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Evaluation of the Administrative and Management

of

The Sericulture / Settlements Project

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## ABBREVIATIONS , EQUIVALENTS , TERMS

### ABBREVIATIONS

BAAC	Bank for Agriculture and Agricultural Cooperatives
DLI	Department of Livestock Development ( MOAC )
MOAC	Ministry of Agriculture and Cooperatives
NEA	The National Energy Administration
FWD	Public Welfare Department ( NOI )
SLD	Self-Help Land Settlement Division ( FWD )
USAID	United States Agency for International Development

### EQUIVALENTS

1 rai = 0.4 acre = 0.16 hectares

### TERMS

khut	block
nakwichakan	technical specialist
nikom	self-help land settlement
phatsadu	person who purchases and stores equipments and materials

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## I. Executive Summary

The present study is an evaluation of the operation of the Sericulture Project in Kham Soi, Lam Dom Noi, and Ubonrat land settlements with respect to administrative and management aspects. It aims to find factors contributing to the efficient operation of the Project in Kham Soi, and factors obstructing the efficient operation of the Project in the other settlements.

### A. Major findings

1. Considering the general comparative advantages and disadvantages for Sericulture in the three settlements, we find that;

(a) as regards soil quality, that of Lam Dom Noi appears to be inferior to those of Kham Soi, and Ubonrat. However, in every settlement, there are areas suitable for mulberry cultivation. The problems lie in the selection of Project members and areas for planting mulberry, as well as the extent of attention demanded from the extension workers.

(b) Kham Soi Settlement has been set up 10 and over years earlier than the other two settlements. Thus it can be expected that the settlers would have higher community spirit and sense of belonging.

(c) The circumstances which gave rise to the setting up of the settlements may also confer some advantages to Kham Soi. Kham Soi was set up to distribute land to people who have insufficient land for cultivation, and to those who sought security from dangers arising from subversive actions of the communists. On the other hand, Ubonrat and Lam Dom Noi were set up to provide land to people who had

to move out of their original cultivation areas because of the construction of the dams. These people were, by actions of the Government, evicted from rich and naturally irrigated land, and settled in rainfed area of inferior soil quality. Thus it would take more efforts on the part of the settlement officials to obtain cooperation from the settlers in Ubonrat and Lam Dom Noi than in Kham Soi.

(b) Income of settlers of Kham Soi in general is much higher than those of the other two settlements. At the beginning of the Project the settlers of Kham Soi are found to have more savings than those of the other two settlements. Personal savings helped as there were expenses not covered by loans from EAAC, such as that for employing additional labors.

2. There is the need for an effective project manager in every settlement. Only at Kham Soi Settlement, the Project Supervisor has formally been empowered (by the Order of Kham Soi Settlement No. 5/2521) to operate as the project manager. In other settlements, the Superintendents of the settlements are the project managers.

3. The Superintendent of a settlement cannot be an effective project manager of any project in the settlement because :

(a) There are many different projects (4-10) in a settlement.

(b) There is no overalled plan or design which assigns weights and importance to various projects in a settlement. There is no design for co-ordination of various projects.

(c) Being also the governor of the settlement as well as its representative to outsiders, the Superintendent has far too much work to be able to pay sufficient attention to the operation of any one project, particularly such a specialized one as the Sericulture Project.

(d) In general, the Superintendent has insufficient knowledge to design work plan, or supervise the detail operation of such specialized project as the Sericulture Project.

(e) Changes of Superintendents are relatively frequent. Every time, there is such a change, policy regarding the management of the Project is changed also. There is, thus, a lack of continuity which would contribute to continued development and growth of the Project.

(f) If the Superintendent is the Project Manager, it means also that all actions to be taken must receive his consent. His being overloaded with work can cause so much delay that is detrimental to effective and efficient operation of the Project.

4. Where the Superintendent is acting as the Project Manager, the following problems have occurred.

(a) There have been tendencies to mix up funds, personals, materials, and equipments of various projects. Those, assigned for one project, may in fact be used in another project. Being the project manager of almost all projects in the settlement, the Superintendent is, in practice, able to shift the funds or parts of them from one project to another. With the exception of Kham Soi Settlement where the Project Supervisor is the Project manager in fact, a large part of the operating expenses funds allocated to the Sericulture Project is not used for the operation of the Sericulture Project.<sup>(1)</sup>

(b) Delays in the operational process often occurred, particularly as regards the repairs of equipments, machines, and vehicles. Decisions for repairs have to wait for the permission of the Superintendent, the cost estimates of the repair center, and the buying of spare - parts. Every step of the process needs to go through the Superintendent, who not only has piles of work but also is often away from the settlement. Sometimes,

the whole process takes about 2 months. Such delays necessarily affect the operation of the Project and its efficiency.

(c) Materials are centrally purchased by the settlement. Problems have arisen, particularly, as regards the buying and using of fertilizers. In some settlements, the Superintendent, himself, buys all fertilizers to be used for all projects in the settlement. In others, the fertilizers are purchased by the Chief-Accountant of the settlement. In the first case, the purchased fertilizers are not used according to the operational plan. Instead of its being used for the central mulberry plantation, it has been distributed to the settlers, with resulting damages to the central mulberry plantation. In the second case, the purchased fertilizers are often found to be old and ineffective.

(b) Problems have also arisen as regards the use of gasoline for transportation. In general, it is often found that gasoline is insufficient for activities of the settlement. The use of gasoline is difficult to control, and a great deal of waste can occur. When the Superintendent is the manager of a number of projects, the use of gasoline is pooled together. Such a project as the Sericulture, which is well supplied with gasoline for transportation, would lose a certain amount of its ration of gasoline to other projects or the general use of the settlement.

(e) A part of the operating expenses funds, which are the Royal Thai Government's contribution to the Project, is found not to have been used for the operation of the Project. Although, at present the Project Supervisor knows the amount of the annual budget allocated to the Sericulture Project (because PHD sends a copy directly to him), he is not informed of the amount and the time when the fund is actually transferred to the settlement and is available for use. When he makes a request to the Superintendent for the use of the fund, he may find that it or a part of it is no longer available. It may have already been used for some other purposes.

(f) As regards the authority to give orders to extension workers and other workers, it is not certain whether the Project Supervisor has the authority. Sometimes, the Project Supervisor has assigned a specific task, or given an order to an extension worker, or a worker to do something on a specific day. Then, the Superintendent may order that person to perform a different task, or do some other things on that specific day. The result is that certain task is not performed as planned.

(g) Uncertain of the availability of the funds as allocated in the budget, and that whatever work plan he makes will be approved in detail on particular items, the Project Supervisor is reduced to a position where he cannot draw up plans for activities, particularly if it is to be done together with Project members. He dares not make any commitment to the Project members for fear that eventually consent from the Superintendent may not be obtained. On the other hand, the Superintendent is unable to make detail plan of Project activities for lack of specialized knowledge as well as not enough time to pay sufficient attention to the Project.

5. The division of roles between the Superintendent and the Project Supervisor, as intended by P.D., is that between administration and management (assigned to the Superintendent) on the one hand, and technical speciality (assigned to the Project Supervisor) on the other. The kind of training given to the Project Supervisor, as well as the category of officials he is placed i.e. nakwichakan (technical specialist) shows clearly that his job is that of a technical specialist. However, for reasons already stated, the Superintendent cannot be an effective project manager. And the Project Supervisor cannot take on the task. Kham Soi is the only settlement where the Project Supervisor is practically given the authority of a project manager for the Sericulture Project, and this is certainly an important factor contributing to its success.

6. With such role division, and the drawbacks on the Superintendent acting as the Project Manager, smooth operation of such a specialized project as the Sericulture Project depends entirely upon perfect coordination between the Superintendent and the Project Supervisor. This is hard to find as there are many conditions (a number of which are personal), which have to be fulfilled. Important ones of them are as follows:

a) They have to like each other well, and are willing to spend a great deal of time discussing the activities of the Project together.

(b) They have to trust each other completely. The Project Supervisor has to be able to feel certain that whatever he does or sets out to do will be endorsed by the Superintendent. Only thus would he be able to take necessary actions, when needed, without having to obtain prior consent from the busy Superintendent.

(c) The Superintendent has to give priority to the Sericulture Project. He has to be very much interested in the Project, and willing to give full supports to it.

(d) They have to plan Project activities together, and together with the Project members.

Such conditions are difficult to fulfil. Trusting each other is something which have to be learned, and it needs time. In some settlement, we find that at one period of time the Superintendent and Project Supervisor get on so well with each other that both of them feel that they both are together the Project Manager in practice. However, situation completely changes with a new Superintendent, and the Project Supervisor no longer dares to take initiatives or make decisions.

(e) The Superintendent should more efficiently play the role of coordinating the Project within his settlement and outside agencies such as the local BAAC, and the local Sericulture stations.

7. There are two important drawbacks for such an administrative arrangement and role division.

(a) The efficiency of the Project operation depends too much upon personal relationship which takes time to develop, and has to be cultivated by both sides.

(b) It gives rise to diffused responsibilities. When the operation of the Project is unsuccessful, it is very difficult to find out where the fault lies, and within whose responsibilities. Take, for instance, where the Superintendent buys the fertilizers and the Project Supervisor has to take care of the central mulberry plantation. In case the central mulberry plantation deteriorates, the Superintendent may put the blame on to the Project Supervisor that latter has neglected it, while the Project Supervisor may say that the Superintendent has bought old and ineffective fertilizers. It is not an infrequent phenomena in the Thai bureaucracy that, when something goes wrong, everyone concerned would try to put the blame on another. Diffused responsibilities help to facilitate such shifting of blames, which must also indirectly encourage corruptive practices.

8. For such a specialized project as the Sericulture project, it is necessary that the technical specialist such as the Project Supervisor be formally given the power and authority to act as the project Manager as in the case of Kham Soi. In order to be able to perform this function, he would have to be given in practice the control of (a) personals, (b) materials, (c) funds, and (d) management.

9. Considering the present situation, there are at least two main obstacles in giving the power and authority to the Project Supervisor to act as the Project Manager. The first is the traditional Thai attitude.

regarding administration and management. The second is the readiness and preparedness of the present Project Supervisors to take on the task.

10. In the opinion of the research team, Thai bureaucratic traditions have the following characteristics :

(a) Distrust, particularly of the subordinates, is the main motive for administrative arrangement and institutional regulations. Thus there are repeated attempts to control actions of subordinates by making administrative arrangements and regulations, which are so rigid and minutely detailed that they tend to stifle initiatives and reduce efficiency of performances. This Reflects also an awareness of the inability and unwillingness on the part of the higher administrators to evaluate performances of their subordinates by using the results of the latter's performances upon the intended beneficiaries.

(b) On the other hand, job descriptions including limitation of power and authority are vaguely drawn up. Thus it is left in the hand of the superior to decide as to how much power and authority to delegate to any of his subordinates. As a consequence, decentralization depends upon the personal judgement of the superiors, which are usually based upon personal relationship between the particular superior and his particular subordinate.

(c) Decentralization is extremely difficult owing partly to inherent distrust, and paternalistic attitude on the part of the superiors.

(d) Personal relationship is highly valued. The existing patron-client relations, and cliques based upon such relations make it difficult to give fair rewards and punishments according to performances. Within such situation, diffused responsibilities are preferred.

(e) Highly centralized practices are also preferred. When most responsibilities are given to a person of high position who has so much work

of various kinds in his hand, the responsibilities are automatically diffused. When anything goes wrong in anyone section or a part of his work, it is difficult to pin down who is at fault. It is difficult to punish the person of high position, for he has so much work of various kinds. When only a part of one of his work goes wrong, one would hesitate to give him punishment because some of his other work may go well or may be excellently performed.

11. From our interviews of officials of settlements, it appears that, in general, most Superintendents are unwilling to delegate the power and authority of the Project Manager to the Project Supervisors. Even the Project Supervisor at Kham Soi, who has already been acting as the Project Manager since 1978 and has performed his duties excellently, has had much troubles and conflicts with the new Superintendent every time there is a change of Superintendent there.

12. The power, which most Superintendents are most unwilling to depart with, is the control over the Project's funds. Besides the Superintendent's distrust of the Supervisors, the Sericulture Project is well funded. A settlement has many projects, a number of which are insufficiently funded. It also has a large amount of other expenses, which are not provided for in the Government budget.

13. A large number of the present Project Supervisors are not yet able to take on the job of the Project Manager. They have not been trained for the purpose. Additional training which is needed for them is in administration and management. The Project Supervisor at Kham Soi has been able to act as the Project Manager so well is because he has previously been Assistant Superintendent at another settlement, and taken much interest in public administration.

14. The Sericulture Project is a development project. There are a number of requirements or prerequisites, which are necessary conditions for its success. They are as follows :

(a) Essentially, development activities have to be a bottom-up process. Top-down ordering without consideration of the differences at the local levels frequently creates difficulties at the operational levels and may even cause damages to the operation of the Project, e.g. The one-time order of PWD. that all settlements should use imported eggs of silk worms without consideration of the varied capability of each settlement in production of mulberry leaves. There are differences between settlements as regards their potentials both physical and social which must be taken into consideration by the planners and higher administrators before any decision is made.

(b) Needs for a thorough knowledge and understanding of the members of the target groups for operational purposes. It is necessary that the Project Supervisors and their staffs (extension workers) get to know the Project members, and potential Project members very well. They have to be friends<sup>and</sup> able consultants of the Project members in their silk-worm raising activities. Only thus would the Project Supervisors and his staffs be able (i) to understand the members' household condition, particularly the availability of labor and resources, and (ii) to make suitable selection of new Project members and persons to be sent for training, and (iii) to know of the problems of each member in his silk worm raising activities, and (iv) to make appropriate planning for future activities. There is a

need to give training to the Project Supervisors and extension officers on attitudes and behaviors towards settlers and farmers, various extension techniques, and how to work with farmers - settlers in general.

(c) Needs for participation of Project members in planning activities e.g. the schedules for silk worm raising, the amount of eggs to be acquired for each household etc. The Project members need to understand the whole process, including obstacles and expected problems, because they each has to think of his own potentiality and available resources, and make his own plan for silk worm raising, which matches with the plan of the settlement, and his other activities, Comparison and contrast between the way this process of the annual planning is done at Kham Soi and at other settlements shows that Kham Soi has managed to obtain participation and commitment of the Project members in planning silk - worm raising activities for each year.

(d) Needs for the Project Supervisors and extension officers to understand the nature of the community in which the Project members live. The spread of knowledge and techniques in silkworm raising and mulberry growing can also be done through members teaching each other and helping each other to solve problems. Such a process can be assisted by the Project Supervisors and extension officers if they understand the community well. This can be done, for examples, by selecting some persons for intensive trainings, or arranging group discussions with the aid of mass media such as slides, film shows etc. The activities at Kham Soi also provide good examples.

(e) As in all development projects, there is a need for timely supports. In order to obtain timely supports, there are at least three requirements (i) reduction of bureaucratic red - tape and repetitiously slow process which needs to be conformed before any action can be taken, (ii)

all equipments must be in a state of preparedness, ready, and available to be used when needed, and (iii) prior careful planning of future activities- all obstacles and expected problems should be foreseen, considered, and solutions found before hand.

(f) formal trainings even of Supervisors is not sufficient for them to operate the Project to the maximum degree of success. They need to analyse problems and acquire new knowledges continually. They have to know of new development with respect to Sericulture, not only about techniques but also marketing situation and future prospects. They may have to try to acquire such new knowledge from various sources. The way the Supervisor at Kham Soi has done in this respect also provides an excellent example.

(g) The role of the Superintendent of the settlement is to oversee that the Supervisor and the extension workers perform their duties to the maximum efficiency, and that the fund, equipments, and materials are fully used for Project activities. At present, there are variations among the Superintendents of various settlement. These range from interfering in activities, which the Superintendent does not understand, to paying least attention to Project activities but controlling the use of funds, and creating unnecessary delays.

B. Recommendations

1. Project Supervisors should be given the power and authority of the Project Manager as was done at Kham Soi Settlement by the Order No.6/2521. Such delegation of power and authority should be done in writing and binding upon later Superintendents.

