

5. 今後のプロジェクト方式の協力を資するための教訓及び提言等

今回は「研究指向型プロジェクト」である雑草研究計画、「開発指向型プロジェクト」であるかんがい農業開発計画、とタイプの異なる2つのプロジェクトを調査対象として調査を行った。この限られた調査から、本調査の目的の一つである「今後我が国が農林水産プロジェクトを実施する際の教訓」について、ここで2、3の考察を試みた。

(1) 機材供与のあり方について

今回の調査で、一部使用されていない、あるいは使用不能になっている機材が散見された。特に、雑草研究の方が多くみられたが、かんがい農業開発でも全くないわけではなかった。その原因は、大規模すぎる、電力の容量を上回る、といった機材の選定に問題のあったもの、あるいはスペアパーツがタイでは入手不可能、メンテナンスの不良、専門家がいなくなって使える人がなくなった、現地語マニュアル不備のため使用法がわからない、など全く多岐にわたる。

これらの問題を現地調達を行うことによってすべて解決することはできなくても、日本製でも外国製でもその国、もしくは近隣の第3国で入手できるものをできるだけ選定すれば、上記の問題はいくらか軽減できると思われる。仮に日本で購入して輸送するよりも高価につくとしても、現地に代理店があり、この代理店を経由して修理やスペアパーツの購入ができ、同時にメンテナンスサービスが期待できれば、そのメリットは大きい。しかし同時に、使用に耐えられる品質であるかどうかのチェックが必要であることは言うまでもない。

プロジェクトの性格、機材の種類によって日本より購送するよりすべのない場合もありうるのも事実である。今回かんがい農業開発の機材の使用状況が比較的良く、雑草研究があまり良くなかったのは、雑草研究では研究用機材として特殊なものが整備されており、タイ国内での修理や、スペアパーツの補給が難しいのが、特にその理由と考えられる。

必要な研究を行うためには相応の機材を導入する必要があるが、プロジェクト協力期間中は機材修理の専門家を派遣したり、専門家で携行機材としてスペアパーツを運んだりの日本側からのバックアップで活動を維持できるが、協力終了後、相手国側のみでこれを継続することは経済的にも、技術的にも大きな負担になっている。研究・活動レベルを引き上げるための機材選定と相手国の経済・社会情勢に合わせた機材選定という相矛盾した二つの条件を最大限同時に満たす方向でプロジェクトが進められないと、「終了後」に大きな課題を残すことになる。

(2) 個別派遣専門家の役割について

今回雑草研究計画には個別派遣の専門家として能勢和夫氏が1987年12月より2年間の予定で派遣されている。このプロジェクトは1987年3月に終了しており、約9カ月後に能勢氏が派遣されたことになる。プロジェクト終了後に個別派遣の専門家が派遣されることが他のプロジェクトでも見受けられるが、プロジェクト方式技術協力と個別派遣専門家の違いを十分認識し、

特に相手側に説明し、納得してもらった上で派遣を取り決める必要があるように思われる。

すなわち、①専門家は特定分野の技術指導的な業務を主とするので、プロ技協のように機材の予算が多くない。そのためプロジェクト協力中に供与された機材の消耗品類が必要になっても、個別派遣専門家がいるとあって自由に供与することができない。②また、供与された機材が故障しても、専門家1人では(機械の専門家ではないので)対応する事が難しい。③相手側から、プロジェクト全体のアフターケアを行うより期待されるので、専門家にとって大きな負担となる。といった問題点がある。

雑草研究プロジェクトのフォローアップ終了時に派遣された巡回指導調査団の報告書には調査団の所見として「タイ側は本プロジェクト終了後も大所高所から研究活動に助言指導のできる日本人専門家の個別派遣を強く要望している。これまでの研究における対応不十分な課題のフォローアップ、研究活動の継承性、研究者の養成、研究施設、機材の利活用などの視点からみて、この要請に応え、個別派遣に対処する必要があるのではないかと考えられる」と記されており、これを受けて能勢氏が派遣されている。しかし、1人でこれらの任務を果たすには専門家の努力だけでなく、JICAをはじめとする日本側の広範なバックアップ体制が必要である。

(3) プロジェクトの自立度について

技術協力においてしばしばプロジェクトの自立度という言葉が使われる。これは日本の協力がなくなっても、相手国独自の力でプロジェクト活動を継続することができるかどうかの度合いというような意味である。協力が終了する際には本来自立度が相当高くなっている必要がある。

