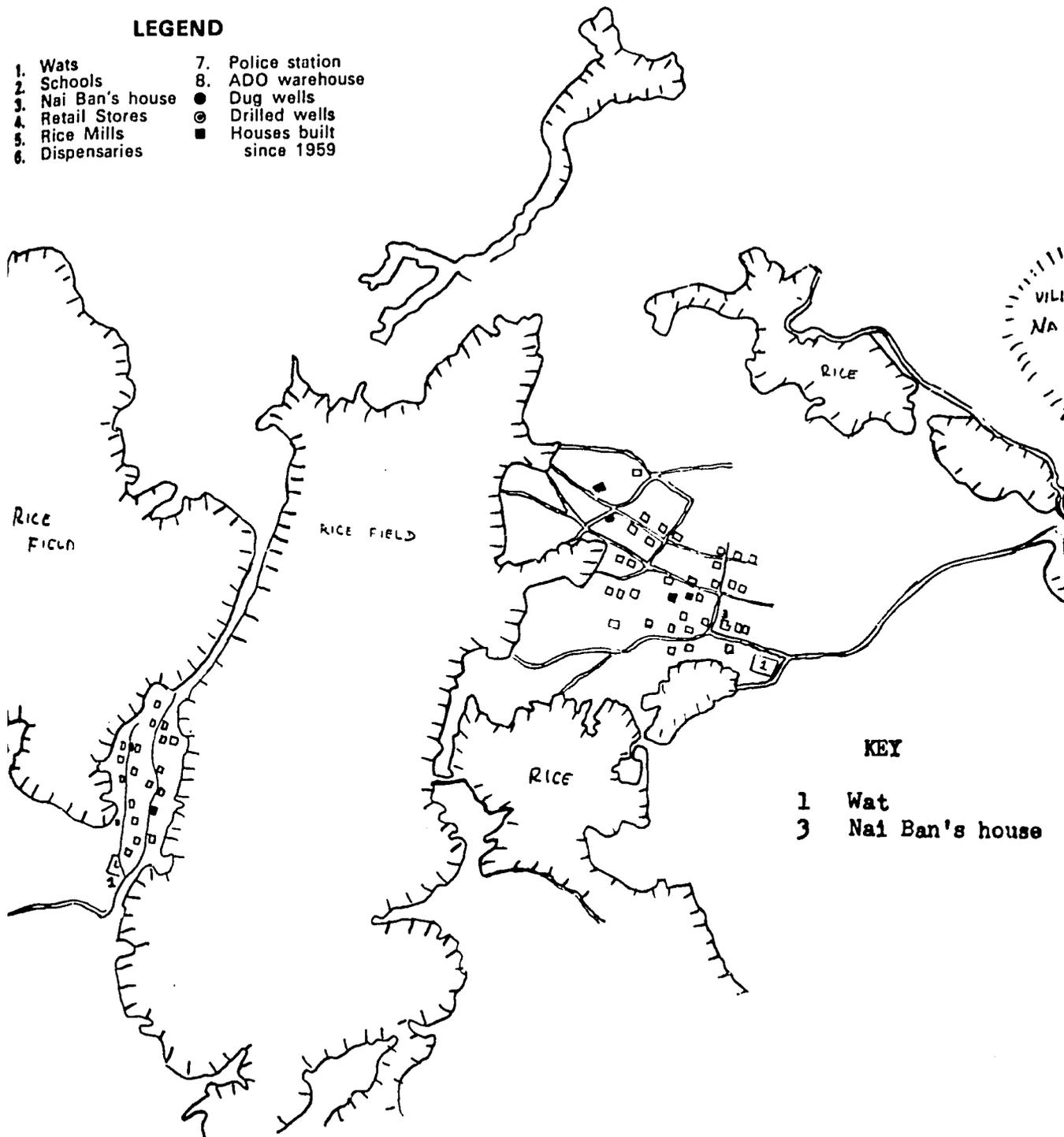
NONG HOUNG

36 houses



LEGEND

- | | |
|--------------------|---------------------------|
| 1. Wats | 7. Police station |
| 2. Schools | 8. ADO warehouse |
| 3. Nai Ban's house | ● Dug wells |
| 4. Retail Stores | ⊙ Drilled wells |
| 5. Rice Mills | ■ Houses built since 1959 |
| 6. Dispensaries | |



KEY

- | | |
|---|-----------------|
| 1 | Wat |
| 3 | Nai Ban's house |

Figure 14 Nong Houng & Na Luak

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road which could be used by motor vehicles and have kept it maintained for the past number of years. However, what it lacks to make it useable is a bridge across the Nam Luak river and culvert pipe for a ditch near the village.

d. Airfield

The airfield at the Nam Tan dam site is between 10 and 11 kilometers from this village.

e. Potable Water

The village has 10 wells which are simply holes in the grounds and it has one lined well. The lined well existed since the time that this area was ruled by Thailand. Water is said to be easily available but is not clean. The villagers would rather have their wells ringed. They say that water is scarce during the dry season.

f. Medical Facilities

Medical facilities are available at Na Kheme, one-half kilometer to the east. However the road is probably impassable during the wet season.

g. Police Stations

The police at Na Kheme is available when access can be gained.

h. Telephone System

This village does not have a telephone. The nearest telephone is at Na Kheme.

i. Rice Mills.