2. A number of the present Project Supervisors may be able to act as the Project Manager, provided training in management and administration are given to them. Such trainings should be provided.

3. A few of the present Project Supervisors may not be qualified to act as the Project Manager even if training in management and administration were to be given to them. In such cases, they may be replaced by qualified and suitable persons.

4. Job descriptions of the Project Supervisor and his staffs should be drawn up in detail and show clearly the areas of responsibilities of each person. They should be drawn up by the Project Supervisor and fit with the condition regarding the operation of the Sericulture Project in the particular settlement. The ability to draw up such job descriptions and obtain agreement from his staffs would show the amount of understanding and thinking the present Supervisor has of the operation of the Project in his settlement.

5. Activities of the Project in each year should be planned well and with the participation of the Project members in advance. Problems and obstacles should be foreseen, and solutions thought of before hand.

6. Trainings are required for the Project Supervisor and his extension workers on how to acquire participation of Project members from the planning stage to the end of the annual activities. Trainings

are required for them on attitudes and behaviors towards Project members and settlers, various extension techniques, and how to work with farmers in general.

7. As, at present, a number of Project Supervisors and the extension officers have already accumulated experiences in working in the Project with Project members and settlers, regular workshops among them can be arranged so that they can share experiences. Discussion may center on the various problems met in the course of their work, and the way they have been solved, both the technical ones, and the social ones in their interactions with the Project members and settlers. It may include also discussions on future expected problems and the ways by which they can be solved. These can be recorded and documented for their use.

8. Attention should be given to the idea that Project members can teach each other and help each other to solve problems. This can be done e.g. by selecting suitable persons for intensive trainings, or arranging group discussions with the aid of mass media such as slides ; Film shows etc. A part of the fund may be provided for the purpose.

9. The role of the Superintendent is to oversee that the Project Supervisor and his staffs perform their duties to the maximum efficiency, and that the funds, equipments, and materials are fully used for Project activities. Particularly, he should see to it that

a). the Supervisor and/or his extension officers visit Project members, regularly, establishing rapport with them, and be useful to them in silkworm raising activities. Systems for checking can be established.

b). the equipments, including tractors, sprayers, vehicles, are always in a state of repaired and ready for use, and that materials e.g. fertilizers are fully used.

c). The work in general, such as that on the central mulberry plantation and the young worm house, is performed well.

He should in general continually evaluate and monitor the performances of the Project Supervisor and his staffs. This implies that the Superintendent should also make visits to houses of Project members and inquire of the progress in their silkworm raising activities and problems.

10. The Superintendent, as the representative of the settlement, should more actively assist the Project Supervisor in coordinating the Project within his settlement and outside agencies.

11. As there often arise emergency needs for the use of some funds (e.g. when the payment for raw cocoon is delayed and the Project members need the money for household expense), there can be a certain sum set aside for such emergency use as advanced payments.

Introduction and General Information on the Three SettlementsA. The Study : Its Scope, Objectives and Methodology

The Sericulture/Settlements Project (AID loan 493-T-018) Agreement between the Royal Thai Government (RTG) and USAID was signed on September 8, 1976 for U.S. \$2.6 millions of the loan funds, \$1.3 million was to be provided to the BAAC with BAAC providing a matching fund, to be loaned to the project beneficiaries. The remaining \$ 1.3 million was to be utilized by PWD. to develop facilities at the land settlements, farmer training and to improve roads in the settlement areas.

PWD., BAAC., and the Sericulture Division of the Department of Agriculture, each has a role to play in the implementation of this Project. PWD. deals with the extension aspects of recruiting, training, and counseling silk producers while BAAC. provides the credit through local branch banks to project participants. Technical information, training, hybrid silk-worm, eggs and cocoon marketing service are provided by the Sericulture Division of the Department of Agriculture. This Project has been in operation in 13 land settlements of PWD, scattered about in the Northeast Region of Thailand.

From the beginning up to the present, a number of evaluations of the operation of this project has been undertaken of various aspects. They are as follows :

1. Thailand Sericulture/Settlements Project Joint Mid-term Evaluation, January 24 - February 21, 1979, conducted by USAID Evaluation team led by Donald R. Mitchell. This evaluation concentrates upon technical problems of mulberry production and silkworm rearing.
2. BAAC Evaluation Report 1980.
3. Thailand Sericulture/Settlements Project, February 24-April 4, 1981, conducted by USAID Evaluation team led by Mr. Kyaw Mint.
4. The Office of the Under-Secretary to the Prime Minister has recently set up a Working Group monitoring and evaluating the Sericulture Project. Two reports have been completed by this Working Group. They are Reports of Monitoring and Evaluation of Sericulture Project, April 30, 1981,

and October 1, 1981 - March 31, 1982.

5. The Report on Changes of Project Member's Attitude Toward Rearing Silk Worms as a Subsequence of Project Redesign, October 7, 1982.

In summary, these evaluation studies, particularly, the most recent ones, have shown, first, that the operation of this Project in Kham Soi land settlement is by far the most effective of all, particularly as regards participation of the members of the land settlements<sup>2</sup> Secondly, the recent evaluation of the Project by a team of researchers led by Mr. Kyaw Mint (February 24 - April 4, 1981) and that of Dr. Chavivun Prachuabmoh have indicated that management and administration may be the most important factors obstructing successful operation of the Project.<sup>3</sup>

The present study is a comparative one of the operation of the project in Kham Soi, Lam Dom Noi, and Ubonrat land settlements particularly in administrative and management aspects, with the aim to find factors contributing to the efficient operation of the Project in Kham Soi, and factors obstructing the efficient operation of the Project in the other settlements.

#### Methodology

This study takes the combination of two approaches. First, it studies the administrative structure of the settlement, concentrating on the relationship between the Project and the administration of the settlement in general. From there, the functioning of the administration and the management of the Project will be investigated. The second approach will look at the problems and obstacles to the efficient management of the project. From there, the causes of the problems and obstacles will be examined. Lastly, it will attempt to offer recommendations for the improvement in the administration and management.

The research for this study has been conducted from August - December, 1982. The first month was designed for the documentary survey. Two months for field work and the last two months was the period of discussion, data analyzing and report writing.

#### 1. Data Collection

1.1 Survey of the Evaluation Studies of the Sericulture / Settlement Project has been undertaken as follow :

- Thailand Sericulture / Settlements Project Joint Mid - term Evaluation, January 24 - February 21, 1979. Conducted by USAID Evaluation team, led by Mr. Donald R. Mitchell.

- BAAC Evaluation Report, 1980.

- Thailand Sericulture / Settlement Project, February 24-April 4, 1981. Conducted by USAID Evaluation Team, led by Mr. Kyaw Mint.

- The Office of the Under Secretary to the Prime Minister has recently set up a Working Group. They are Reports of Monitoring and Evaluation of Sericulture Project, April 30, 1981 and October 1, 1981. March 31, 1982.

- The Report on Changes of Project Members' Attitude Toward Rearing Silkworm as a Subsequence of Project Redesign, Dr. Chavivan Prachubmoh, October 7, 1982.

1.2 Interviews of government officers responsible for the Sericulture project:

have been conducted at 3 levels -

A. National level interviewing policy makers and planners. They are

- The officers of the Self-help Land Settlement Division, PWD.
- The Assistant Manager of Loan Department, BAAC
- The previous and the present Directors of the Sericulture Division, MOAC.
- The Assistant Project officer, Office of Rural Development, USAID.
- Previous Superintendent of Land Settlement.

B. Regional Level interviewing the government officers Responsible for the Sericulture/Settlements Project from different provinces has been undertaken. The officers represented in each provinces were the BAAC Branch officers, the Sericulture Sub-station officers.

C. Community Level : interviewing the Superintendents, Assistant Superintendents, Supervisors and Extension Worker of the Sericulture Project and Members. 53 households are selected from three settlements. These are stratified into three groups based on relative successes in their Sericulture Project. It consists of 15 of the successful members of the 3 settlements, 15 of the relatively successful members, and 19 of the unsuccessful

members. Interview has also been made of the 7 non-members of the project. (see table I for detail) The criterion used for measuring success can be found in Appendix IV .

## 2. Site Selected

Three Self-help land Settlements, from thirteen Settlements which this project has been in operation, were chosen for study on the basis of their project progressiveness. Kham Soi, Mukdahan Province, is the sample site of the most efficient operation of all settlements, Lam Dom Noi, Ubon Province, is the sample site of the less efficient operation and Ubonrat, Kham Kaen Province, is the sample of "Rise and Fall" of the project progressiveness.

Although Chuay Luang Land Settlement is not included in the study, visit has been made to the Settlement and interviews have been made with the Project Supervisor and the Deputy Superintendent. A Project Supervisor of another land settlement has also been interviewed.

This Report will first consider the general condition of the three land settlements as affecting the Sericulture Project, and will consider specifically the factors facilitating and obstructing the operation of the sericulture project in each land settlement. Then it will concentrate on administrative and management problems, analysing factors facilitating and obstructing the efficient operation of the project. Lastly, it will attempt to offer recommendations for the improvement in the administration and management.

B. General Information : the Three Land Settlements, Kham Soi, Lam Dom Noi, and Ubonrat.

Although among the three settlements. Kham Soi is the oldest, Ubonrat is the largest as regards land areas as well as the sizes of membership. Table II. given general information as regards the three settlements as 1976.

By 1982 the sizes of membership of Lam Dom Noi and Ubonrat have increased slightly, i.e. up to 1,432 households in Lam Dom Noi and 2023 households in Ubonrat.<sup>4</sup> For Kham Soi, an increase of 1,474 households is made in the year 1982. Because the Settlement has included squatters in the area as its members. The present size of membership at Kham Soi is, therefore, 3,214 households, which makes it the largest as regard sizes of membership among the three. The average household sizes of the three settlements are 6.73 for Kham Soi, 6.53 for Lam Dom Noi, and 6.44 for Ubonrat.<sup>5</sup>

Table III shows the average land holdings of the three settlements. It can be seen that for actual farm sizes within the area of the settlements, those of Kham Soi are on the average larger than those of the other two, while those of Ubonrat are the smallest.

As regards soil quality and availability of water resources, the condition at Kham Soi appears to be better than the two other settlements. Kham Soi has a number of streams running through its land, and the soil is said to be suitable for upland crop cultivation. The geographical feature of Ubonrat land settlement is hilly ground with areas of flat plains in between. The soil is sandy in general with some areas having underlying sandstones. It is stated to be suitable for cultivation of Upland crops if irrigation can be provided and suitable technique for land improvement is applied.<sup>6</sup> the area of Lam Dom Noi is also hilly. The land suffers through lack of water resources as well as the poor soil condition, which do not hold water. Complaints of lack of water are more frequently heard, and more strongly expressed at Lam Dom Noi than in the other two settlements. It may be noted in this respect that for a large number of households, about one fourth of their land is not used for cultivation due to lack of water.

Land in Ubonrat settlement is predominantly used for the cultivation of upland crops. The most important ones are sugar cane and cassava. Table IV shows area for each crop, yield per rai, and the amount received for its sale for Ubonrat.

About half of the cultivated area in Kham Soi is used for cultivation of rice. The rest is used for upland crops, the most important of which is also sugar canes. (See table V)

Land use in Lam Dom Noi is different from the other two land settlements. While the majority of land area is used for planting rice, the important cultivated upland crops are kenaf and groundnut. (see table VI)

Table VII shows the main income sources of the settlers of the three settlements. It can be seen that while the settlers of Kham - Soi and Ubonrat derive most of their income from upland crop farming, those of Lam Dom Noi obtain their income from rice cultivation

Table IX shows a comparison of average income of settlers in the three settlements. It may be noted that the average income of the settlers of Lam Dom Noi settlement is much lower than those of Kham Soi and Ubonrat.

There are in general two types of residential settlement in the land settlement. The one consists of clusters of houses separate from their farms. This is similar to the traditional village settlements found generally in the Northeast Region of Thailand. The other type is similar to those of the Central Plain, where each house is situated in the farm area of the house owner. The social implication is that for the settlement of the first type (the N.E. village-type), the people within the community (village) are living close to-gether, and thus can be expected to have maximum interactions. For settlement of the other type (Central Plain type), as the houses are relatively distant from each other, less contacts and interactions between community members can be expected.

In almost all the three settlements, the number of households in the two types of settlement are not much different. Thus in Ubonrat, the number of households in the first type (N.E. village type) is 919, while the number in the second type is 1,104.<sup>7</sup> For Kham Soi, the first type includes 859 households while 881 households are in the second type. However, Kham Soi has in 1982 incorporated 1,474 households of squatters as settlers. The settlement of these squatters is in the form of natural villages. Thus Kham Soi in fact, has 2333 households in the first type of settlement<sup>8</sup>. Taken together with the fact that Kham Soi Settlement has been established earlier (Kham Soi 1956, Ubonrat 1966, and Lam Dom Noi 1969), it is to be expected that the settlers at Kham Soi would have a stronger sense of community and belonging.

The circumstances which gave rise to the establishment of each particular land settlement have also important consequences upon the settlers. Kham Soi was set up to distribute land to people who have insufficient land for cultivation, and to those who sought security from dangers arising from subversive actions of the communists. On the other hand, Unbonrat and Lam Dom Noi were set up to provide land to people who had to move out of their original cultivation areas because of the construction of the dams. In this case, two effects upon the attitudes and feelings of the settlers may be observed. The first is due to the fact that the land from where they have to move out is naturally irrigated and of much better quality than those given them in the land settlements. Thus Dr. Chvivun found that the settlers in Unbonrat and Lam Dom Noi are bitter about the fact that they have been moved to a dry area in the land settlements.<sup>9</sup> The second effect is their attitude towards the Government and government officials. While for Kham Soi settlers, the Government and the officials are their benefactors, giving land and shelter to them, Unbonrat and Lam Dom Noi settlers have been deprived of their rich land by actions of the Government. It is to be expected that their attitudes toward government officials would not be as favorable as those of Kham Soi. It would take more efforts on the part of the settlement officials to obtain cooperation from the settlers in Unbonrat and Lam Dom Noi than in Kham Soi.

C. Comparative Advantages and Disadvantages for Sericulture in the Three Settlements.

Comparison of the work of the Sericulture Project in the three settlements as regards the number of the Project members, the amount of raw cocoon produced as well as the amount of income received by the members shows clearly the success of Kham Soi Settlement. Charts I-III shows comparative numbers of the members of Sericulture Project, the amount of raw cocoon produced, and the income derived from the sale of raw cocoons for the three land settlements. The stated goal of the Project is to "increase the annual net cash farm income of 1,500 families in 10 Northeastern settlements by an average of 50% per family in 5 years<sup>10</sup>." This is from  $\text{¥ } 8,600$  (\$ 430) in 1977 to  $\text{¥ } 14,400$  (\$ 720) in 1981 of which about  $\text{¥ } 11,000$

was to be derived from silk worm production. As regards the number of the Project members, the expectation would be on the average up to 150 families for each settlement in 1982. We can see that Kham Soi has 102 families, which is not far below the stated goal. Ubonrat and Lam Dom Noi have only 34 and 37 which are far below the stated goal. As regards income from silk worm production, the Kham Soi 102 families earn an income on the average of about  $\text{฿ } 15,861$  a family from silk worm production, while those of Ubonrat and Lam Dom Noi earn about  $\text{฿ } 11,027$  and  $\text{฿ } 7,432$  each respectively.<sup>11</sup>

In considering the relative advantages and disadvantages of the three land settlements for sericulture, we may first begin with the soil condition and the availability of water for mulberry cultivation. As regards the availability of water, cultivation of mulberry in all land settlements in general depends on the rain. As regards soil condition, it has been noted that for Lam Dom Noi, most areas used by Project members to plant mulberry are not suitable for it.<sup>12</sup> In comparison to Ubonrat and Kham Soi, soil quality of Lam Dom Noi may in fact be inferior. There, it may be observed that yields of upland crops in general are low, and the income of farmers in the area in general is very low in comparison to those in the area of Ubonrat and Kham Soi. The value of land in Lam Dom Noi is also stated to be very low. However, it may be observed that in every settlement, there will be areas suitable for mulberry cultivation. The problems lie in the selection of Project members and areas for planting mulbreey. Huay Luang Settlement has recently avoided the problem by accepting applicants only after there successful experiments in cultivating mulberry in their plots. Further, there exists techniques to improve the soil and increase the yield, although it may need a little higher expenses and much more attention from the extension workers. Comparing the three settlements in this regards, Lam Dom Noi appears to have some disadvantages which have to be compensated by more attention from extension workers<sup>13</sup>.