他方、プロジェクト協力期間中にはローカルコスト負担と言われる現地業務費が我が国から供与され、プロジェクト活動を実施して行く上で重要な資金となっている。本来、相手国側がプロジェクトの施設及び運営費を負担することが前提となっており、JICAは日本人専門家の現地での業務に係わる経費(一般現地業務費)だけを負担することとしていた。しかし、先方が負担すべき経費を負担し得ないケースが多くなってきていること、また国際的にローカルコストの相当部分を援助国側が負担することが一種のコンセンサスになってきていることから、日本側のローカルコスト負担も拡大しており、言い換えれば日本側のローカルコスト負担なしにはほとんどのプロジェクトが成り立たなくなっている。

このような状況の中で、専門家を初めとするプロジェクト関係者は、プロジェクトが最終的に終了する際には相手国側が独自にプロジェクト活動を継続できるように、すなわち、技術的にも資金的にも自立度を高めるべく活動を行っている。仮に自立度が不十分ならば、協力期間延長、またはフォローアップ等の処置が必要になるし、終了後でも、なんらかの継続性を持って、個別専門家の派遣や、アフターケア協力、単独機材供与や小型無償資金協力などのフォローが必要となる。

今回の調査対象プロジェクトについていえば、雑草研究では当初の協力期間終了後、2年間

のフォローアップを経て現在個別専門家が派遣されており、加えて、近く、アフターケア協力を
を行うことが検討されている。かんがい農業開発では、3年間の協力期間延長後、1年間のフ
ォローアップを経て一応の協力は終了しているが、OECD や世界銀行のローンによって、大規
模なかんがい農業開発へと発展したり、JICA の協力によって第3国研修を行っており、双方
ともプロジェクトが継続・発展している。

このように、プロジェクト方式技術協力の協力期間は終了しても、当該プロジェクトに関し
て我が国と相手方との協力関係は続くべきであり、その後必要となればなんらかの形でフォロ
ーするのが望ましい。その意味で、プロジェクト終了後何年かを経てそのプロジェクトの現状
を調査し、今後の協力の方向性を探る今回のような事後評価調査はきわめて重要な調査である
といえる。また、プロジェクトを最終的には完全に自立させるという目的のためには、アフター
ケア協力はプロジェクト終了後、間隔をおいて、繰り返し実施されることも必要
であろう。

付 属 資 料

1. 団 長 レ タ ー
2. 関 係 機 関 へ の 質 問 表
3. 農 地 改 革 研 究 訓 練 セ ン タ ー 要 請 書

March 8, 1989

Dear Authorities concerned,

It is my great pleasure to submit herewith the summary report of the Ex-post Evaluation on the Technical Cooperation Project in the Field of Agriculture, Forestry and Fisheries in Thailand.

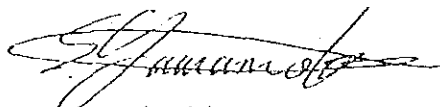
The Ex-post Evaluation Team, which was organized by Japan International Cooperation Agency (JICA), the member list of which is attached, visited the Kingdom of Thailand from February 27 to March 9, 1989. The team conducted an ex-post evaluation survey of the Technical Cooperation for the National Weed Science Research Institute Project and the Irrigated Agriculture Development Project.

During its stay in Thailand, the team had a series of discussions with the Thai authorities concerned, visited the Project sites and interviewed people concerned, putting emphasis on evaluating the present status of activities involved in the Projects and their impact on other related activities. The team also collected information on desirable cooperation for the sustainable development of the Projects and so forth.

I would like to take this opportunity to express our sincere gratitude and appreciation to all officials and staffs concerned in the Kingdom of Thailand for their warm cooperation and kindhearted arrangement extended to us.

I will be happy if our visit would strengthen the technical cooperation between Japan and Thailand.

Sincerely yours,



Mr. Shigeki Yamamoto

Leader

JICA Ex-post Evaluation Team

MEMBER LIST OF THE EX-POST EVALUATION TEAM
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Summary Report of the Ex-Post Evaluation
on
The National Weed Science Research Institute Project

1. Objectives and Activities of the Project

Aiming at solving pressing weed problems in Thailand, the Project was implemented with the cooperation of the Government of Japan initially for five years, starting from April 1980 to April 1985. Immediately after the termination of the cooperation period, the follow-up cooperation was carried out for about two years until March 31, 1987.