The rice mill at Na Kheme is available when access can be gained. It is probable that most of the milling here is done by hand.

j. Retail Stores

The stores at Na Kheme are available when access can be gained. There are no stores in the village.

k. Personal Equipment

It is said that four to five families have radios. There are no sewing machines, bicycles or motorcycles.

l. School

This village does not have a school. The Nai Ban says that a school was requested as early as 1967, but nothing happened. He says that about 11 to 12 persons go to school at Na Kheme. However these can only go during the dry season. During the rainy season the road is flooded and the water level in low places is well over the height

VILLAGE POPULATION

Village: Ban Nong Houng

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	1	-	1	-	-	2	1.01
1	3	2	2	1	5	2.86	3	1.51
2	2	8	2	9	4	2.29	17	8.54
3	3	.	5	-	8	4.57	-	-
4	2	3	1	9	3	1.71	12	6.04
5	3	-	3	1	6	3.43	1	.50
6	5	6	1	6	6	3.43	12	6.04
7	3	3	1	-	4	2.29	3	1.51
8	-	7	3	3	3	1.71	10	5.03
9	3	1	2	-	5	2.86	1	.50
10	4	8	1	5	5	2.86	13	6.53
11-15	8	11	8	8	16	9.14	19	9.55
16-20	9	9	13	11	22	12.57	20	10.06
21-25	8	4	3	10	11	6.29	14	7.04
26-30	5	3	7	3	12	6.86	6	3.02
31-35	5	6	14	3	19	10.86	9	4.52
36-40	6	5	4	14	10	5.71	19	9.55
41-45	2	5	8	8	10	5.71	13	6.53
46-50	5	6	2	7	7	4.00	13	6.53
51-55	4	4	7	1	11	6.29	5	2.51
56-60	2	3	2	1	4	2.29	4	2.01
61 +	3	3	-	-	3	1.71	3	1.51
No Age	-	-	1	-	1	.57	-	-
Total	85	98	90	101	175	-	199	-

of the pupils. Thao Pha said that formerly elementary education was compulsory and parents found to have neglected to send their children to school would be arrested. He says that now education is not compulsory. It is estimated that in 1963 approximately 5 students went to Na Khome to school, and as stated earlier some 10 to 12 go at the present. The total number of school age children in 1968 was 43.

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m. Wats

There is one wat in the village but there has been neither a monk nor novice for the past two years. The villagers here go to the boons at Na Kheme. They would like to have boons here but other villagers cannot make their way to the village. They say that when other villagers have boons they send cards to every village and receive donations from the other villagers. This village not having a boon has made donations to other villagers but has never gotten any of their money back. The Salawat is Xieng Khuong, who is about 50 years old. He is the religious leader of the village. Before the Cluster, the wat had been given some 60 sheets of corrugated iron roofing which had been donated by the U.S. government. This is the same shipment that has been talked about in other villages and where the roofing was used in either schools or wats. Because of the old Tasseng of this tasseng had been a native of this village and was a friend of the Chao Khoueng, the sheets were transported by truck from Sayaboury to Na Kheme, and the villagers carried these sheets from Ban Na Kheme, the 1/2 kilometer to Ban Nong Houng. This is in contrast to all of the other villages, who had to carry their metal roofing on their backs from Sayaboury.

4. Resource Utilization:

a. Rice Production

It is said that six families had a surplus of rice last year. They sold it to ADO in amounts of 30-60 kalong each, for a total of 210 kalong. This is the first year that surplus rice was sold in this way. Previously it had been sold within the village to villagers here. Average rice product from upland fields is said to be about 150 kalong per family. There are two or three families who get 200 kalong from their upland rice. The average product from paddy is between 100-200 kalong.

b. Livestock Production

This village will sell approximately 5 buffaloes per year to merchants who come from either the north or the south. They say they sell 10-15 pigs each year to merchants or sometimes to villagers from the Phai villages nearby. Although the village did not receive any of initial shipment of Taiwan ducks, they later received eggs and ducklings and now grow the Taiwan duck as well as local ducks. A local duck is sold for 400 kip and a foreign breed duck at 300 kip. Thao Noi use to have four horses. He sold them to the Meo and the Yao (30,000 for a strong horse and 17,000 to 18,000 for a weaker horse). They have many chickens, but they say that many chickens die too.

c. Other Production

Other crops that are raised are jackfruit, pineapple, water melon, sugar cane, banana and papaya. Some of these are sold but only occasionally, to other villages and total sales at any time are usually 20-50 kip. Vegetables are said to be grown only in the foggy season (October-November). These are garlic, onions, lettuce and cabbage. They only grow enough for their own consumption.

5. Security:

The Nai Ban says that now the villagers are afraid of the PL threat. He says that four years ago nothing of this sort ever happened. He says that they are afraid of the PL even though they have never met one of them.

6. Project Participation:

The only project that this village has participated in has been the Village Development Committee project. Their committee now contains five members. Formerly there were only the Nai Ban, his assistant and the Salawat to settle any quarrels or disputes. The elders also would participate in arranging a compromise and the parties in the litigation were either satisfied or might receive reprimands. They say they still do the same today, but that recently there have been fewer in the way of quarrels.

They also participated in that they received copies of the bulletin. They say they received them with great interest and wish they had more like them. They say they get 10 copies each month because they are a small village. When asked about literacy, the Nai Ban said that those who were over 30 years of age had attended Thai school during the Thai rule. The younger ones had studied the Lao Language, but very few of these had gone to school. The Nai Ban feels that less than a quarter of the village is literate.