We have earlier noted that Kham Soi Settlement has been set up 10 and over years earlier than the other two settlements. The circumstances which gave rise to the setting up of the Settlement may also confer some advantages to Kham Soi. It is probably easier for Kham Soi officials to establish rapport with its settlers. This is important for extension work and transfers of technology.

Income of settlers of Kham Soi in general is much higher than those of the other two settlements (see table IIX). It has been shown also that at the beginning of the Project, the settlers of Kham Soi have more savings than those of the other two settlements. (see table IX).

Personal savings at the beginning of the Project obviously helped as there are expenses not covered by loans from BAAC. This may also be related to the problems of the lack of labor, pointed out by Dr. Chavivan as one of the important factors for failures in silk worm production.<sup>14</sup> Those, having larger income and personal savings may have the advantage in employing other people to look after mulberry plots and silkworms. In this case, Kham Soi also has an advantage over the other two settlements.

The evaluation team of February 24 - April 4, 1981 led by Mr. Kyaw Mint has pointed at a number of basic weaknesses of the Project plan, including target.

" Project planners were overoptimistic in their expectations with respect to availability of staff; coordination between agencies ; capacity to supply inputs; availability of surplus labor requirements and ability to recruit able settlers to meet production targets, mulberry and cocoon production."<sup>15</sup>

We have seen, however, at the beginning of this section, that, despite such overoptimism of the Project planners, and serious drawbacks shared by all settlements, the performance of the Sericulture Project at Kham Soi has been far more effective than the others. The success of Kham Soi is due obviously to a number of factors. We have examined the few basic advantages as regards soil condition, and social and economic potentiality. The factors, which we have not

yet examined, are related to the administration of the land settlements, and the Project management. The Report of the Joint Evaluation team of February 24-April 4, 1981 has pointed at these factors as the most important ones. Thus the existence of administrative weakness has consequently affected project implementation resulting in management problems surfacing as a major source of delay.<sup>16</sup> It may be observed that Project administration of Kham Soi is different from all other settlements. The Project supervisor at Kham Soi has since 1978 been in practice given full authority over the management and administration of the Project including the power and control over the budget and the use of funds for the Project.

It is extremely difficult to assign relative weights to the various factors affecting the operation of the Project in the three settlements. As mentioned above, there are, of course, advantages of Kham Soi over the other two settlements. However, it is interesting to observe that the operation of the Project at Ubonrat settlement was relatively successful until the year 1979-1980. Cultivation of mulberry at Lam Dom Noi was successful in the first year (1977). Project implementation at Kham Soi was slow at the beginning, and its successes have not become apparent until the year 1980.

Despite the advantages and disadvantages mentioned above, the officials of settlements interviewed appear to be of the opinion that factors related to administration and management are the most important for the successes and failures in the operation of the Project. The weights assigned to the relative importance of the various factors are that about 50% of factors responsible for success and failures are related to administration and management. The other factors mentioned earlier such as soil condition, social condition of settlers, and other technical factors are responsible for another 50%. All the officers of the Project at Kham Soi rank as the most important factors for success, the attention of the officers, administration, and the project members (see tables X). The real problem in assigning weight is that most of the other drawbacks and basic disadvantages can be corrected or partly corrected through more efficient administration and management, although in the other settlements, it may need more efforts than in Kham Soi. As it appears, however, they are weaker and less efficient than that of Kham Soi.

III.

Administrative Structure

The Position of the Sericulture Project in the Settlement Administration.

A. Administrative Structures of the Three Settlements

A settlement consists of two main categories of people, the personals of the settlement and the settlers. As regards the first category, each settlement has the Superintendent, the Assistant Superintendent(s), extension officers (or workers), accountants, and other personals, e.g. nurses, typists, and drivers.

The administration of a settlement is highly centralized. PWD's Order No. 583/2513 (year 1970) on the Administration of Land Settlements lays down only the power and duty of the Superintendent.<sup>17</sup> According to this Order, the Superintendent has full power over all the officials of the settlement, issuing orders, supervising their works, and assigning them duties. He has also the duty of drawing up the annual budget, and controlling the expenditure of the settlement. The officials, interviewed, compare the position of the Superintendent of the settlement to the Director General of PWD. They say that the Superintendent is the representative of the Director General in the settlement. Formal contacts with other agencies and outsiders have to be done through the Superintendent. The Superintendent is responsible for all activities within the settlement.

According to the same Order, the settlement is divided into khet (blocks). A khet consists of 50 households or over. Similar to a village, a khet has an elected headman. As regards the authority of the Superintendent of the settlement in relation to the settlers, he is compared by the interviewed officials to a District Chief. As such he governs the settlement. The Superintendent, thus, has a great deal of work and responsibilities.

The extent of decentralization and the selection of what kind of power and authority to be delegated to whom and in what manner depend upon the discretion of the Superintendent. Thus, although the administrative chart of every settlement are as in chart, IV, chart drawn up from actual

assignments of work in the settlements are different. Charts V-VII show the actual administrative structures of the period. (1977 - 1981).

These differences mean that it is within the power of the Superintendent to organize the administrative structure and to assign tasks to his subordinates as he deems suitable for the particular settlement.

Such power is shown clearly in the case of Ubonrat, when in the year 1980 there was a reorganization of the responsibilities of officers. For this settlement, during 1977-1980, the Settlement was divided into 7 khet(blocks), each of about 200 households. For each khet, an officer was assigned to serve as the co-ordinator between the settlers and the Settlement. Any development project operating in the khet done through and with the cooperation of such a coordinator. In 1980 the position of these coordinating officers were abolished, and each Project has to send their own officers to work with the settlers without the assistance of the coordinators in each khet.

In summary, it can be stated that the Superintendent has the power over the assignment of works, the organization of the administrative structure, and the control over the budget and the use of the funds. The place of any project such as the Sericulture Project in the overall administrative system of the settlement can be defined by the Superintendent of the particular settlement, and is entirely within his discretion.

#### B. The Project Supervisor : His Role and Responsibilities.

The research team has found that in practice the role and responsibilities of the Project Supervisor in different settlements are different. Moreover, within one and the same settlement, his role and responsibilities may be changed with the change of the Superintendent of the Settlement. The role and responsibilities range from that of an extension worker to that of a field director or a project manager in practice. In general they act like that of a leader of extension workers.

The Project Paper (March 26, 1976) prescribes that "the Supervisors will be responsible for supervising the seven extension agents in each settlement as well as managing the central mulberry plantation and central worm-rearing houses." The Project Paper assumes that for every settlement there will be a functioning cooperatives which will handle :

- 1.) the purchase of silkworm egg
- 2.) provision of production inputs such as fertilizer, disinfectant for worm houses, silkworm eggs etc.

However, in fact, the cooperatives functions have never materialized.<sup>18</sup> Thus these functions are thrown back at the Settlement. Without the expected cooperatives functioning, each settlement needs a project manager, or a field director, who manages the Project in the settlement. The problem is "who shall perform that function?"

In every settlement, except Kham Soi, the answer is that the Superintendent is the Project Manager of the Sericulture Project in the Settlement. And a number of them act certain ways like one.

There are a number of reasons why the Superintendent cannot, and should not be, or act as if he is, the Project Manager. They are as follows:

1. He has no knowledge, or insufficient knowledge about sericulture to be able to draw up work plans and assign specific tasks to workers.

2. He has far too much work as the top administrator of the settlement and its representative to outsiders to be able to pay sufficient attention to any single project in the settlement.

3. A settlement has a number of projects for development (Kham Soi 5 projects, Lam Dou Noi 4 projects, and Ubonrat 12 Projects. See tables XI, XII, XIII). If the Superintendent is the Project manager of one, he has to be the Project -

Manager of them all, which obviously he cannot do effectively. On the other hand, one can look at all these projects as parts of an integrated development program of the whole settlement, and thus the Superintendent is the Director of the program. However, there is no such integrated program or overall, integrated development plan of any settlement. Further these projects are on different kinds of activities, and obtain funds from different sources. The Superintendent cannot give equal treatment and attention to all of them.

According to one high official of a settlement, a Superintendent will pay special attention to such a project which the P.D. has in its policy emphasized, or a project which benefits large numbers of settlers in the settlement. Until recently (1931), P.D. has not emphasized the importance of the Sericulture Project, and the activities of this Project do not benefit large number of settlers.

As the Project Manager of all the projects in the settlement, the Superintendent controls all the funds and manpower of all the projects. His concentration and interest in particular projects and disinterestedness in other projects have resulted in shifting both manpower and parts of the funds from one project to another. This affects, particularly, the operating expenses fund, which is the Royal Thai Government's contribution to the Sericulture Project. It has been said by the people interviewed that, only at Kham Soi Settlement, 95% of the operating expenses fund for Sericulture Project is actually and usefully spent on the project activities. In all other settlements, only about 5% of this fund is usefully spent on activities of the project (see note 1.)

In December 1933 P.D. has drawn up a detail job description of the Project Supervisor. They can be summarized under four headings as follows :

1. Supervising and planning sericulture activities in the settlement. These include supervising and planning for the raising of silk worms of each lot, the maintenance and improvement of the central mulberry plantation and individual mulberry plots of the members, the training of members in silkworm raising, the construction of members' worm-rearing houses and the provision of equipments, silkworm raising activities, activities of extension workers, and collection and sales of raw cocoons. It includes the solving of all problems in sericulture activities in the settlement.

2. Coordinating with the Training Center at Nakhon Ratchasima and nearby sericulture sub - stations.

3. Coordinating with MWD local branches .

4. Collecting data and reporting.

This job description appears to assign more responsibilities to the Project Supervisor than being merely the chief of the extension workers. With planning, and supervising the project activities, and coordinating with outside agencies, it would make him a Project Manager in the settlement. However , this job description does not provide for him to have, in practice, the control of the use of the funds and the provision of inputs and materials, which are needed for the performances of his duties as the project manager in the Settlement.

At Khan Soi alone assignments of duties and responsibilities of the Project Supervisor and his staffs has since 1973 been made in writing through the Order of Khan Soi Settlement, Nakhon Phanom Province, No 6/3521 on Assignments of Duties to officers of the Sericulture project (for detail, see Appendix 1.). These assignments constitute in practice an act of decentralization in the real sense which makes the Project Supervisor, the manager or Director of the project in the settlement. Here, the Project Supervisor has

full control, in practice, of the Project staffs, the Project materials, the Project fund, and the Project management. We shall examine these aspects, one by one, and show why such a delegation of power is necessary to obtain maximum efficiency for the operation of the Sericulture Project. This will be done through showing the hitches in and obstruction to efficient performance where and when such delegation of power is not made.

1. Control of Staffs and workers For Kham Soi, assignment of work to extension workers and other workers is done by the Project Supervisor and the Superintendent does not interfere. Occasional hiring of labors for improvement of the central mulberry plantations and other works is also done by the Project Supervisor. The Project Supervisor can decide when to do so, whom to employ, and at what rate of payment. He will ask for formal approval from the Superintendent later, and know that it will be granted. For other settlements this is not so.

In one settlement, the Superintendent directly gives orders to an extension worker to do a job which the Supervisor has assigned to another extension worker (See case 1, Appendix III). The Project has three drivers, but is able to use only two, because the Superintendent has taken over the other one to be his personal driver. Sometimes, without informing the Project Supervisor, the Superintendent makes use of the Project's pick up truck to the detriment of Project's activities (See case 2, Appendix III). The Project has an officer assigned to work as Phatsadu i.e. buying materials and equipments and storing them, but he has nothing to do in this respect because the

Superintendent does not allow the Project to buy materials and equipments. The Project has an accountant but the Superintendent asks her to do accounting for the Settlement as a whole.

As regards the hiring of laborers, as the decision to hire the workers is not given formally to the Project Supervisor, the work on the central mulberry plantation is delayed for over two months with resulting damages to the plantation. (See case 3, Appendix III).

2. The Power to purchase and store materials and repair machines and tool

At Kham Soi settlement, the Project Supervisor has the power to purchase and store materials for the Project, and to repair machines and tools. At other settlements it varies. For one settlement, the chief accountant is the person who purchases everything for the settlement. At another settlement, a number of things are purchased by the officer (Phatsadu) who has the duty to do so. However, for certain material such as chemical fertilizers which would be bought in large amount, it is bought by the Superintendent, himself.

The problems associated with central buying of materials for the Project are delay, loss of the materials, and the quality of the material. Even at Kham Soi, at the time when one of the Superintendent took away the purchasing power from the Project Supervisor and purchasing was centrally done, it appears that an amount of purchased materials was lost. To obtain maximum efficiency at least, fertilizers, insecticides, chemicals, and equipments should be purchased by the Project Supervisor and his staffs. In one of the settlement, the Project Supervisor is not allowed to make decision in buying materials for the Project. He has to ask the Superintendent for it, and then the Chief Accountant of the Settlement is the person who buys the material. The result is that, not only the process is very slow, but the materials obtained are often defective. Fertilizers, especially, are found to be so old that their effectiveness is much reduced.

At another settlement fertilizers are bought always by the Superintendent, who always go alone with only his personal driver to buy them. In these cases where fertilizers are centrally purchased, the chances that those fertilizers belonging to one project may be used in another project or for other purposes is very high ( see cases 4 and 5, Appendix III).

We have already talked of the case when the Superintendent made use of Project's vehicles for other purposes. Sometimes, a vehicle may be lent by the Superintendent to other Government agencies. In case of Kham Soi settlement, the control of the use of Project's vehicles is in the hand of the Project Supervisor, and he would not allow them to be used by other people for other purposes. (See case 7, Appendix III).

It appears that in certain settlements, there exists a general insufficiency of gasoline for vehicles. In one settlement, the Superintendent complains that the Sericulture Project uses a great deal of gasoline. On the other hand, the Project Supervisor complains that the process for getting the gasoline is extremely slow (See case 6 Appendix III). Even at Kham Soi, the problem of the general insufficiency of gasoline for the settlement is an important issue for argument, and a reason for the desire on the part of some Superintendents to recall the power of control over the Project's gasoline from the Project Supervisor. One of the Assistant Superintendents, states, in the interview, that there is a general insufficiency of gasoline for use in all other projects but the Sericulture Project, and expresses the opinion that gasoline should be pooled together centrally. At the moment, according to the Order of Kham Soi settlement, the Project Supervisor separates funds for the Project's gasoline from the general pool, and takes care that nobody else can use it for other purposes. In fact, uses of gasoline can be wasted a great deal for people may take out the official cars for private journeys. Such opinion, as expressed, shows the tendency of settlement administrators to shift funds from one project to support other projects. (see case 8 Appendix III).

One of the most important obstacle to efficient operation of the Sericulture Project or any other project in the settlement is that machines and tools including vehicles are not kept in workable condition. Tractors, vehicles, and machine tools and equipments which are defective are not repaired. The first thing the Project Supervisor at Kham Soi did, when the authority for ordering repairs of tractors, vehicles, and machine tools was given to him, was to have machines and tools repaired. This problem is shared by most settlements, and in some it has serious consequences upon the operation of the Project (see case 9 and 10 in Appendix III).

One can see that most problems are associated with the buying of fertilizers, the control of the use of gasoline, and the repairs of machines and tools. When the purchasing and storing of these materials are centrally done, it is easy to shift the materials, or the funds for purchasing the materials and repairs, assigned to one project, to other projects, and very few Project officials would dare to raise objections. The ease in doing so is connected to the control of the funds of the Project by the Superintendent.