The Project was carried out at the National Weed Science Research Institute (NWSRI) and other relevant local experimental stations. The activities of the Project were to conduct a joint research on weed control, and thereby to strengthen the capacities of researchers in the NWSRI. As an after-care cooperation, a Japanese expert for herbicide has been assigned to the NWSRI since December 1987.

2. Present Conditions of the Project

The theme to be researched at the time of cooperation consisted of five main subjects and others, which were further divided into 18 sub-titles. Since the termination of the Japanese cooperation, the research has been continued on the 16 sub-titles to solve the remaining problems. At present, 19 researchers in total are engaged in the work at the NWSRI, out of which 15 have experiences of training in Japan. The knowledge and techniques obtained in Japan are usefully applied for their present research activities. It seems that the effects of the Japanese cooperation is sustained even today.

During the Japanese cooperation period, 13 researchers were engaged in research activities as the counterparts of Japanese experts. Even after the termination of Japanese cooperation, most of the researchers have continued their research works in the NWSRI, except for two researchers who have promoted to higher positions in DOA. It seems, however, that the present research work involves many problems, especially shortage in number of researchers and budget, although every efforts have been made in improving the capability of the researchers in NWSRI.

A number of equipment and facilities were provided under the cooperation by the Government of Japan. However, the equipment and facilities have not always been utilized effectively with various reasons as; lack of knowledge on using the equipment, difficulties in providing spare parts and in repairing damages, and shortage of local budget in procuring materials.

3. Impact of the Project

Efforts have been made by the researchers of the Institute themselves after the termination of the Japanese cooperation under the limited amount of budget and insufficient number of researchers. Followings are recognized as the impact of the Project.

(1) When the Project was commenced, studies carried out in the Institute were limited to simple themes such as trial tests on use of herbicide. Under the Japanese technical cooperation, the importance of research on basic matters was recognized by the Thai researchers and the studies on physiological, ecological and biochemical aspects of weeds have started.

(2) Also after the termination of the technical cooperation, the researches of the Institute have made steady progress on the studies and achieved remarkable results, which have been presented in the academic societies. It should be emphasized that the following three reports have been issued into public.

- Annual Report of the Botany and Weed Science (1986)
- Mimosa pigra and Control (1987)
- Weed Control and Management (1988)

(3) The extension of agricultural techniques to farmers on weed control has also been made by the Institute under close cooperation with the Suphan Buri Training Center. Followings are noted as recent tangible results of the extension.

- Weed control in barley fields
- Barnyard grass control in paddy fields cultivated with germinated direct seeding method.

(4) Mr. Visut, Director of Botany and Weed Science Division, was elected as the president of Weed Science Society of Thailand in February 1989, which shows that the researches in the Institute have been highly evaluated in the academic society of Thailand.

4. Further Development of NWSRI and Possible Japanese Cooperation

As the main institute of weed science research, NWSRI is expected to play an important role in research and extension of weed control techniques. As Thailand is located in the tropical zone, there are a lot kinds of weeds which grow very fast. Damages of crops by weeds are tremendous. It is, therefore, strongly required to promptly put the results obtained in the Institute into practical use. It is recommended that the researches in the Institute should be concentrated in making

clear the physiological and ecological relationships between crops and weeds, and also required to study on the effective use of herbicide in view points of farmers' economy.

Subjects to be researched shall cover various fields of weed science. Though a JICA expert on herbicide is now assigned to the Institute, it would be difficult to cover all the fields of research by a solitary expert. It would be worthy enough for Japan to consider further technical cooperation for intensifying the capability and increasing the number of Thai researchers in various fields. Meanwhile, it would also be important for Thailand to make efforts in fostering researchers so that all the research works could be made by the Thai researchers themselves.

Summary Report on the Ex-post Evaluation
on
The Irrigated Agricultural Development Project

The Project aimed at contributing to the promotion of land consolidation, the improvement and extension of agricultural production technology, the development and strengthening of farmers' organization and other related activities which are necessary for the increase in rice yield and expansion of multi-cropped area.