7. Villagers Perceptions of Change:

Xieng Bounma said there was a change amongst the women. Formerly the villager women wove their own cloth. Now they buy imported cloth which he says is more attractive.

The Nai Ban said that formerly they had no problems to worry about because they didn't recognize the existence of problems. Part of the reason was that they didn't think they could get any help anyway if they did have a problem. Now he says they recognise problems concerning the roads, school building, water wells with cement rings and the canal. The Nai Ban said that 2/3 of the people don't want any change at all whereas some of the others do.

Almost every family would like the government to help them with regard to loans especially for buffalo. Most of the families have a small piece of land which is barely large enough to provide enough rice for their own consumption. The Nai Ban says he expects very little rain this year. He says that this is one of the years when there are two "8th" months during the year, that is, the eighth month in effect of 60 days long. He says that when this happens the amount of rain that would normally fall in one month has to fall in two months, and therefore there is a very short supply.

NA LUAK

1. Location:

Na Luak is located just a little over 16 kilometers south of Muong Phieng. It is about one and one-half kilometers southwest of Ban Na Kheme. The military grid coordinates of the center of the village are at 6349 78. The village is located at the southern edge of the wide flood plain of the Muong Phieng River, just at the point where it narrows into a very narrow valley extending south toward the Nam Phoui River.

2. Administration:

Na Luak is in Tasseng Na Kheme. The Nai Ban is Khampeng who is 43 years old and has been in the position for 6 years. The Village Development Committee Members are Tee Yospuai, age 54; Kham Phantong, age 43; and Inta Khanpeng, age 55.

3. Resources:

a. Land and Irrigation

The Nai Ban says that rice farming has not improved in the past 4 or 5 years; people are still starving. The Nai Ban says that they hope that when the water comes from the Nam Tan Irrigation System they will be able to double-crop. He says that he is hoping that he can make some arrangement whereby the people who do not have rice fields can put in a second crop on other persons fields. However, one of the Village Development Committee Members dissented and said that he thought probably all the owners would want to get all the profit that they could from their land. Only the Nai Ban has two hectares of land. All the rest have somewhat less. Upland rice fields are about two kilometers away.

b. Manpower

Na Luak had 20 families and 96 people in 1963 and in 1968 it had 19 families and 96 people. The village of Nong Houng has been a satellite of Na Luak — or rather it was people from Na Luak who settled and have continued to settle Nong Houng. The accompanying table shows the age-sex breakdown for the population of 1963 and 1968.

c. Roads

The people of Na Luak gain access to the main road by a very poor road which goes from their village to Nong Houng and then to the main road. This is strictly a dry-season road and it is impassable during the wet-season. It is expected that Lao Public Works will this year build a road from Na Kheme through Nong Houng to Na Luak. The Nai Ban has said that he would like to have this road but he would also like to have a road that connected his village with Houa Na. This road is probably part of the irrigation system plan. He probably talked with some of the surveyors about this. The main canal will probably run from west of Houa Na along the west edge of the

plain and will lie then between Na Luak and the foot of the hills. Since a road will be built on the embankment, this will make access very convenient from Na Luak to Houa Na and to Na Bouam and the dam site. This road probably would continue on down to meet the main road at the southern end of the plain.

d. Airfield

The airfield at the Nam Tan Dam site is 11 to 12 kilometers away.

If on the other hand the main canal is built, as planned, the access to the airfield by the way of the road on the main canal would reduce the distance to about 8 kilometers.

e. Potable water

The village does not obtain water from wells. Water is obtained from the Houei Na Luak and is available even in the dry season from this stream.

f. Medical facilities

The Nai Ban said that not too many people get sick and that no one has been seriously ill and has had to go to the medic at Na Kheme. He says that some villages have gone there to get medicine, such as aspirin. There is a local practitioner at Nong Houng who used to be a Tasseng and is named Ay Ngao. However, the Nai Ban was anxious to emphasize that the villagers have never been seriously sick and hardly ever go to see either kind of healer. This Nai Ban has been accused by his villagers of not securing Cluster projects. He may be trying to justify his rejection of Cluster benefits.

g. Police Station

The police station at Na Kheme is available when the road provides access.

h. Telephone Service

The nearest telephone service is at Na Kheme. However this system has been out for a number of months and when it will be repaired is an open question.

i. Rice Mills

There is no rice mill in the village. However, it is said that many villagers like to have their rice milled, because it takes less time than pounding it. In this case they take it to Na Kheme.

j. Retail Stores

The villagers go to Na Kheme for any purchases that they need.