### 3. Control of the Project budget and funds

For most of settlements, the control of the Project budget and funds is in the hand of the Superintendent of the Settlement. According to the existing regulation, an amount belowed 20,000 Baht is within the power of the Superintendent to permit the use of it. An amount exceeding 20,000 Baht would require the consent of the Governor.

The problem, which is shared by a number of Project Supervisors, is that, although he knows at the beginning of the Budget year the amount assigned to the Sericulture Project (as a copy is sent from PWD. to each of them directly), he is not informed when the fund is released, as the fund is transferred directly from PWD. to the Superintendent. Thus, at the time when he comes to know of the availability of the fund and makes a request for the use of it, it may be too late to do anything as a part of it has been spent already, and what is left is insufficient. Thus, he cannot make plans for Sericulture activities which would be dependent upon availability of coming funds.

A supervisor, interviewed, states clearly that, in order to run the Project efficiently he needs power and authority in two matters :

(a) that he has the authority to order the repairs of all machines and tools connected with Sericulture, and

(b) that he is able to check at any time the amount of fund left and available for Sericulture.

We may note that the Order of Kham Soi Settlement No. 6/2521 lays down that the Project Supervisor also does the followings : (for Detail, see Appendix I)

(a) Preparing the details of the annual budget (for Sericulture).

(b) Preparing the requests for the use of the funds in the annual budget from PWD.

(c) Preparing the requests for the use of the funds in the annual budget from Nakhon Phanom Province Authority.

(d) Collecting receipts and preparing evidences of expenditure for funds disbursed through PWD.

(e) Collecting receipts and preparing evidences of expenditure for funds disbursed through Nakhon Phanom Province Treasury.

The power and authority associated with these duties are necessary in order that the Project Supervisor would be able to make detail plans of activities, and to perform activities according to the plans. He would be able to know at any moment of time the amount of funds available for use, and amount of funds coming. We may observe also that when the Supervisor of the Sericulture Project is given such duties and power, it will not be possible for any other persons to use the funds for Sericulture project for any other purposes. It may be noted that these are the power and duties which the Superintendents at Kham Soi (after the one who gave the Order No.6/2521) would like to recall. It has been said that, if it were not because of that Superintendent (who gave the order no.6/2521), who is more enlightened than the others, the Supervisor at Kham Soi would never have been able to obtain such power, but would have been fired long time ago. However, it has to be admitted that these power and duties of the Supervisor are probably the most important factors contributing to silkworm rearing success at Kham Soi.

Inability on the part of the Supervisor to control funds, and particularly the use of funds, may have serious consequences upon planned activities (See case 11, Appendix III), where such activities have been planned. On the other hand, for most of the Supervisors, such inability to control the use of the funds appears to inhibit them from planning activities and making decisions. The problems of the control of the use of funds is closely related to management problems, which are discussed in the next section.

#### 4. Management : who is the project manager in the Settlement ?

As most of the people interviewed have stated, with the exception of Kham Soi Settlement, the Settlement Superintendents are the Project Manager of the Sericulture Project in their own settlements. The Project Supervisor is a technical specialist (Hakwichakan) who coordinates the works of the extension workers in their extension works. As stated earlier there are many reasons why a Superintendent cannot be an effective Project Manager (see above in Section B, 1,2,3,). Another two reasons may be added. First, the changes of Superintendents are relatively frequent. Every time, there is such a change, policy regarding the management of the Project is changed also. There is, thus, a lack of continuity which would contribute to continued development and growth of the Project. Secondly, if the Superintendent is the Project manager, it means also that all actions to be taken must receive his consent. His being overloaded with work can cause so much delay that is detrimental to effective and efficient operation of the Project.

With such division of roles and functions, efficiency in operation depends entirely on perfect coordination between the Superintendent and the Project Supervisor. This is rare as there are many conditions, a number of which are personal, which have to be fulfilled. Important ones of them are as follows :

(a) They have to like each other well, and are willing to spend a great deal of time discussing the activities of the Project together. Such perfect co-ordination is necessary because, while the Project Supervisor is close to the Project members and is the one initiating and performing actions, the Superintendent is the person who has to give consent to all actions to be taken, and control the funds. The Superintendent has to know what is going on in

the Project very well, and the plans of actions to be taken by the Supervisor so that he would be able to give permission or withhold consents. Imperfect knowledge and understanding of the Project activities, conditions, and plans of actions would make him hesitate, and sometime require him to make more enquiries about the matters before he makes decisions. Thus it tends to create delays which can be damaging to the Project activities.

(b) They have to trust each other completely. The Project Supervisor has to be able to feel certain that whatever he initiates or sets out to do will be endorsed by the Superintendent. Only thus would he be able to take necessary actions, when needed, without having to obtain prior consent from the busy Superintendent. This is a delicate matters which involve personal adjustment on both sides. Thus it takes time to develop, and in some cases may not ever develop. In the course of this study, the team has found a Superintendent, who at one Settlement, could work in perfect conjunction with the Project Supervisor there, but, when he was moved to another settlement, could hardly work in coordinated manner with the project Supervisor. On the other hand, we have also found a Project Supervisor who worked so well with a Superintendent, but unable to work with another Superintendent who has been appointed to replace him at all.

The matters is delicate because it involves the feeling which would inhibit the Supervisor from initiating actions. Thus, a Superintendent may say to the Supervisor that he could take actions even before informing him or obtaining his consent. However, when the Supervisor did precisely that, he was told off by the Superintendent. Such response inhibits him from initiating actions later on despite persistent statement of the Superintendent that he could do so. The only circumstances where such perfect harmony can be obtained is when both of them have complete trust and true understanding of each other. Such personal relationship needs time to develop. frequent changes of Superintendent obviously does not help.

(c) The Superintendent has to give priority to the Sericulture Project. He has to be very much interested in the Project, and willing to give full supports to it. As we have seen already, the Superintendent has a number of projects in his hand, thus the project which he gives priority to would be in an

advantageous position. These advantages would range from the amount of time he spends on it to the amount of funds which he may give to it. Every project would be competing with each other for his time and attention. Some of them will have to be neglected.

(d) The Superintendent and the Project Supervisor have to plan Project activities together. Being a development Project, the Sericulture Project needs also Project members' participation in the planning process. Thus, in order to make effective planning, the Superintendent has to get to know Project members well also, and this would take a large amount of his time.

Some improvement has recently been made with the Setting-up of a Working Group of the Office of the Under Secretary to the Prime Minister in 1981. The existence of a high-level working group monitoring the Project automatically force the Superintendents to pay more attention to the Sericulture Project, to spend more time on it, and to be willing to work more closely with the Supervisors.

However, this is only a measure to force the operation of the Project to work within the existing structure which has serious flaws. The Project Paper underestimates the organizational difficulties of cooperatives in Thailand, and institutional weaknesses in the administrative apparatus of the settlements. Over centralization of the administration of the settlement does not permit an existence of a Project Manager who would have to perform a number of functions in place of the cooperative which does not function. Although the assignment of responsibilities to the Supervisors in December 1980 does seem to make the Supervisor, the Project Manager in the settlement, it does not provide for his control of the funds and materials which are necessary for efficient operation. These are in the hands of the Superintendent. Thus the efficiency of the operation depends upon perfect coordination between the Superintendent and the Supervisor. The Project Manager is the combination of both of them. There are two important drawbacks for such an arrangement :

(a) The efficiency of the Project operation depends too much upon personal relationship which takes time to develop and has to be cultivated by both sides. We may note the disruption, and changes in administrative arrangement and management which have occurred at all settlements with the change of Superintendents, even at Kham Soi.

(b) It gives rise to diffused responsibilities. When the operation of the Project fails, it is very difficult to find out where the fault lies, and within

whose responsibilities, Take for example, where the Superintendent buys the fertilizer and the Project Supervisor takes care of the central mulberry plantation. In case the central mulberry plantation deteriorates, the Superintendent may put the blame on to the Project Supervisor that the latter has neglected it, while the Project Supervisor may say that the Superintendent has bought old and ineffective fertilizer. It is not an infrequent phenomena in the Thai bureaucracy that, when something goes wrong, everyone concerned would try to put the blame on another. Diffused responsibilities help to facilitate such shifting of blames, which indirectly encourages corruptive practices.

It appears that it would facilitate the operation of the Sericulture Project a great deal if the Project Supervisors are made the Project Manager in the settlement, having the control of the personals, the materials, the funds, and the management. That is to put the responsibilities for Project activities squarely on his shoulders.

However, this appears to have been an extremely difficult undertaking. It is against the Thai bureaucratic traditions which have the following characteristics :

(a) Distrust, particularly of the subordinates, is the main motive for administrative arrangement and institutional regulations. Thus there are repeated attempts to control actions of subordinates by making administrative arrangements and regulations, which are so rigid and minutely detailed that they tend to stifle initiatives and reduce efficiency of performances. This reflects also an awareness of the inability and unwillingness on the part of the higher administrators to evaluate performances of their subordinates by using the results of the latter's performances upon the intended beneficiaries.

(b) On the other hand, job descriptions including limitation of power and authority are vaguely drawn up. Thus it is left in the hand of the superior to decide as to how much power and authority to delegate to any of his subordinates. As a consequence, decentralization depends upon the personal judgement of the superiors, which are usually based upon personal relationship between the particular superior and his particular subordinate.

(c) Decentralization is extremely difficult owing, partly to inherent distrust, and paternalistic attitude on the part of the superiors.

(d) Personal relationship is highly valued. The existing patron-client relations, and cliques based upon such relations make it difficult to give

fair rewards and punishments according to performances. Within such situation, diffused responsibilities are preferred.

(e) Highly centralized practices are also preferred. When most responsibilities are given to a person of high position who has so much work of various kinds in his hand, the responsibilities are automatically diffused. When anything goes wrong in anyone section or a part of his work, it is difficult to pin down who is at fault. It is difficult to punish the person of high position, for he has so much work of various kinds. When only a part of one of his work goes wrong, one would hesitate to give him punishment because some of his other work may go well or may be excellently performed.

From our interviews of officials of settlements, it appears that, in general, most Superintendents are unwilling to delegate the power and authority of the Project Manager to the Project Supervisors. Even the Project Supervisor at Kham Soi, who has already been acting as the Project Manager since 1978 and has performed his duties excellently, has had much trouble and conflicts with the new Superintendent every time there is a change of Superintendent there.

The power, which most Superintendents are most unwilling to depart with, is the control over the Project's funds. Besides the Superintendent's distrust of the Supervisors, the Sericulture Project is well funded. A settlement has many projects, a number of which are insufficiently funded. It also has a large amount of other expenses, which are not provided for in the Government budget.

A large number of the present Project Supervisors are not yet able to take on the job of the Project Manager. They have not been trained for the purpose. Additional training which is needed for them is in administration and management. The Project Supervisor at Kham Soi has been able to act as the Project Manager so well is because he has previously been Assistant Superintendent at another settlement and taken much interest in public administration.

C. Extension Workers and Extension Work

In this section, we shall examine contributions of the following factors to the successes of the operation of the Sericulture Project in the three settlements :

1. Ratio of extension workers and Project members in each settlement.
2. Level of education and training.
3. Administrative arrangement and assignment of responsibilities.
4. Operation of extension work.

1. Ratio of Extension Workers and Project Members

Table XIV shows the ratio of extension workers to Project members in each year from 1977 to 1981 for each settlement .

The number of Project members is limited to those actually raising silkworms in that particular year. The following observation may be made :

a) At Kham Soi, the number of extension workers has been increasing as the number of Project members has been increasing.

The lowest ratio 1:5 was in the year 1977, and the highest 1:15.2 occurred in the year 1980.

b) At Lam Dom Noi, the ratio of extension workers to members of Sericulture Project has been as high as 1:18.5 for two years 1979 and 1980. The lowest ratio 1:8 was in 1977.

c) At Ubonrat, the number of extension workers was in the year 1981 increasing although the number of Project members grew smaller. The ratio of extension workers to Project members in 1980 was 1:14.5, and in 1981 was 1:6.8. The lowest ratio 1:5.7 was in the year 1977, and the highest ratio 1:18.3 occurred in the year 1979.

Table XV shows average income from Sericulture per member in the three settlements. Comparing the data in table XIV with the statistics in table XV, following observations may be made.

i). The ratio of extension workers to Project members certainly affect production and the average income per member in Lam Dom Noi. Thus in the years 1978 and 1979 when the ratio went up from 1:5.3 to 1:18.5, the average income per member went down from 4,278.75 baht in 1978 to 3,552.38 baht in 1979. In the year 1981, when the ratio suddenly went down to 1:9.3 the average income per member went up to 7,432.43 baht.

ii) Data from Ubonrat seems to give a different picture. In the years 1978 and 1979, when the ratio went up from 1:12.7 to 1:18.3, the average income per member increased from 7,232.39 baht to 9,546.45 baht. On the other hand, in the years 1979 and 1980, when the ratio went down from 1:18.3 to 1:14.5, the average income per member also went down from 9,546.45 baht to 5,358.43 baht. However, when in 1981, the ratio went down to 1:6.8, the average income per member went up to 11,027.15 baht.

iii) For Kham Soi, the ratio was gradually growing higher and higher from 1:6 in 1977 to 1:15.2 in 1980 without affecting the growing-higher average

income per member which is from 5,789.50 baht in 1977 to 13,570.79 baht in 1980.

From these data we may make two statements:

i that gradual changes in the ratio of extension workers and Project members do not seem to affect production. Only big jump whether up or down of the ratio will affect production.

ii that the data for Ebonrat in the years 1979-1980 shows that there are other factors more important than the ratio of extension workers and Project members affecting production. These factors may be in regards to administration and management. In the year 1980, there was a change of the Superintendent at Ebonrat Settlement which brought about also changes in the method and manner of administration. The relationship between the Superintendent and the Project Supervisor also changed in its essential nature. There was also a replacement of an extension worker. Moreover, there were three more projects (one supported by UNICEF, the other two by the Netherland Government, and USAID) coming to Ebonrat settlement.

iii The data tend to suggest that the ratio of extension workers to Project members, which was prescribed in the plan (1:20) may be too high. At the present stage of development of the skill of Project members, and the sophistication of sericulture using imported or hybrid silkworms, the ratio not exceeding 1:15 may be more suitable.

## 2. Level of Education and Training of Extension Workers

Table XVI shows the levels of education and training of extension workers. As for formal education, extension workers either have a diploma in agriculture (College level which is a further education of 2 years after completion of secondary education), or a certificate in agriculture (equivalent to completion of secondary education). All 7 extension workers at Eham Soi have completed only the certificate level. One of Lam Dom Noi workers, and two of Ebonrat have received

diplomas. On the other hand, as regards training in Sericulture, four (more than half) of Kham Soi workers, and two of Ubonrat have received trainings, while none of Lam Don Noi workers have received them. Thus, trainings in Sericulture practice are an important factor for effective performance of extension workers in the Project, while higher formal education does not appear to be so. This is certain because sericulture, as practised in the settlements, is very specialized and involves methods and technique new to this country.

As regards the Project Supervisors, the two Supervisors at Kham Soi and Ubonrat have received Bachelor degree in Agriculture, while the one at Lam Don Noi has attained only Diploma level. The works of the two Supervisors at Kham Soi and Ubonrat are superior to that of the one at Lam Don Noi. The work of a Project Supervisor is in fact much more than that of an extension worker and may need a person who has obtained an education at Degree level for the job.

3. Administrative arrangement and assignment of responsibilities. Comparison of the administrative arrangement and assignment of responsibilities for extension workers in the period 1977 - 1982 between the three settlements shows important differences which could have significantly affected the operation of the Sericulture Project. For Kham Soi, assignment of responsibilities which includes also decision-making power, to extension workers was made since 1978. This was when Kham Soi Settlement Order No.5/2521 made the Supervisor, the Project manager in practice. Then in the following year (1979) with the increase of the number of extension workers, division of areas to be supervised and responsible by particular workers was made. This was followed in 1980 by assignment of two types of duties to extension workers. They are as follows:

a) Each extension worker is assigned specific area or areas of the settlement to be under his responsibility. He has to supervise the silkworm raising activities of the members who reside in that area or those areas.

b) Each worker is assigned some specific duties in the general operation of the Project (for examples, see Appendix I.). When the number of extension workers increased to 7 in 1981, there was a rearrangement of assignments of duties and responsibilities.