In pursuing these objectives, the Project was implemented at four sites; namely the Project Center at Bangkok, the Chao Phya Pilot Project, the Mae Klong Pilot Project, and the Suphan Buri Rice Extension Station and Training Center.

The Project was implemented firstly from April 1977 to April 1983. Then, it was extended for three years until the end of March 1985. Furthermore the follow-up cooperation was carried out for the Chao Phya Pilot Project until March, 1986.

In addition to the technical cooperation for the on-farm development of irrigated agriculture, a number of development surveys and related soft-loan as well as grant aid projects were implemented comprehensively under close relations with the Project in the surrounding areas. Owing to the substantial efforts made by both Governments of Thailand and Japan, the Project seems to have achieved remarkable results.

Though the Project Center was dissolved after the termination of the cooperation, the activities in the three sub-projects have been continued and useful results have been obtained. In general, the facilities and equipment provided by Japan are well maintained and effectively utilized.

Furthermore, agricultural techniques on double crops of rice as well as related farm management techniques derived through the Project have generally settled in the Pilot Project areas, and thereby, the Project seems to have given a great impact to the Pilot areas and their surrounding areas.

Accordingly, we are of the view that the Project itself has achieved its objectives and become self-reliant. We expect that the Government of Thailand will continuously promote the irrigated agricultural development by making use of the results of the Project.

Sub-project-wise findings are given in the following sheets.

Chao Phya Pilot Project

The Pilot Project is now incorporated in the Chao Phya Irrigated Agriculture Development Project (CPIADP) which is being undertaken with the OECF loan over 12,600 ha of the surrounding area and the construction has been mostly completed. The ex-counterparts are generally involved in this Project.

The facilities constructed under the Pilot Project have been maintained properly and are mostly functioning well. Some of construction equipment have been used for the construction of CPIADP. The trial farm is now mainly used for multiplication of new varieties.

Double cropping of rice is practiced annually on every paddy field in the Pilot Project area and the unit yield of paddy is over 5 tons per hectare on average for both in the wet and the dry seasons at present. The water users' association were first established in the Project area in 1982, and their function has been gradually strengthened. At present, all farmers in the Pilot Project area have been organized and the operation and maintenance of the on-farm facilities are conducted by farmers themselves. It should be noted that rotational irrigation was introduced in the area in 1982, and the farmers have been well trained to practice it. As a result, irrigation water is evenly distributed in each lot of the Pilot Project area. For sustaining the activities of the water users' association, a water fee has been collected. It is mainly used for electric charges of the secondary pumping stations, maintenance cost of the on-farm facilities and for other purposes.

The activities of the agricultural cooperative have been improved and intensified. All agricultural inputs are supplied and outputs are marketed through the agricultural cooperative. It is also recognized that the activities of extension are satisfactory

enough with a fact that the latest variety, "Suphan Buri 60", developed at the Suphan Buri Station, has already spread to over 75 % of the Pilot Project area in 1988.

Taking the above facts into accounts, it is judged that the initial target of the Pilot Project has been fully achieved and the technologies developed have been widely diffused in the Pilot Project area as well as in the vicinity areas. It is recommended, however, that the Pilot Project should be continued with different targets and should function as a core of the agricultural development of the ALRO projects.

In order to effectively utilize the facilities, equipment and machinery available, it was tentatively suggested by the Thai authorities that the Project shall function in the future as follows:

- (1) On-farm Water Management Training Center
- (2) Agricultural Machinery Service Center
- (3) Agricultural Land Reform Research and Training Center

Mae Klong Pilot Project

The Pilot Project has functioned as a pioneer project for the on-farm development of the Greater Mae Klong Irrigation Project (GMKIP), a part of which has been financed by the World Bank and is going to be completed in March 1989. The facilities constructed under the Japanese technical cooperation have been properly maintained and effectively utilized in both the Pilot No.1 and No.2 areas. Stable double cropping of rice has been practiced and the unit yields have increased from the initial 2.2 ton/ha to the recent 5 tons/ha in the dry season and 4 tons/ha in the wet season. In view of the unit yields of rice and the double cropped area expanded in the Pilot Project areas, it is recognized that the original targets of the Pilot Project have fully been achieved. The accumulated techniques and know-how in planning, designing and constructing on-farm facilities, as well as the agricultural techniques on double cropping of rice shall be widely applied for the on-farm development in the GMKIP area.