NA LUAK

21 houses

NONG HOUNG

36 houses



LEGEND

- | | |
|--------------------|---------------------------|
| 1. Wats | 7. Police station |
| 2. Schools | 8. ADO warehouse |
| 3. Nai Ban's house | ● Dug wells |
| 4. Retail Stores | ⊙ Drilled wells |
| 5. Rice Mills | ■ Houses built since 1959 |
| 6. Dispensaries | |

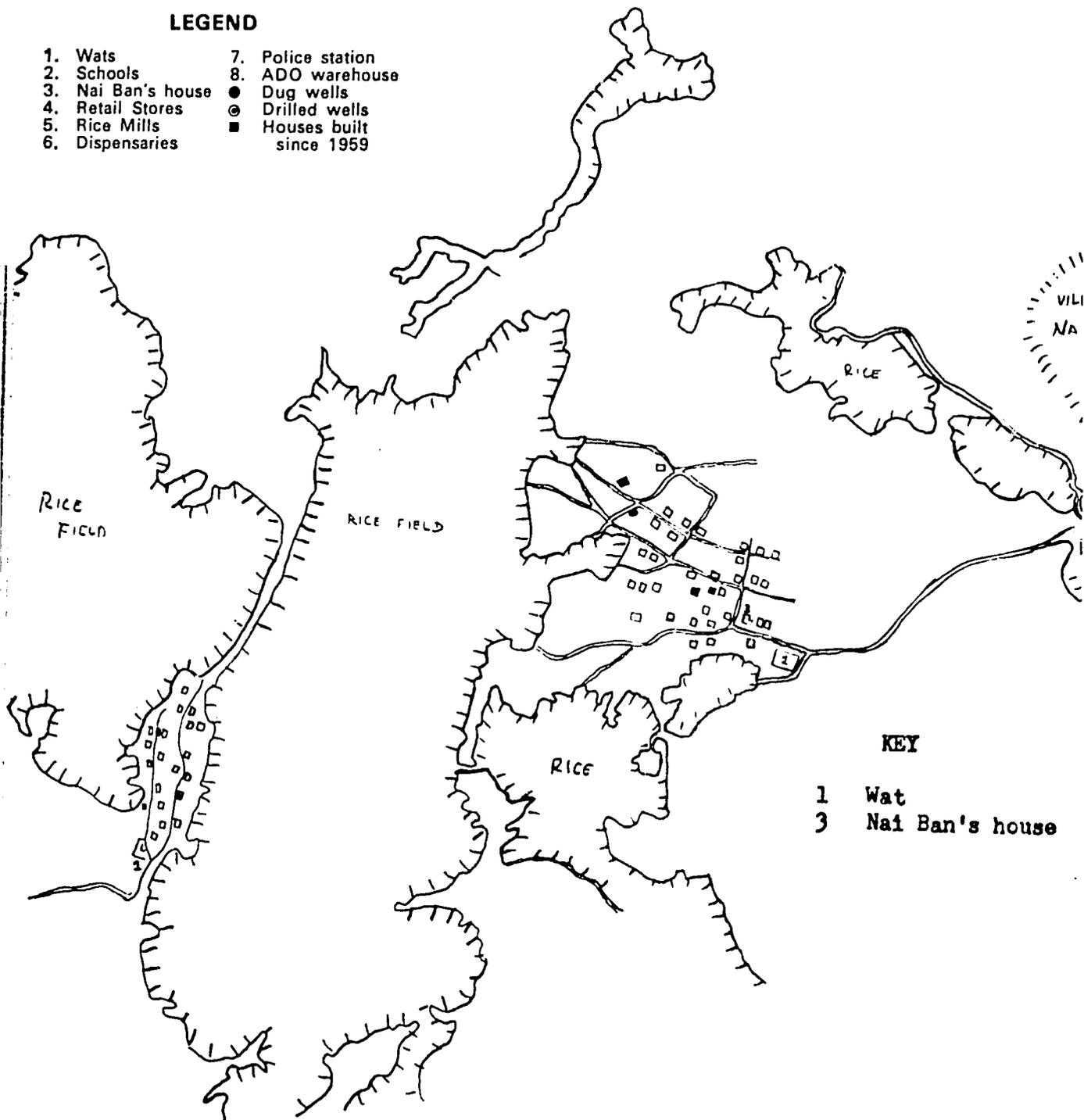


Figure 14 Nong Houg & Na Luak

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VILLAGE POPULATION

Village: Ban Na Luak

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	-	-	-	-	-	-	-
1	3	1	6	2	9	9.36	3	3.13
2	1	4	4	3	5	5.31	7	7.29
3	2	-	1	-	3	3.13	-	-
4	2	5	3	3	5	5.21	8	8.33
5	4	-	2	1	6	6.25	1	1.04
6	1	5	-	-	1	1.04	5	5.21
7	-	-	1	1	1	1.04	1	1.04
8	2	1	-	2	2	2.08	3	3.13
9	-	1	1	-	1	1.04	1	1.04
10	1	3	2	4	3	3.13	7	7.29
11-15	5	2	2	5	7	7.29	7	7.29
16-20	3	4	2	2	5	5.21	6	6.25
21-25	4	4	7	4	11	11.46	8	8.33
26-30	4	2	7	1	11	11.46	3	3.13
31-35	2	2	1	2	3	3.13	4	4.17
36-40	4	2	-	6	4	4.17	8	8.33
41-45	3	5	6	3	9	9.36	8	8.33
46-50	-	2	3	7	3	3.13	9	9.36
51-55	1	4	-	1	1	1.04	5	5.21
56-60	4	-	1	1	5	5.21	1	1.04
61 +	-	-	1	-	1	1.04	-	-
No Age	-	-	-	1	-	-	1	1.04
Total	46	47	50	49	96	-	96	-

k. Personal Equipment

Three families have radios. The Nai Ban says there are no sewing machines, no bicycles, or motorcycles, because there is no road and there is no money.

l. Schools

There is not, nor ever has been a school in Na Luak. The Nai Ban recognizes that it is impossible to build a school in a village which has only 10 children of school age. He feels that they should go to a school at Nong Houng. However, there is no school there, either.

m. Wats

There is one wat but there have been neither monk or novices for the past 5 or 6 years. The village cannot afford to give merit-giving ceremonies or bouns. The villagers join in the ceremonies at Ban Nong Houng or Na Kheme because they have relatives there. The village has a salawat or wat committee man named Xieng Plien, who is 25 years of age. He was just elected this year, because the villagers are anxious to get a novice to reside at the wat. They feel that he will become a monk later.

n. Residential Structures

This village is completely surrounded by paddy land. This is the outstanding example of a village which, when surrounded by paddy land, does not expand, but throws out its excessive personnel to form new villages. In this case the new village formed was Nong Houng.