For Lam Dom Noi Settlement, there was no assignment of duties and responsibilities to extension workers until the year 1982. The only assignment that was made earlier was only that each extension worker had to supervise 18 households. For other works, it is said that, owing to the small number of extension workers, everybody had to help in everything.

For Hbonrat, the situation was similar to Lam Dom Noi. Assignment of duties and responsibilities to extension workers was made only in the year 1981. Rearrangement was made on the basis of past performance in 1982.

In general, we can say that at Kham Soi, management of the Project was systematized since 1976-79, while attempts at systematization of the management of the Project at both Hbonrat and Lam Dom Noi had not been made until 1981-82. Further we can only categorize assignments of duties and responsibilities in Hbonrat and Lam Dom Noi as attempts. Comparing job assignments of the three settlements, it can easily be observed that those of Kham Soi are much clearer and more specific and detailed, even though the assignments at Kham Soi was made 4-5 years earlier.

Clarity and specificity of job assignments to extension workers reflect the understanding of the Supervisor (who makes the assignments) of the nature of the Project operation, and his knowledge of the capability and

aptitude of his staffs. It can be used as the test of the ability of the Supervisor and his attention to the Project performance.

Assignments of responsibilities, if sufficiently clear and specific, can improve performances of the workers. This is because it gets rid of diffused responsibilities mentioned earlier, and each worker would know specifically what he has to do and be responsible for the success or failures of the Project in regards to the specific aspects assigned to him.

Job assignments to extension workers were facilitated by the fact that the Supervisor at Kham Soi was in reality the Project manager. It gave him confident in assigning jobs to his staffs, for he can be certain that the Superintendent would not and cannot interfere with the arrangement. We have observed that in one of the settlement, although job assignments have been made by the Supervisor, the arrangement has been interfered and tampered by the Superintendent who is acting as the Project manager in the settlement.

#### 4. Operation of Extension Work

Comparison of extension work as can be observed between the three settlements show clearly that the operation at Kham Soi is far more superior and efficient than the other two settlements.

1. From observation the researcher team has noted that extension workers at Kham Soi have far better rapport and familiarity not only with the Project members but also other settlers who live nearby. Settlers at Kham Soi address extension workers with terms which denote familiarity and fondness. This does not occur at other settlements. Extension workers at Kham Soi know well settlers who are not Project members, but live near houses of Project members. This also does not occur at other settlements.

2. As a consequence, the selection of persons to be trained was much better done at Kham Soi than any other settlements. Knowing well the situation in each household of the Project members, extension workers at Kham Soi has been able to select persons to be trained in such a way that only those who would actually be looking after silk-worm raising in the household in the future are selected. This is an extremely important factor for successes in silk worm raising. In a number of settlements, it has become apparent that, frequently, those who have received trainings are not the one who would be looking after silk-worm raising. In some places, the persons who have been trained are the daughters who soon later get married and move away. In some places also, the persons selected are not in the position to transfer the knowledge and skills acquired from training to other members of the household or other persons. Thus for proper selection of persons to be trained, the extension workers have to know and understand the situation within the households of the members very well. Kham Soi is the only settlement which has managed to do it.

3. At the beginning, particularly, and even later on, **formal** training in Sericulture practices is never sufficient for the Supervisors and extension workers. Acquisition of knowledge and skill by themselves is necessary in order to equip them for the job. Such acquisition can be done in two ways.

a). The Supervisor may acquire additional knowledge from outsiders, such as other private agencies which are engaged in Sericulture and silk production, and the Government Sericulture stations and other specialists in Sericulture. Such knowledge, he may transfer to extension workers and Project members.

b) A great deal of knowledge and skills can be obtained through careful observation and attempts at solving problems in silk-worm raising occurring within the settlement. These have to be done by the Supervisor, the extension workers, and the Project members together. The extension workers at Kham Soi have been doing these. From such observation and thoughts on improvement of silk-worm raising activities in the Settlement, the extension workers at Kham Soi have managed to make important improvement of the structure of old-worm houses.

4. The Supervisor at Kham Soi has been able to establish contacts with the officials at the P&D office in Bangkok, and other agencies and thus able to facilitate the processes in obtaining assistances and getting through red-tapes in various matters. Such ability of the Supervisor at Kham Soi has helped to facilitate the operation of the Project in the settlement.

5. Knowing for certain the amount of fund on each item, the time when transfers of any amount is to be expected, as well as the amount already spent and necessary for any specific purpose, the Supervisor is able, when necessary, to obtain something e.g. gasoline, on credit from private business in order to solve urgent problems, which often arise in development activities, and prevent unnecessary damages to the efficient operation of the Project. This cannot be done in other settlements.

6. The Supervisor and extension workers have managed to make such arrangement that the Project members are meeting together also with extension workers to discuss different aspects including problems in silkworm raising, sericulture in general, and other development activities. Use of mass media has been made for the purpose. Thus the Project Supervisor has used his own personal money to buy a projector and borrow films on Sericulture and development activities from various agencies. Then they made arrangement

for such film shows to members and other settlers. This is combined in training sessions for Project members as well. One would expect that with the aid of such mass media, interest in sericulture would be aroused, and Project members would be discussing their problems in silkworm raising and exchange experience. Such things have not been done in any other settlements.

7. The Supervisor and the extension officers at Kham Soi do understand the Project members well. Further, they have taken the interests and problems of the Project members to heart, and encourage Project members' participation in the planning process for sericulture for each year. For instance, in the first year when a new member begin to raise silkworm, the income from the sale of his cocoon is usually low. The Supervisor would contact ERAC to exempt that member from repayment in that year in order to give him incentive for continuation in silkworm raising. After the sale of raw cocoons, frequently, it takes a long time before the members can get payment for the sale of their cocoons. The Supervisor made arrangement with PNB in such a way that advanced payment can be made to the members who are in need of cash. In planning the amount of eggs to be bought and silk worms raised, the Supervisor and his staffs plan production of each year together with Project members in meetings. Discussions were encouraged and each member is allowed to make plan for his own silkworm raising and adjust his own plan with others. Thus participation in planning is obtained, and also each member's commitment is obtained in the meeting. This is the reason why Kham Soi has no problem in ordering silkworms eggs more or less than actual requirement.

In general, when we try to find reasons for superior effectiveness in extension work at Kham Soi, we may find the following factors contributing to its efficiency.

i) Kham Soi's Supervisor is dedicated to his work and genuinely interested in silk worm raising. Further, he gives much importance to the benefits which the Project members will obtain. He serves the Project members, not himself, nor his superiors.

ii) He has managed to inspire his staffs to follow his example, and also used his administrative knowledge and skill in his work and management of the Project.

iii) The Supervisor and his staffs have managed to obtain the trust of the Project members. Implication is that they have been working honestly and untainted by corruption. In general, when an official of the lower level, i.e. those working close to the people, is corrupted, the people will know. They may not say anything about it for fear, but usually they withdraw their cooperation and participation. Thus, the fact that the Supervisor and his staffs at Kham Soi have managed to obtain good co-operation and participation from Project members in itself tend to show that they have not been tainted with corruption.

iv) The fact that the Supervisor at Kham Soi has been much more efficient than others, and that he has dared to take many important decisions affecting the operation of Sericulture in Kham Soi is because he has formally been given the responsibilities of a Project manager in the Settlement, and success or failures of the Project are to be responsible by him. He has to make a success of it. This is not so in other settlements where the Superintendent is the Project Manager. When failure occurs, the Superintendent, with all kinds of work in his hand, would blame the Supervisor, while the Supervisor would blame the Superintendent. In the end, it will never be found out where the fault lies, and why.

IV

Conclusion and Recommendations.

There are serious flaws in the administration and management of both the settlements and the Sericulture Project which reduce the efficiency of the operation of the Project in a number of settlements. The only settlement which has been able to correct such administrative and management flaws is Kham Soi. As a consequence, by any measure whether it be the number of active Project members, the amount of raw cocoon produced, and the amount of income (total and per household) received from sales of raw cocoons, the operation of the Sericulture Project at Kham Soi is the only one which may be considered successful.

Of course, there are a number of other factors ranging from soil quality to the economic situation, motivation, and attitude of settlers which may contribute to success and failures of the Sericulture Project in various settlements. However, as is pointed out and accepted by all who have been interviewed, administration and management constitute the most important factor responsible for successes and failures of the Project

Contrasting the operation of the Project in three settlements, i.e. Kham Soi, Lam Dom Noi, and Ubonrat, one distinct difference emerges. At Kham Soi alone, the Project Supervisor is, in practice, acting as the Project Manager of the Project in the Settlement. In all the other settlements, the Superintendent of the Settlement is also acting as the Project Manager.

The original plan for Sericulture Project has assumed that for every settlement there will be a functioning cooperative which would handle the purchase of silkworm eggs, and the provision of production inputs. This assumption has never materialized. Cooperatives in the settlements do not function well, and have no concern with Sericulture. Thus these functions are thrown back at the settlement officials. There is thus a need for a Project Manager in the real sense of the term for every settlement.

With the assumption of a functioning cooperative in every settlement, the Project Paper prescribed the responsibilities of the Project Supervisor as a/technician , a chief of the extension officers in the settlement. Thus, with the exception of Kham Soi, the Settlement Superintendent has taken on the work of the Project Manager.

There are many reasons why the Settlement Superintendent cannot be an effective and efficient Project Manager in the Settlement. Important ones are as follows:

i). He has far too much work as the top administrator. Thus, when he is acting as the Project Managers, this results in:

- a). Unnecessary delays in all activities of the Project , and
- b). his inability to pay sufficient attention to one single

Project like this.

ii) A settlement has a number of projects for development and no integrated program for the whole settlement. These result in :

a). Whether one or another project will receive supports and attention will depend upon a number of factors, some of which are personal.

b). mixing up of funds for various projects. Operating fund for one project may ,in fact, be used for other projects, or the general use of the settlement. Some projects may suffer.

c). Similar cases are found also as regards personals and materials. That earmarked for one project may, in fact, be used in others.

iii) In general , the Superintendent has insufficient knowledge to design work plan , or supervise the detail operation of such specialized project as the Sericulture Project.

(iv) Changes of Superintendents are relatively frequent. Every time, there is such a change , policy regarding the management of the Project is changed also. There is , thus, a lack of continuity which would contribute to continued development and growth of the Project.

With the Superintendent being the Project Manager, the operation of the Project can be relatively efficiently done only when the Superintendent and the Project Supervisor can work hand in hand as if they were one and the same person. Thus, the Project Supervisor would know that, all decisions he has made, will be affirmed by the Superintendent. This kind of relationship

between the Superintendent and the Project Supervisor is rare because it depends a great deal on personal relationship, which needs to be cultivated.

PWD. has, in December 1980, drawn up a detail job description of the Project Supervisor, which include supervising and planning Project activities in the settlement, coordinating with Training Center at Nakhon Ratchasima and nearby sericulture sub-stations, coordinating with BAAC local branches, and collecting data and reporting. This, in fact, would seem to make the Project Supervisor, a Project Manager.

However, this job description does not provide for the Project Supervisor to have the control of the use of the funds, the production inputs, and the materials which are needed for the performances of his duties as the Project Manager in the Settlement. The Superintendent, acting as the Project manager, still has the control of them.

At Kham Sai alone assignments of duties and responsibilities of the Project Supervisor and his staffs has since 1975 been made in writing through the Order of Kham Sai Settlement, Nakhon Phanom Province, No.6/2521. These assignments constitute in practice an act of decentralization in the real sense which makes the Project Supervisor, the Manager or Director of the Project in the settlement. Here, the Project Supervisor has full control, in practice, of the Project staffs, the Project fund, and the Project management.

In order that the operation of project will be efficiently performed, and that administrative hitches can be avoided, the Supervisor must have the control as in the case of Nam Sai. He must be able to (a) Preparing the detail of the annual budget (for Sericulture). (b) Preparing the requests for the use of the funds in the annual budget from PWD. (c) Preparing the requests for the use of the funds in the annual budget from the Provincial Authority. (d) Collecting receipts and preparing evidences of expenditure for funds disbursed through PWD., and (e) Collecting receipts and preparing evidences of expenditure for funds disbursed through the Provincial Authority.

The power and authority associated with these duties are necessary in order that the Project Supervisor would be able to make detail plans of

activities and have them performed according to plans.

The following recommendations are made:

1. Project Supervisors should be given the power and authority of the Project Manager as was done at Kham Soi Settlement by the Order No.6/2521. Such delegation of power and authority should be done in writing and binding upon later Superintendents.
2. A number of the present Project Supervisors may be able to act as the Project Manager, provided training in management and administration are given to them. Such trainings should be provided.
3. A few of the present Project Supervisors may not be qualified to act as the Project Manager even if training in management and administration were to be given to them. In such cases, they may be replaced by qualified and suitable persons.
4. Job description of the Project Supervisor and his staffs should be drawn up in detail and show clearly the areas of responsibilities of each person. They should be drawn up by the Project Supervisor and fit with the condition regarding the operation of the Sericulture Project in the particular settlement. The ability to draw up such job descriptions and thinking the present Supervisor has of the operation of the Project in his settlement.
5. Activities of the Project in each year should be planned well and with the participation of the Project members in advance. Problems and obstacles should be foreseen, and solutions thought of before hand.
6. Trainings are required for the Project Supervisor and his extension workers on how to acquire participation of Project members from the planning stage to the end of the annual activities. Trainings are required for them on attitudes and behaviors towards Project members and settlers, various extension techniques, and how to work with farmers in general.
7. As, at present, a number of Project Supervisors and the extension officers have already accumulated experiences in working in the Project with Project members and settlers, regular workshops among them can be arranged so that they can share experiences. Discussion may center on the various problems met in the course of their work, and the way they

have been solved, both the technical ones, and the social ones in their interactions with the Project members and settlers. It may include also discussions on future expected problems and the ways by which they can be solved. These can be recorded and documented for their use.

8. Attention should be given to the idea that Project members can teach each other and help each other to solve problems. This can be done e.g. by selecting suitable persons for intensive trainings, or arranging group discussions with the aid of mass media such as slides ; film shows etc. A part of the fund may be provided for this purpose.

9. The role of the Superintendent is to oversee that the Project Supervisor and his staff perform their duties to the maximum efficiency, and that the funds, equipments, and materials are fully used for Project activities. Particularly, he should see to it that

a). the Supervisor and/or his extension officers visit Project members, regularly, establishing rapport with them, and be useful to them in silkworm raising activities. Systems for checking can be established.

b). the equipments, including tractors, sprayers, vehicles, are always in a state of repaired and ready for use, and that materials e.g. fertilizers are fully used.

c). The work in general, such as that on the central mulberry plantation and the young worm house, is performed well.

He should in general continually evaluate and monitor the performances of the Project Supervisor and his staffs. This implies that the Superintendent should also make visits to houses of Project members and inquire of the progress in their silkworm raising activities and problems.

10. The Superintendent, as the representative of the settlement, should more actively assist the Project Supervisor in coordinating the Project within his settlement and outside agencies.

11. As there often arise emergency needs for the use of some funds (e.g. when the payment for raw cocoon is delayed and the Project members need the money for household expense), there can be a certain sum set aside for such emergency use as advanced payments.