4. Resource Utilization:

a. Rice Production

There are said to be seven households in the village which have enough rice to eat and still have some surplus. In this village, rice is only sold to other people in the same village. Upland fields are about 2 kilometers away. It is said that two to three kalong of rice are planted. One family uses 6 kalong and obtains 200 kalong of rice product. The rest of the people do not get as much as 100 kalong. Paddy farming in general yields about 200 kalong. The Nai Ban is said to get 500 kalong. Two families sell rice, that of the Nai Ban and Ay Kham, a committee member. The amounts sold cannot be estimated because it is sold 1 or two kalong at a time to neighbors or people in surrounding villages. None is sold to ADO. Right after the harvest the price of rice is 200 kip per kalong. At the present time, which is in June, the price is 400 kip per kalong.

b. Livestock Production

No buffalo are sold because the village is small and there are only about 30 altogether in the village. Most of the villagers do not have enough money to buy the ones they need, and therefore have to hire them. It is said that the villagers used to raise buffalo and that seven or eight years ago they were being sold to traders from Luang Prabang and Sayaboury. However, none have been sold in the last three or four years. The village has never had horses, elephants or cows. They sell 9-10 pigs per year to traders from Na Kheme, who come many times a year. It is said that the traders from

Sayaboury never come to this village. They cite the price of 10,000 kip and up for a pig of 5 "kham". It is interesting to note that this is the only village in the Cluster which, when citing the size of pigs, has mentioned five kham; all other villages have used a 4 kham pig to illustrate the price. This village has never had any of the Taiwan ducks. They have had no difficulty in raising chickens. It is said that every family has at least two to three chickens. A big chicken sells for 300-400 kip. The Laotian ducks which they raise sell for 500 kip.

c. Other Production

The vegetables that are grown in the home gardens are lettuce, parsley, onions and garlic. The villagers wanted to grow cabbage and asked for seeds from their relatives in Na Kheme, but they were not successful. The fruits they grow are mango, papaya, coconut and jackfruit. They say that the amounts are the same as they have always been. They had heard that the Cluster management gave vegetable seeds and hoped that they would get some. However, nobody ever come to offer them the seeds and they didn't want to ask for them.

5. Security:

The Nai Ban says that the villagers are afraid of the enemy because of what they have been told by the villagers at Nam Tan and Na Kheme. However, the villagers here have never seen any of them.

6. Project Participation:

Except for the Village Development Committee, there have been no projects actually implemented in this village. However, they have benefited from the presence of Cluster activities in nearby areas. They have of course benefited by the presence of the dispensary at Na Kheme and although they do not have their own access road, the main road has put all weather travelling within about a kilometer and one-half of their village. The general increase in economic activity has made it possible for them to sell more chickens than they had ever sold before. It is also probable that their sale of pigs has also raised.

However, this village had a dam that was built in the early 1950's. After a year or so the dam collapsed. However, eight or nine of the owners in the immediate vicinity reconstructed the dam and have kept it in operation since that time. However, these are the only people who benefit from this dam.

The villagers had been asked to attend the livestock training course. They did not want to go because they felt that the training course was too long, and took them away from their farms for too long a period of time.

The village receives the Cluster newspaper. The village receive five copies and there are exactly five people who are literate in the village. After they have finished reading

the papers they tell the others about the news. They don't always understand every topic, but they do read the entire newspaper.

7. Villagers Perceptions of change:

Before the Cluster all shopping had to be done in Sayaboury. Now they can shop in Na Kheme. Here they buy clothes, fish nets, containers, and spoons.

There has been a change in clothing since the plan began. The villagers now do not weave their own cloth. They prefer to buy ready-made clothes instead.

An elder says that food is also different. The village had not had Nam Pha and food seasoning (monosodium glutamate). They say that now food seems tasteless without these things.

There used to be many wild animals in the area. Three or four years ago a tiger killed a buffalo near the village. Now there are very few wild animals. Instead, they say, there are Meo, who come to farm, and raise their buffaloes all over the area. Since they now have buffaloes grazing everywhere, the grass which used to be used for thatch is all eaten up. They say also that fish have become scarce because the Meo have taken them. The Nai Ban also goes on to say that the Meo's know their way around the forest and carry guns with them. They are very good shots. He says the villagers are afraid because they never know which one is good or which one is bad.

The Nai Ban says that prior to his training for the Village Development Committee he had never thought about "problems." Now he recognizes that there are problems and he has a way to think about how to solve them. The main problems now are the school, road, water wells, and a monk for the wat.

Before the development area, the villagers went to vote for their representatives at Muong Phieng or Houa Na. The last time they went to vote at Na Kheme.

The Nai Ban says when there are quarrels they are still settled by the Nai Ban or the Tasseng. However, he goes on to say that the village has never had a serious dispute, because most villagers are relatives.

HOUEI OUM

1. Location:

Houei Oum is located 18 kilometers south of Muong Phieng. It is the southern-most end of the Cluster. The valley is about one-third of a kilometer wide at the point where Houei Oum is located. Directly west of the town, the mountains rise fairly abruptly reaching an altitude of 600 meters within less than one-half kilometer of the village. The Nam Phieng River lies about 200 meters to the east and directly on the other side of the Nam Phieng River the mountains start rising again. The military grid coordinates of the center of the village are 649 961.

2. Administration:

Houei Oum is in Tasseng Na Kheme. The Nai Ban is Ay San Klongkham, who is 49 years of age and who has been in the position since 1960. The assistant Nai Ban is Uan Onhchai, who is 21 years of age and who took the position last year when the former assistant resigned. The Village Development Committee members are Xieng Boonmee Opalad, age 55; who is also a former Nai Ban, Xieng Chad Tonsook, age 45, Xieng Phan Nantachai, age 45, Xieng Boonma Taiti, age 46.

3. Resources:

a. Land and Irrigation

Six of the families work paddy land on the east side of the Nam Phieng River. The rest of the families are all on the west side as far as paddy land is concerned. All families are liable to work upland rice on either side of the river. Ten families have no paddy and work only upland rice. Most paddy land holdings range one to one and one-half hectares, although three families own as much as two hectares. All families are said also to work upland rice. Fifteen families are now providing self help labor in the Nam Tan Right Bank Irrigation District. The villagers are still somewhat doubtful as to whether or not they will ultimately get land.

b. Manpower

In 1963 Houei Oum had 23 families and 143 population. In 1968 there were 32 families and a population of 189. The age-sex breakdown of this population for both years is shown on the accompanying table.

c. Roads

Houei Oum is located on the main Cluster road. The road has just been completed to this village and goes on beyond to the Nam Phoui River. Since the road has been opened to the Nam Phoui area with the settlement of a large number of refugees there, quite a good deal of traffic now goes over this road. Before the road was put in, there were many horses in the area which were used for portage to the river.

d. Airfields

The village is approximately 12 kilometers from the airfield at Nam Tan dam site.

e. Potable water

Wells cannot be dug at the village because the village is situated on high ground. They have tried digging wells and have gone over 10 meters and have not gotten water. They get their water from the Houei Oum stream, which flows by the village.

f. Medical Facilities

The villagers go to the medic at Na Kheme. Na Kheme is only about two - and one-half kilometers north and is located on the main road.