## Notes

1. The operating expenses fund is the Royal Thai Government's contribution to the Project. With the exception of Kham Soi Settlement where the Project Supervisor is the Project Manager in fact ,it is said that only about 50 percent of it is actually used for the Operation of the Sericulture Project. At Kham Soi , over 90 Percent of it is actually used for the operation of the Project.
2. Kyaw Mint ,et al. " Thailand Sericulture/Settlements Project Joint Evaluation " , 1981 ,p. 30 and appendices G,I ; and Chavivan Prachubmoh , " The Report on Changes of Project Member's Attitude toward Rearing Silk Worms as a Subsequence of Project Redesign." , October 7, 1982 ,p. 5<sup>4</sup>
3. Kyaw Mint ,op.cit.,pp. 3,5,11 , in particular ; and Chavivan Prachubmoh , Op.cit.,pp. 86-89
4. Chavivan Prachubmoh , op.cit. p. 23 (for Lam Dom Noi) ; and " Sarup Kichakan Nikhom pi 2525 , Nikhom Ubonrat " (Summary Report of Activities , Year 1982 , Ubonrat Land Settlement) p.5
5. Faculty of Economics and Business Administration , Kasetsart University , "Summary Report on Ten Land Settlements under Sericulture/Settlements Project." , 1977 , Bangkok ,1980, Table II p. 2
6. Chavivan Prachubmoh , op.cit.,p.20
7. "Summary Report of Activities" , Year 1982, Ubonrat Land Settlement, op.cit., p.4
8. "Summary Report of Activities" , Year 1982 Kham Soi Land Settlement, p. 4

9. Chavivan Prachuabmoh , *op.cit.*, pp.21 ,24
10. PWD., "Thailand Sericulture/Settlement Project" (Thai Language)
11. In fact a number of Families which earn very high income From Silk worm production have taken up silk worm production as their main occupation. The numbers of the members are limited to those actually Raising silkworm. (statistics obtained from Supervisors).
12. Prime Minister's office , "Monitoring and Evaluation Report of Sericulture Project" , V 1. 1. p.37 (Thai Language)
13. It is interesting in this Regards to observed that an earlier Report Stated that in the first year , mulberry cultivation at Lam Dom Noi was good. (Chavivan Prachuabmoh , *op.cit.*, p.52)
14. Ibid. p.42 and pp.71-75
15. Kyaw Mint , *op.cit.* , p.17
16. Ibid.pp. 2-3
17. PWD. Order No. 583/2513 Section IV pp. 27-29
18. For problems of cooperative development in Thailand, see Akin Rabibhadana , "Self - Help Organizations in Thai Villages : The Question of Appropriate Policy Inputs" in Colin Macandrews and Chia Lin Sien , Too Rapid Rural Development : Perceptions and Perspectives from Southeast Asia , Ohio University Press , 1982

Table I  
Number of settlers Interviewed

Settlement	members of Sericulture Project			Non-member of Sericulture Project	total
	successful	medium	fail		
Kham Soi	5	4	5	2	17
Lam Dom Noi	5	3	5	2	15
Ubonrat	4	5	9	3	21

Table II

General Information , Kham Soi , Lam Dom Noi , Ubonrat Land Settlement

	Kham Soi	Lam Dom Noi	Ubonrat
Location district province	Nikom Kham Soi Mukdahan	Piboonmungsahan Ubonrachathani	Nampong Khon Kaen
Year established	1955	1959	1964
Total Area	123,750 rais	55,504 rais	373,900 rais
Total Allocated	38,400 rais	21,015 rais	51,950 rais
Official membership	1,740	1,401	2,023
Size of land plot	25 rais	15 rais	15 rais

Source: Faculty of Economic and Business Administration , Kasetsart University Basic Baseline Data Summary Report on five Land Settlements, 1976 P.5

Table III

Average land holding by settlement, 1975

Unit: Rai per farm

Land Settlement	land plot	Actual farm size	
		land inside settlement	inside & outside settlement
1. Kham Soi	25	31.74	37.91
2. Lam Dom Noi	15	25.05	45.09
3. Ubonrat	15	15.74	22.20

Source: Faculty of Economic and Business Administration, Kasetsart University Basic Baseline Data Summary Report on five Land Settlements, 1976 P.17

Table IV  
Ubonrat Settlement  
Crops, Area Planted, Yield from Crops  
and Amount Received from sale of Crops

Crops	Area Planted (Rai)	Yield from crops per rai (kg.)	Amount Received from Sale of crops(baht)
Cassava	2,923	2,000	2,923,000
Kenaf	4,371	170	2,229,210
Sugarcane	9,507	8,000	41,070,240
Legume	625	150	750,000
Vegetable	348	-	395,975
Fruit	2,867	-	412,039
<u>total amount received</u>			47,780,464

Source Sarup Kitchakan Nikhom pi 2525 , Nikhom Ubonrat  
(Summary Report of Activities, Year 1982, Ubonrat Land  
Settlement) P.22

Table V  
Kham Soi

Crops , Area Planted , Yield from Crops per Rai  
and Amount Received from Sale of Crops

Crops	Area Planted (Rai)	Yield From crops per Rai (Kg.)	Amount Received from Sale of crops(baht)
Rice	11,504	300	8,327,500
Sugar cane	5,541	8,000	24,380,400
Kenaf	1,250	180	900,000
Cassava	3,115	2,500	3,092,000
Groundnut	721	200	1,008,000
Cotton	65	210	158,000
<u>total amount received</u>			37,875,000

Source Sarup Kitchakan Nikom pi 2524 , Nikhom Kham Soi  
(Summary Report of Activities, Year 1981, Kham Soi Land  
Settlement) in Chavivan Prachuabmoh , P.22

Table VI  
Lam Dom Noi

Crops ,Area Planted, Yield from Crops per Rai  
and Amount Received from sale of Crops

Crops	Area Planted (Rai)	Yield from crops per Rai (Kg.)	Amount Received from Sale of crops(baht)
Rice	6,771	150	2,539,125
Kenaf	3,112	120	1,580,480
groundnut	149	400	238,400
Cassava	20	2,000	28,550
Others	233	30	104,850
<u>total amount received</u>			4,591,405

Source Sarup Kichakan nikhon ,pi 2524 (Summary Report of Activities, Year 1981, Lam Dom Noi Settlement) in Chavivan Prachuabmoh, P.23

Table VII

Occupations

The comparison of main income source of farm households of three settlements

unit: %

Category	Kham Soi (1)		Ubonrat Dam (2)		Lam Dom Noi (3)	
	settlers	non-settlers	settlers	non-settlers	settlers	non-settlers
paddy farming	32.28	10.00	7.14	30.00	80.47	90.00
Upland crop farming	53.78	80.00	91.34	70.00	17.19	10.00
Orchard farming	0.79	-	-	-	1.56	-
Vegetable farming	1.57	-	-	-	-	-
Cattle-Buffalo Raising	0.79	-	-	-	0.78	-
Civil service & others services	0.79	10.00	1.02	-	-	-
Total	100.00	100.00	100.00	100.00	100.00	100.00

Source: Faculty of Economics and Business Administration, Kasetsart University, Basic Baseline Data on Land Settlement, 1976

1. Vol. X, table 5, P.12

2. Vol IX, table 5, P.12

3. Vol XI, table 5, P.11

Table IIX

The comparison of average income, by farmer group, of three settlements, 1977

Category	Kham Soi (1)			Ubonrat Dam (2)			Lam Dom Noi (3)		
	Non-project member	USAID sericulture	All settlers	Non-project member	USAID sericulture	All settlers	Non-project member	USAID sericulture	All settlers
1. net farm income from crops	6,468.03	5,784	6,380.47	2,046.93	3,886.80	2,863.83	1,488.88	2,987.33	935.86
2. income from fruits and vegetables	1,332.90	1,162.34	1,240.62	1,715.61	2,662.37	2,132.20	237.94	419.69	380.15
3. non-farm income	3,081.00	4,584.22	3,700.85	2,872.69	3,841.48	3,290.15	6,090.85	3,274.93	4,998.64
Total (Family income)	11,244.15	11,530.88	11,321.94	6,635.23	10,370.65	8,286.18	7,777.57	6,681.95	6,314.95

Source: Faculty of Economics and Business Administration, Kasetsart University, Report on Evaluation of USAID. Sericulture and Thai-German Land Settlement, 1980, Table 37; P.37

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Table IX

Amount of Savings of Project Members  
at the Beginning of the Project

Settlement Amount of Saving (cash)	Ubonrat		Kham Soi		Lam Dom Noi	
	No. of members	%	No. of members	%	No. of members	%
no answers	9	25	-	-	3	13.6
none,	13	36	7	21.9	12	54.6
1,000 or below	6	16	2	6.2	1	4.6
1,001-2,000	2	5.5	2	6.2	2	9
2,001-3,000	4	11	3	9.4	2	9
3,001-4,000	-	-	2	6.2	1	4.6
4,001-5,000	1	2.7	9	28.1	-	-
over 5,000	1	2.7	7	21.9	1	4.6
	36	99.9	32	99.9	22	100

Source Chavivan Prachuabmoh: The Report on Changes of Project  
Attitude Toward Rearing Silke Worms as a Subsequence of  
Project Redesign, Bangkok, October 7, 1982, P. 34.

Table X

The Opinion of the officials on the factors for the success of the Kham Soi Sericulture Project

Priority of the factors \ Factors for success	Soil condition	Staffs of Sericulture Project	Number of Sericulture Project	Project Administration and Management	Others
1	3	4	4	2	1
2	3	3	1	2	2
3	-	2	1	2	4
4	-	-	2	2	3
	6	9	8	8	10

The number of officials interviewed is 12; 7 project staffs 4 settlements officials and the other is the Sericulture Experimental station official.

Table XI

Development Project in Kham Soi

Year	Project	Funding	Project Description
1972	Cattle raising	IFD	Distribution of calves Cattle breeding
1975	Thai-German Agricultural Development	German Gov. and Thai- Government	Agricultural Demonstration and Training Cash-crop promotion
1976	Sericulture	IFD	Silk worm Rearing
1977	Sericulture	USAID	Silk worm Rearing Cocoon Rearing
1980	Land Redistribution and Development	USAID	Redistribution of the land Occupied by the squatters Integrated Development

Table III

Development Project in Abonrat

Year	Project	Funding	Project description
1954	Intra-structure Development	New Zealand Gov. Netherlands Gov. PFD	School Construction Health Development Road Construction Irrigation
1970	Agricultural Cooperative	Siakong Project	Cooperative Promotion
1975	sericulture	PFD	Silk worm rearing
1977	sericulture	USAID	Silk worm rearing Cocoon drying
	Livestock Promotion	PFD DND.	
1979	ocial Development	UNICEF	Child-care Center Self-development Promotion Vocational Development
1980	Thai-Netherlands	Netherlands Gov.	Agricultural Development Irrigation ocial Development

Year	Project	Funding	Project Description
1980	Land Redistribution and Development	USAID	Redistribution of the Land occupied by the squatters; agricultural extension
1981	Reforestation	ID.	
1982	Vocational Development Bio-gas Technology Dairy-Cattle Raising	World Bank ID. PID	

Table XIII

Development Project in Lam Dom Noi

Year	Project	Funding	Project Description
1975	Thai-German Agricultural Development	German Gov.	Agricultural Credit Cash crop extension Fishery
1977	Sericulture	USAID	Silk worm rearing
1982	Livestock Development Social Development	German Gov. PAD	Pasture Improvement Reforestation Vocational promotion Community leader- training

Table XIV

Ratio of Extension Workers to Project Members in Each Settlement

YEAR	NO.OF EXTENSION WORKERS			NO.OF PROJECT MEMBERS (ACTUALLY RAISING SILKWORMS).			RATIO.		
	KHAM SOI	LOM DOM NOI	UBONRAT	KHAM SOI	LAM DOM NOI	UBONRAT	KHAM SOI	LAM DOM NOI	UBONRAT
1977	3	2	3	18	16	17	1:6	1:8	1:5.7
1978	4	3	3	46	16	38	1:11.5	1:5.3	1:12.7
1979	5	2	3	60	37	55	1:12	1:18.5	1:18.5
1980	5	2	4	76	37	58	1:15.2	1:18.5	1:14.5
1981	7	4	5	102	37	34	1:14.6	1:9.3	1:6.8

Table XV

Average Income from Sericulture per membre in  
the Three Settlements

year	Kham Soi	Lam Dom Noi	Ubonrat
1977	5,789.50	1,493.81	5,939.35
1978	7,694.74	4,278.75	7,282.39
1979	9,553.45	3,552.38	9,546.45
1980	13,570.79	4,236.89	5,358.43
1981	15,861.13	7,432.43	11,027.15

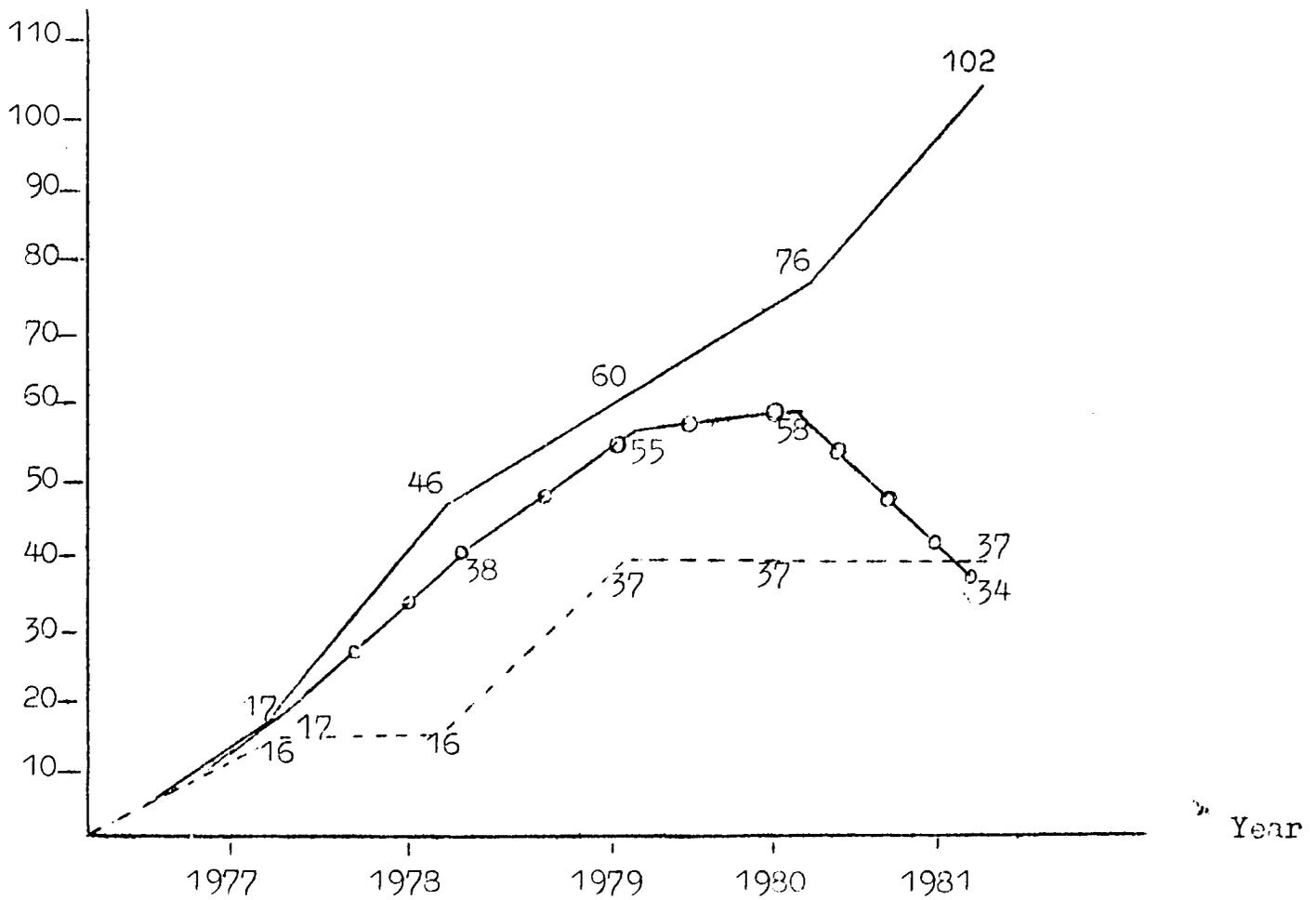
Table XVI

Levels of Education and Training of Extension Workers

SETTLEMENT	LEVELS OF EDUCATION AND TRAINING				TOTAL
	DIPLOMA+TRAINING	DIPLOMA	CERTIFICATE+TRAINING	CERTIFICATE	
KHAM SOI	-	-	4	3	7
LAN BOM NOI	1	-	--	3	4
UBONRAT	1	-	2	2	5