HOUEI OUM

33 houses

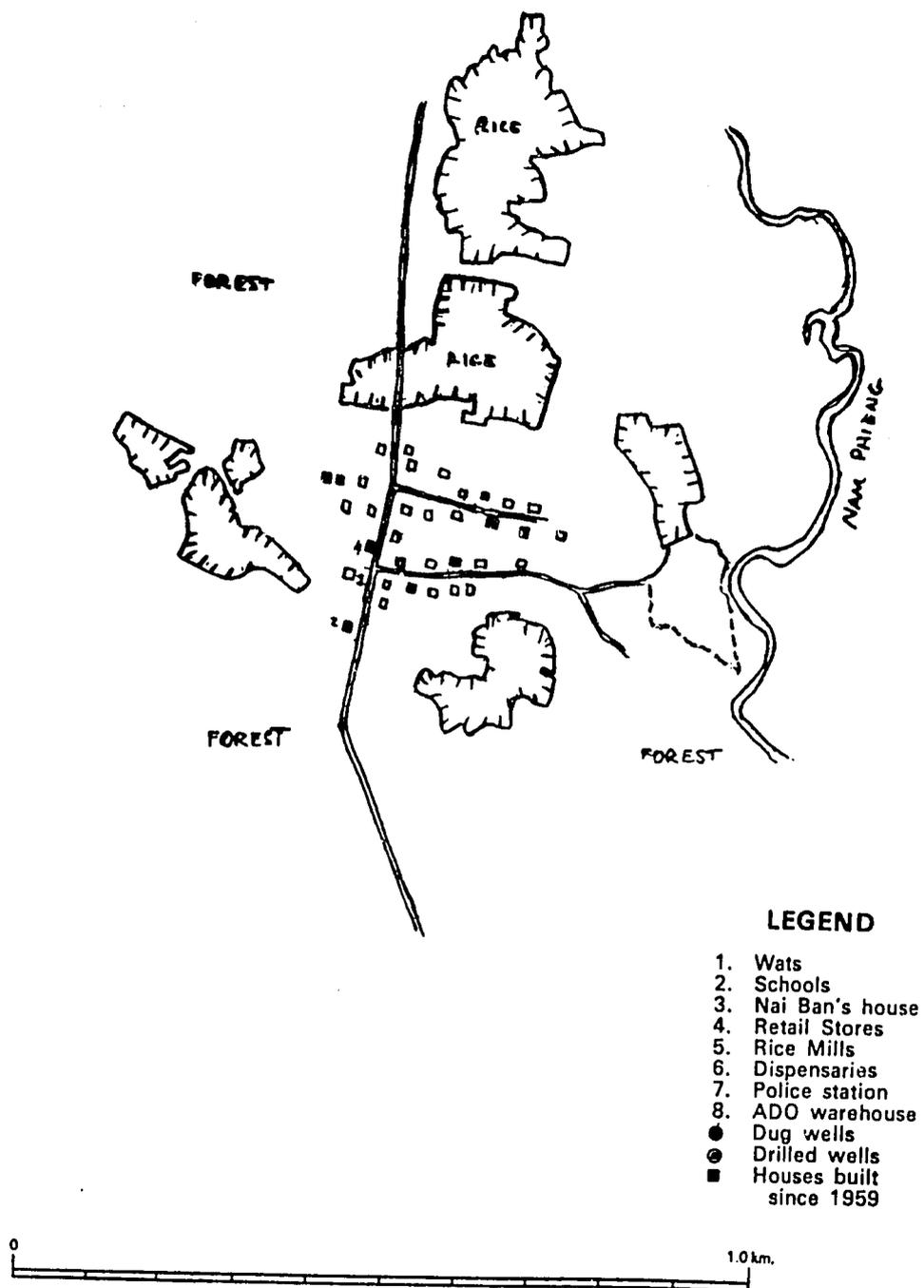


Figure 15 Houei Oum

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VILLAGE POPULATION

Village: **Ban Houei Oum**

Age Group	Male		Female		Total			
	1963	1968	1963	1968	1963		1968	
					No.	%	No.	%
0	-	2	-	-	-	.	2	1.06
1	2	2	-	5	2	1.40	7	3.70
2	6	1	1	2	7	4.90	3	1.59
3	1	2	-	6	1	.70	8	4.23
4	5	-	1	3	6	4.20	3	1.59
5	3	4	-	6	3	2.10	10	5.29
6	3	6	6	1	9	6.29	7	3.70
7	-	5	1	2	1	.70	7	3.70
8	2	3	4	3	6	4.20	6	3.17
9	3	7	2	2	5	3.50	9	4.76
10	2	3	-	4	2	1.40	7	3.70
11-15	13	10	9	14	22	15.38	24	12.70
16-20	5	10	6	8	11	7.69	18	9.52
21-25	11	10	7	7	18	12.59	17	8.99
26-30	4	7	4	16	8	5.59	23	12.17
31-35	2	3	2	3	4	2.80	6	3.17
36-40	1	3	6	6	7	4.90	9	4.76
41-45	3	1	6	3	9	6.29	4	2.12
46-50	5	3	6	4	11	7.69	7	3.70
51-55	7	5	3	2	10	6.99	7	3.70
56-60	-	-	1	-	1	.70	-	-
61 +	-	3	-	1	-	-	4	2.12
No Age	-	-	-	1	-	-	1	.53
Total	78	90	65	99	143	-	189	-

g. Police Station

The villagers go to Na Kheme if they need the police.

h. Telephone System

There is no telephone at Ban Houei Oum. The nearest point at which a telephone could exist is at Na Kheme, although the telephone there does not work.

When the Nai Dan asked the Nai Ban whether he would like to have a telephone system the Nai Ban said he would rather have a bicycle. The Nai Dan refused saying that if he gave it to him he would have to give it to all the others too. The Nai Ban now says that actually he would like to have the telephone if it can be installed without being asked for

i. Rice Mills

Rice is milled at Na Kheme, but a great deal of it is also done by the villagers themselves at home. The Nai Ban says that machine milled rice is whiter than the pounded rice, but is not as nourishing. He says it has no vitamins and does not smell as good, because the yellow part is taken out.

j. Retail Stores

Houei Oum has one retail store, which was started in 1961. The owner is Ay Chae who is a native of Houei Oum. He is also an upland rice farmer and is a member of the Village Development Committee. His store sells approximately twenty-three items. Most of his customers come from Houei Oum, Nam Phoui, and some of the surrounding mountain villages.

k. Personal Equipment

Ten families are said to have radios, seven have sewing machines, and five own bicycles.

l. Schools

The school has been built for six years. It was built by the villagers themselves and they received the iron roofing from the Chao Khoueng at Sayaboury. It is believed that the government supplied the teacher first in 1965; he was Mr. Pheng Luangliat. There were then 25 students and they were all in the first grade. By 1968 there were 35 students of whom 24 were in the first grade, five in the second and six in the third grade. Their teacher was Mr. Huang Singthinh. Five students are in the higher grades at Na Kheme. Xieng Boonmee, who is a Village Development Committee member and who was the first to establish his household at this village, is sending his son to Vientiane to school this year.

m. Wats

There is one wat in the village with one monk and three novices. The present monk was a novice who came from Ban Kang to stay in the village for three months, but he came two years ago. Bouns or merit-giving ceremonies were never held in the village

until the monk arrived. Before that they went to Na Kheme. They feel that Na Kheme is something like a parent village. When the monk arrived they then set up a position of Salawat or Sarawat. Xieng Sipa who had been the assistant Nai Ban was elected or selected to be the Salawat.

4. Resource Utilization:

a. Rice Production

It is said that the owner of one to one and one-half hectares gets about 100-150 kalong of paddy. For upland rice it is said that they use between 3 and 4 kalong of seed and get about 100 kalong of product. Three or four families plant 6-7 kalong and get as much as 200 kalong of product. The Nai Ban said that in 1967 almost every family could sell from 10-50 kalong of rice. However, last year only three families could sell rice. The reason was that no upland rice was grown because of the heavy rains which did not permit the villagers to burn down the forest.

b. Livestock Production

Three families are said to own rice fields but not to have buffalo. One family owns buffaloes, but does not have a field. The buffalo is rented for 30-40 kalong of rice. The village will sell maybe two or three buffaloes a year, the buyers are the Meo from Nam Hia. They say that a pig of 4 Kham is worth 11,000-12,000 kip. This is one or two thousand kip higher than prices quoted in other parts of the Cluster. Almost all of the villagers grow the cross-bred or the Taiwan ducks. Chickens are raised and a big one will cost 200 kip. The cross-bred or Taiwan duck will cost about 300 kip and a native duck will cost 350 kip. There has never been an elephant owned in the village. There are five horses, two of which are still very young.

c. Other Production

The villagers grow lettuce onions, garlic, and cabbage in the garden for consumption only. Fruits grown are mango, coconuts, papaya, bananas, jackfruit, pineapple, corn. They have been grown since before the Cluster period.

5. Security:

The village is prepared to set up its own guard system when the Nai Dan sends an order. For example the village was on an alert before the fighting at the Nam Tan dam site. However the villagers gave up the regular duty in March, when they started to farm. The village is located in a relatively vulnerable position. During the last attack the attackers went through the village on their way to the Nam Tan Dam site.

6. Project Participation:

Probably the main project participation has been the Village Development Committee. This project has been explained to the villagers by Maha Suvan, Mike Flanagan, and the IVS assistant Sam Law. They went to every house and asked who would

be suitable and nine persons were selected as candidates. They voted at the school. The women also went and voted, although most of them did not understand what was going on. It is said that the wives voted for their husbands and the younger women voted for their fathers, although their names were not on the list. After the election, some of the committee members became unwilling to take the position because they weren't sure of what their rights were. They felt that they had other work to do, as the other people did, and that this would take more of their time than they had to spare. The Nai Bans said that it was only the younger men who made this complaint. The older one are satisfied, because their children were already making a living for them.

The Nai Ban explained the various problems that were raised during the training program at Ban Na Kheme. They were the problems that the village development committee members from his village and others had thought about. He thought it would be a good idea to show this list of problems to the officials so they would know what was needed at the villages.

He also said that the national assembly representative stayed at the capital and had no idea what was going on in the villages. He said that he felt that the Cluster management was better, because they helped in many things, such as the problems of sickness and religious ceremonies.

The Nai Ban said that he used to be afraid to have to talk to the villagers alone and was also afraid that he would not be able to communicate with the officials. He says that he is not any longer afraid of the government officials and with the Village Committee members helping, he also has better communication with the villagers.

The Nai Ban asked when USAID was going to leave Muong Phieng for some place else. He said he was worried that USAID might leave because they undoubtedly had budget to help other poor villages. He was afraid that if USAID leaves, then the Village Development Committee would have no one to be responsible to and would have no authority. He said that if the developers leave it would be like the lack of fathers and mothers. He wondered if there would still be a Village Development Committee if USAID left.

Probably the first project that this village participated in indirectly was duck production. They received ducklings and eggs from other villages who had received the first distribution. They also had participants in the livestock training course. There were three, Ay Sai, Xieng Sipa, and Ay Wud. They went to class twice a week for eight or nine weeks. They were taught methods of castration and were shown the correct way to build the enclosure. However the villagers went on raising local pigs. The villagers did not have enough time or food to adopt new practices. Those who had gone for training did not raise more ducks or pigs when they came back and nor did they teach others how to do it.

Vegetable seeds were never received at this village, although they were told that they could have them if they asked for them. They asked for them twice, but did not get any. The Nai Ban says the villagers found out that only the people in Muon Xieng got very many seeds.

As mentioned earlier, 15 families are participating in the Nam Tan self-help activities with regard to irrigation development.

They say that the government distributed rice in 1960. There had been starvation that year because rats ate the rice plants. Although they were offered privies during the time that this program was operable, they refused them. They now say that they would like to have them but they are afraid that the officials will say that when they were offered, nobody wanted them.

The newspapers are received, but not regularly. Four or five are received at a time. They are given to the wat and to the literate people - the assistant Nai Ban and the Salawat. The Nai Ban cannot read very well and often asks the younger children to read the papers to him. This appears to be the general practice, where the children read the papers to their elders.

7. Villagers Perceptions of Change:

The Nai Ban said that there are fewer deaths now since the villagers can go to see the medic at Na Kheme. He also said that earlier there were no medicines available, as at the present time.

The former Nai Ban, Mr. Xieng Boonmee said that the method of pig raising has improved because the villagers were trained by the developers. This contradicts that which was said earlier to the effect that the training resulted in no improvement.

A major change has been the introduction of the Meo. They say that now that the Meo are all around it is difficult to know who are good and who are bad. The Nai Ban says that the Meo people carry government guns and say they are soldiers. However, they use the guns to shoot fish and animals. He says that sometimes they shoot near the village. The villagers say they are afraid even though there are soldiers at Nam Phoui with the Meo.

The former Nai Ban said that since the road was built there are many more people travelling. The area used to be isolated. Shopping was done at Sayaboury or Nan, which required three days to arrive by foot. He felt that the goods at Nan were cheaper than those at Sayaboury. Now, of course, there is shop in the village where fish sauce, containers, spices, etc. can be purchased.