Chart 1.  
Number of Members of Sericulture Project in three Settlements

Project-member



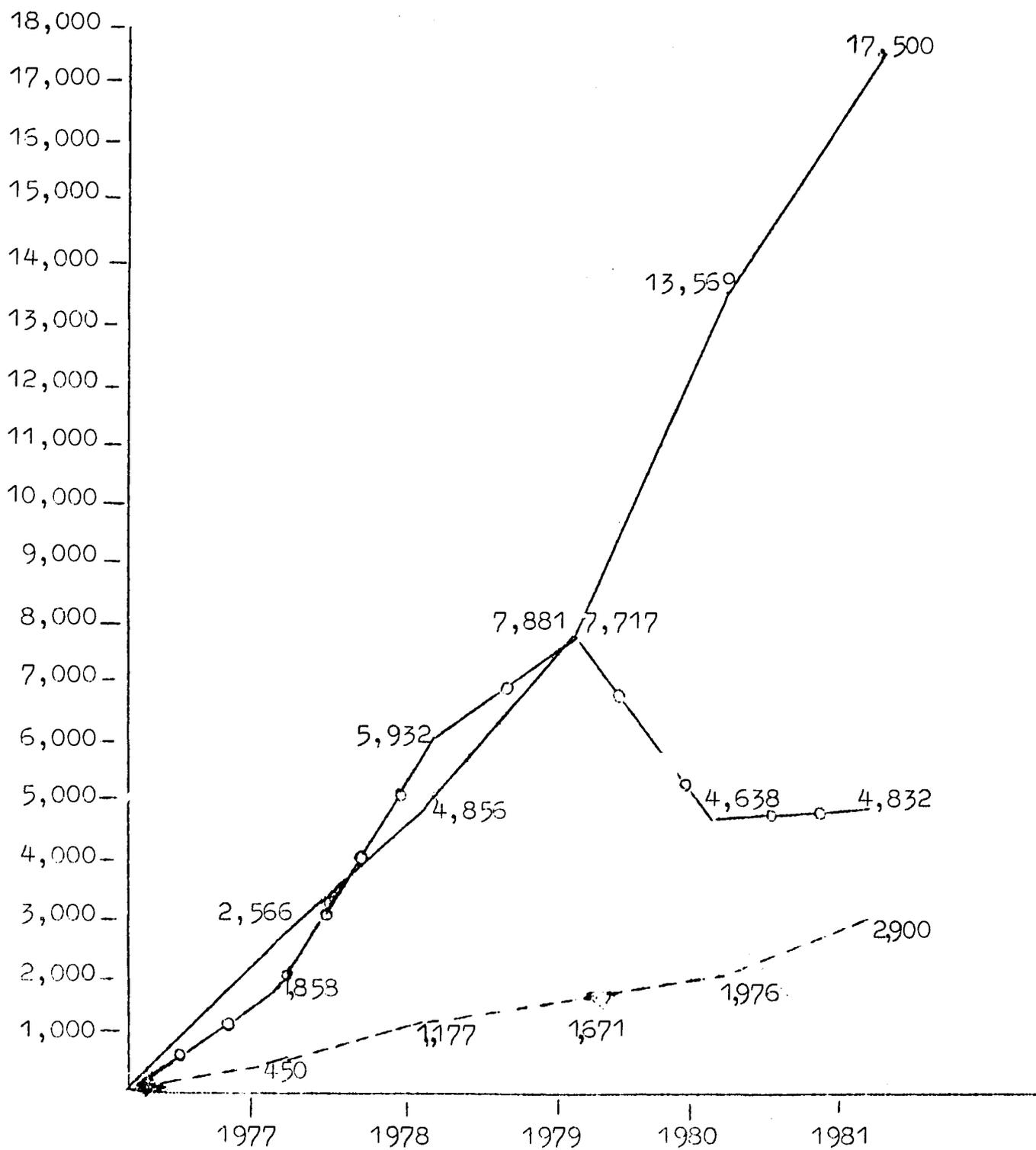
Kam Soi \_\_\_\_\_

Lam Dom Noi - - - - -

Ubonrat Dam —○—○—○—

Chart II

Raw cocoon(Kg.) Amounts of Raw Cocoon Production in the Three Settlements



Kham Soi \_\_\_\_\_

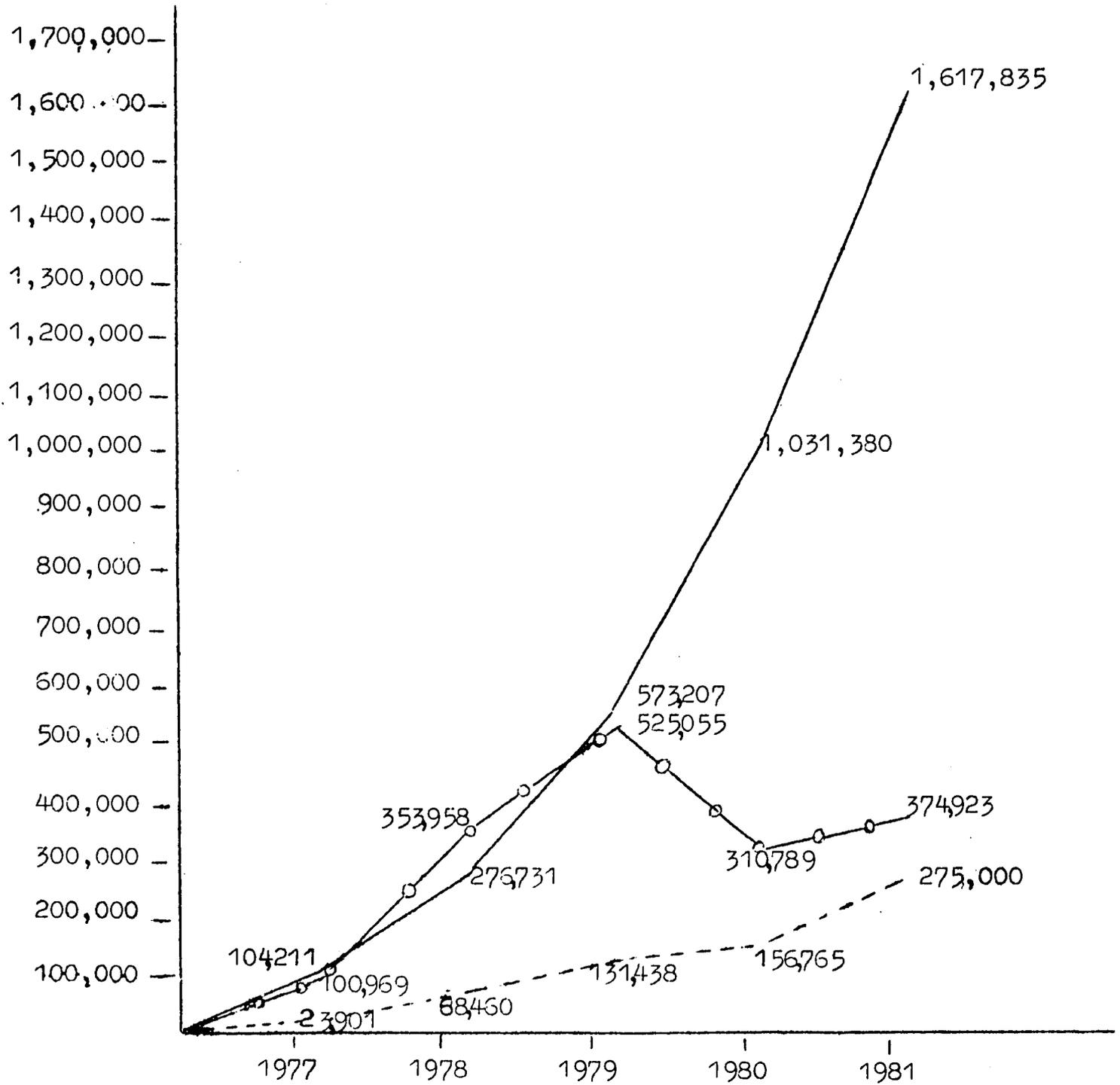
Lam Dom Noi - - - - -

Ubonrat Dom .....  
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Income(Baht)

Chart III

Amounts of Income Derived from Sale of Raw Cocoons



Kham Soi \_\_\_\_\_

Lam Dom Noi - - - - -

Ubonrat Dam \_\_\_\_\_

Chart IV  
Administrative Structure of Settlement

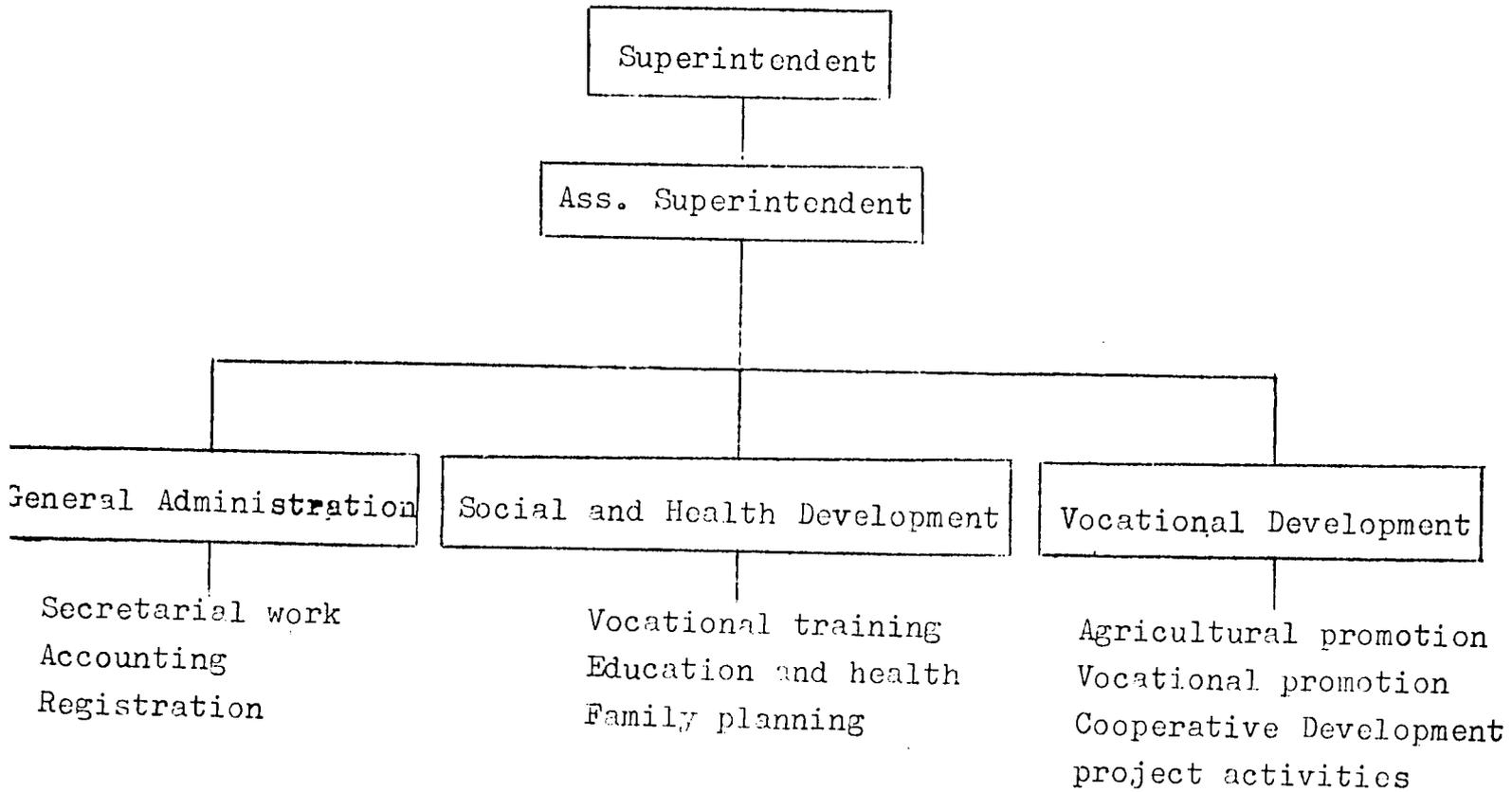


Chart V

Administrative Structure

Lam Dom Noi

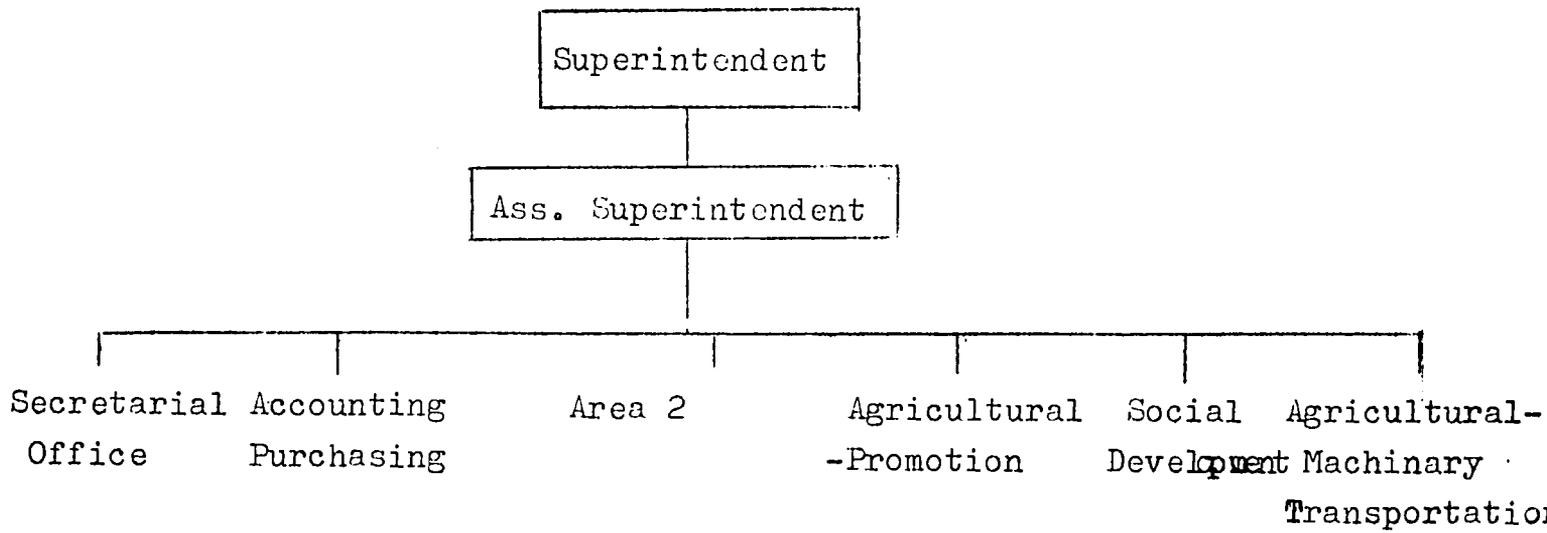


Chart VI

Administrative Structure

Kham Soi

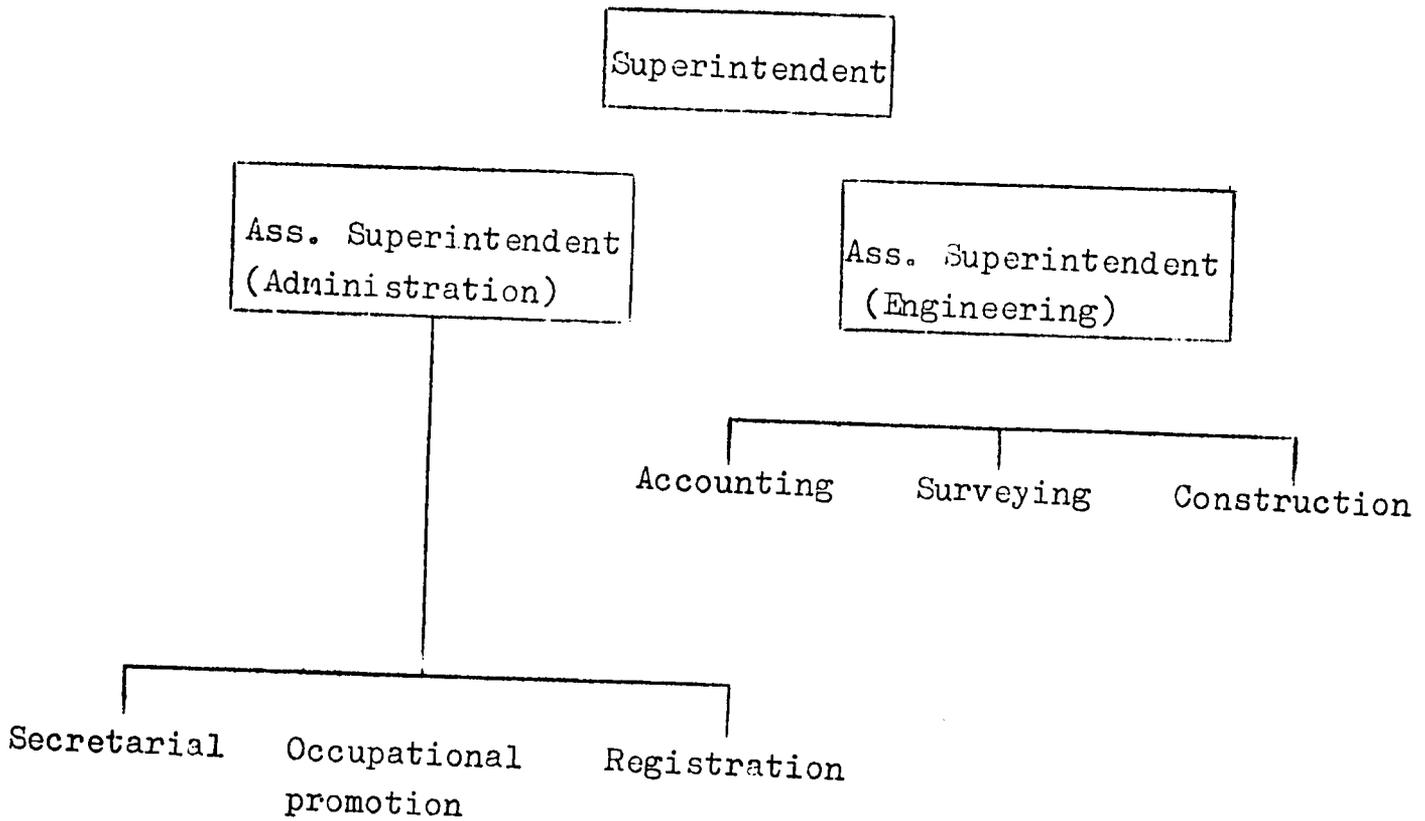
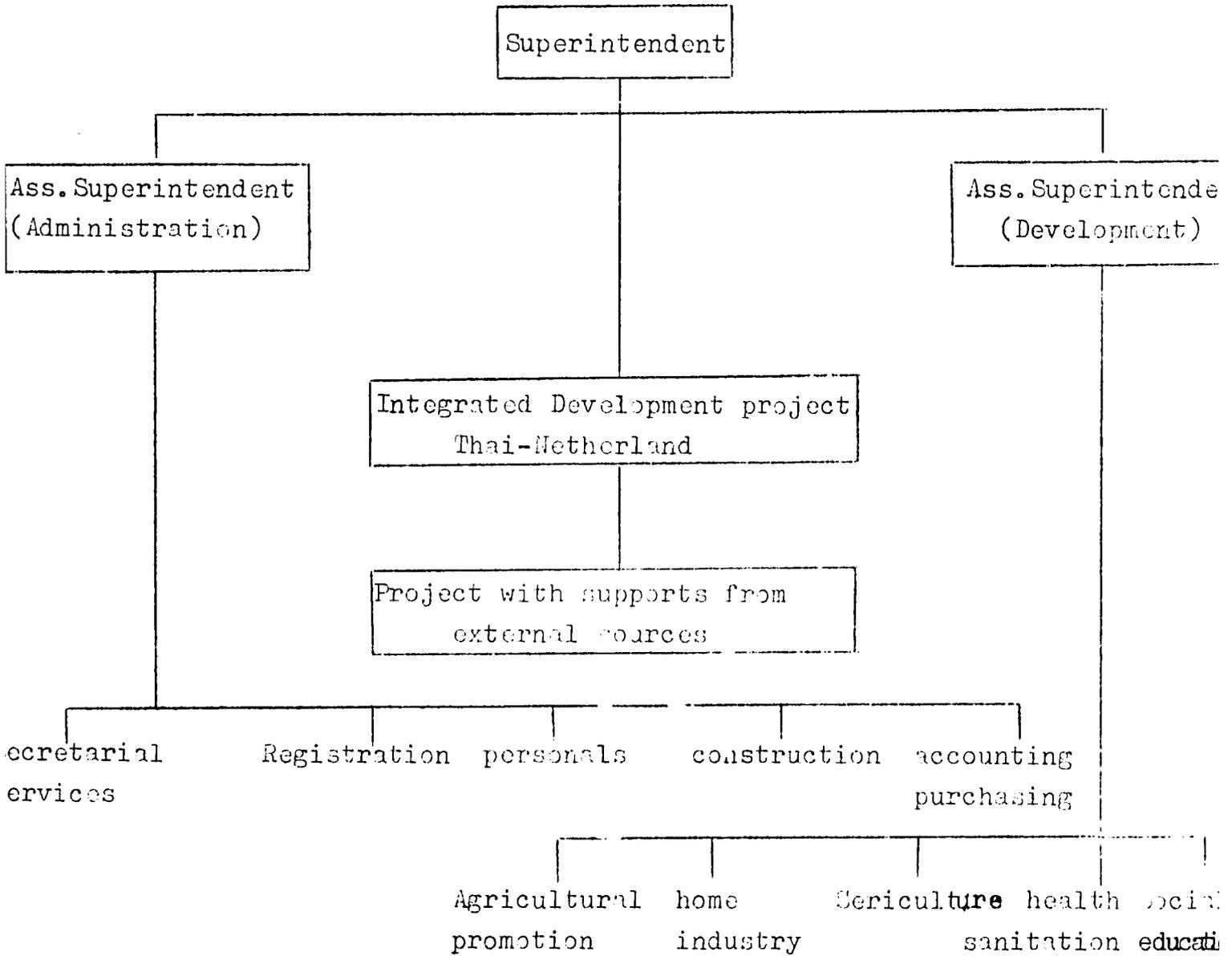


Chart VII

Administrative Structure

Ubonrat



## Appendix I

### Assignments of Duties and Responsibilities to The Personals of The Sericulture Project, Kham Soi Settlement

Assignments of duties and responsibilities were made on March 8, 1978 Through an Order of Kham Soi Settlement. Nakhon Phanom Province, No 6/2521, as follows:

1. The Project Supervisor (Withaya).

1.1 Performing duties of the Project Supervisor as appointed by P/D.

1.2 Organizing the meetings of the Provincial Sub-Committee for Co-ordination of the Sericulture Project

1.3 Preparing documents and lectures on seri-culture practices.

1.4 Preparing the details of the annual budget

1.5 Preparing reports of silkworm raising of each period.

1.6 Preparing the requests for the use of the funds in the annual budget from P/D.

1.7 Preparing the requests for the use of the funds in the annual budget from Nakhon Phanom Province Authority

1.8 Collecting receipts and preparing evidences of expenditure for funds disbursed through P/D.

1.9 Collecting receipts and preparing evidences of expenditure for funds disbursed through Nakhon Phanom Province Treasury

1.10 Participating in meeting organized by the Government.

1.11 Visits and supervised activities of the Project

1.12 Supervise construction of buildings, houses, warehouses, silk-worms houses of Project members

1.13 Supervise construction and repairs of infra-structures such as roads, and organize the construction of etc. which the Sericulture Project manage.

1.14 Processing the applications, the selection, and appointment of both permanent staffs and occasional ones for the Project.

1.15 Performing other tasks which will be assigned to him by the Superintendent.

2. Extension officer (Bunkoed)

2.1 Collecting regulations of PWD. and BAAC with respects sericulture

2.2 Recruiting members of Sericulture Project

2.3 Processing the applications of settlers to become members of Sericulture Project

2.4 Reporting the process of recruiting member and the problem met in the process for PWD.

2.5 Collecting problems about loans from BAAC and related problems, and report the matters to PWD.

2.6 Collecting regulations relating to payment of loans for mulberry cultivation and old silk worm houses, and buy silkworm raising tools.

2.7 Collecting names of members who have received loans from BAAC.

2.8 Cooperating with BAAC in screen applicants for membership in the Sericulture Project.

2.9 Cooperating with BAAC in the process of making payments of loans in instalments.

2.10 Contracts various agencies for sale of raw cocoons

2.11 Loans follow-up and urge repayment to BAAC.

2.12 Co-ordinating with the Co-operative of the Settlement.

2.13 Collect and keep copies of loan document of members.

2.14 Performing other tasks assigned him by the Superintendent.

## Appendix II

### Assignments of Duties and Responsibilities to The Personals of the Sericulture Project , Lam Dom Noi, and Ubonrat Settlement

#### 1. Lam Dom Noi Settlement

Assignments of duties of Project staffs was made in 1981, orally. (not in written form). they are as follows:

##### 1. Project Supervisor

- 1.1 Coordinator of the Project
- 1.2 Supervising the cultivation of mulberry and silkwor raising of Project members
- 1.3 Committee member and Secretary of the committee of the Provincial Sericulture committee.

##### 2. Extension officers (or workers)

- 2.1 Follow-up extension activities of the Sericulture Project
- 2.2 Receiving complaints and problems for correction.

#### 2. Ubonrat Settlement

Assignment of duties of Project staffs was made after 1980, and orally. They are as follows:

1. Project Supervisor - supervising the operation of the Project
2. Extension officer (Verasak)
  - 2.1 Cocoons curing plant
  - 2.2 Central mulberry plantation
  - 2.3 Drafting letters.
3. Extension workers
  - 3.1 Chaiyaphon - locks 25-26-28 and Ban tha Phatsadu (purchasing and storing equipments and materials) not performed in fact.

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- 3.2 Phongsuk - locks 17-18-19-22-23
- 3.3 Vanna - locks 1. - Km. 4 Pitttraphap.-11-12, and  
central silkworm house.
- 3.4 Sukanya - central silkworm house
- 3.5 Ratchana - accountant.(the Settlement use for  
is the accountant of the Settlement  
in general).

### 3. Extension officer (Thongchai)

- 3.1. Organizing meetings of Project members
- 3.2. Taking care of and improving the central mulberry  
plantation
- 3.3. Surveying and examining mulberry plots of members  
for improvement.
- 3.4. Training members in mulberry cultivation and  
silkworm raising.
- 3.5. Coordinating with Mukdahan Sericulture Experimental  
Station
- 3.6. Collect all evaluations of the Project by Kasetsart  
University.
- 3.7. Collect all informations and documents in connection  
with the trainings of Project officers
- 3.8. Contacts and Obtaining silkworm eggs.
- 3.9. Preparing reports of number of members and  
periods of silk worm raising in each year for the  
Settlement Division; (D).
- 3.10 Requesting permission for sending Project members  
on observation and study tours.
- 3.11 Listing all equipments and vehicles of the Project
- 3.12 Preparing requests for the use of chemical  
fertilizers, natural fertilizers, and other  
chemicals, and storing them for use in the Project.

- 3.13 Making requests for the use of vehicles for the Operation of the Project.
- 3.14 Making requests for permission for official travels of the Project personals.
- 3.15 Collection of all documents, research documents for research in connection with sericulture .
- 3.16 Any other tasks assigned by the Superintendent.

### Appendix III.

#### Cases of Mismanagement and Administrative Errors.

- case 1: Works for caring the central mulberry plantation, cocoon curing plant, and central silkworm house had been assigned by the Project Supervisor to the extension workers. The Superintendent unaware of the assignments, came and ordered the person who had been assigned to look after the central mulberry plantation to go to clean the central silkworm house. This upset all the staffs of the Project, but no one dared to say anything.
- case 2: Sometimes, the Project Supervisor had scheduled to take the pickup truck out to spray formalin at the members' silkworm houses. On the scheduled date and time, the Project Supervisor could not find the truck and the driver, because the Superintendent had taken them away with him for some purposes. This was done without prior enquiry as to the scheduled use of the car from Project staffs, or even informing the Project Supervisor.
- case 3:
- At the time when the improvement of the central mulberry plantation was needed to be done. The Project staffs had a meeting and decided to hire 15 workers for 5 days with the wage rate of 25 baht each. The Project Supervisor wrote to the Superintendent requesting permission to do so. The Project Supervisor waited for 2 months for the answer, and none came. The Project staff went to the Superintendent to enquire. The Superintendent said that he was very busy and asked the Project staff to wait longer. The central mulberry plantation suffered.
- case 4: Once the Superintendent gave fertilizers, which were planned for the central mulberry plantation, to the settlers. The result was the deterioration of the central mulberry plantation.

- case 5: Once, the Project Supervisor reported to the Superintendent that the fertilizers of the Project were insufficient. The Superintendent, then, gave fertilizers, which were planned for another project, to the Sericulture Project members. Then, later on, one day, he ordered the staffs of the Sericulture Project to return that amount of fertilizers to the other project, The Project Supervisor had not been told at all that the fertilizers, which had been given to the Project members, had to be returned.
- case 6: Sometimes when the Superintendent, the Assistant Superintendent, and the Chief Accountant are away, it is not possible to obtain gasoline. Severe limitation on the operation occurs if such happening coincides with the time when the members are caring the old worms at their houses. Such troubles has occurred three times already. There was a lack of gasoline for three months.
- case 7: Once the Superintendent lent the Project vehicle to the local police, the Project Supervisor went out to find the vehicle and demanded its return,
- case 8: Because of the urgent need to use vehicles for Project activities, the Supervisor knowing that the fund for gasoline will be available for The Project in 3 months time, the Supervisor obtained gasoline from a gasoline station in advance for the purpose. When the Project's fund for gasoline was transferred to the Settlement (to the Superintendent), one of the Assistant Superintendent came to the Project Supervisor and said that there was an urgent need to use that fund elsewhere, for activities outside the Sericulture Project. The Project Supervisor refused to allow the Assistant Superintendent to do so. This refusal has given rise to continuing conflicts between that Assistant Superintendent and the Project Supervisor.
- case 9: In one settlement, when a tractor develops problems and can not be used, the Project Supervisor would have to write to the Superintendent about the problem and ask for it to be repaired. The Superintendent, would, then order the repair Center of the Settlement to estimate the cost of repairs, and submit it to the Superintendent. If the cost is not

Over 20,000 baht it is within the power of the Superintendent to order the repair to be done. Sometimes, the whole process takes over 2 months.

case 10: The settlement had 4 formalin sprayers. All of them were not useable and needed repairs. There are no sprayers to be used to fumigate the silkworm houses of the numbers. The Supervisor advised the numbers to use lamps instead.

Appendix IV  
Criteria Used for Meaning Success

Criteria of Successfulness

1. produces about or over 150 k.g. of cocoon per year
2. continue silk production
3. Repay the credit to BAAC consistently

Criteria of moderately successful

1. produces about 100 - 150 kg. (approx.) of cocoon per year \*

Criteria of non - successful

1. produces less than 100 kg. (approx.) per year.
  - or 2. old silk worm rearing house is incompleted
  - or 3. negligent in the discharge of mulberry plantation
  - or 4. Stop silk production
- 

\* plan of cocoon production was set for 240 kg. per farm household per year ( 6cycles ) ( 2 boxes of silk worm egg per 1 cycle )