The construction equipment provided under the Japanese cooperation has been utilized for the implementation of the GMKIP. The agricultural machineries have also been used effectively in both the trial farm and the pilot farms. Some of the machineries, however, are facing difficulties in obtaining spare parts. Most of the counterpart personnels attached to the Japanese experts have been engaged in the construction of the GMKIP.

After achieving the initial targets, the trial farm which was attached to the Pilot Project No.1 is now named as "Crop Water Requirement Experimental Station 5" under the GMKIP. Its duties and responsibilities are as follows:

- (1) Research on crop water requirements.
- (2) Demonstration of rice double-cropping.
- (3) Demonstration of crop rotation..

- (4) Multiplication of purified seed of recommended RD-varieties and their distribution to farmers.
- (5) Collection of climateological data.

Favored with sufficient amount of water, the irrigation in the Pilot areas has been practiced with less difficulties. However, for the expansion of irrigated area in the basin with the limited water resources, more efficient use of water is required. The present overall water management system shall be further improved and at the same time, it would become necessary to introduce on-farm water management by farmers through organizing and strengthening water users' group.

Suphan Buri Experiment and Training Center

Department of Agriculture of MOAC was reorganized in 1982 and the main activities of the Center, i.e. the experiment and the training on rice and rice cultivation, were shared with respective Institutes of Research Division of DOA. Namely, the experiment work is now carried out in the six Rice Experiment Stations established in each District under Rice Research Institute, and the training for the government officers is conducted in the Suphan Buri Training Center under the Farming Systems Research Institute.

At present, the experiment section of the Center functions as a satellite station of the Rice Experiment Station in Pathum Thani, which is one of the six Stations under Rice Research Institute. As main experimental activities in the District are carried out in Pathum Thani, the experiment in the Center have been gradually decreased and the staff have been shifted to Pathum Than. It should be noted, however, that the experiment section of the Center has recently developed the most attractive improved variety "Suphan Buri 60", which is expected to spread in the irrigated area nation-widely.

The training section of the Center conducts continuously various training courses on rice cultivation and others, even after the termination of the Japanese cooperation. In addition, it should be emphasized that the Third Country Training has been conducted successfully every year since 1986 at the Center with the assistance of JICA and it is planned to continue until 1990. The trainees are invited from several countries in ASEAN and the Pacific. It is judged that the Center is functioning actively as a training center of rice cultivation not only for Thailand but also for other developing countries.

Most facilities and equipment provided under the Japanese cooperation are well maintained and used effectively by both the experiment and the training section even after the reorganization of DOA. Due to the reduction in activities of experiment section the use rate of laboratory equipment for experiment purpose has become less. Instead, they are often utilized for the training purpose as well.

It was reported that it is hard to purchase spare parts of some specific machinery in Thailand, and the request was made to the Team to consider the provision of some spare parts by JICA.

It is anticipated that the training activities of the Center will be further strengthened to be an international level. In order to cope with such requirements, training accommodations such as dormitory and cafeteria should be improved into an international standard.

The Farming System Research and Development Project, which is conducted at eight FSR&D offices across Thailand and Suphan Buri Training Center has connection with No.5 FSR&D, seems to play an important role in disseminating the research result to farmers. Hence, it is required to make efforts in reducing the differential between research level and farmers levels by effectively making use of FSR&D. For this purpose, there will be an opportunity for Japan to extend technical cooperation in the future.

2. 関係機関への質問表

EX-POST EVALUATION
ON
THE NATIONAL WEED SCIENCE RESEARCH INSTITUTE PROJECT
IN
THAILAND

March, 1989

QUESTIONNAIRE to DOA

1. Please show the following statistical data in these ten years.
 - a. The amount and volume of consumption of fertilizer, pesticide, and herbicide (weed killer)
 - b. Weed damage of main crops (decrease in yield by %).
2. Local budgets for weed control in these 10 years.
3. Please describe the plan or idea to improve the capability of researchers in NWSRI.
4. What kind of cooperation by the Government of Japan is expected for further promotion of weed control in Thailand? Which type of cooperation is preferable, the development oriented or research oriented?

EX-POST EVALUATION
ON
THE NATIONAL WEED SCIENCE RESEARCH INSTITUTE PROJECT
IN
THAILAND

March, 1989

QUESTIONNAIRE to NWSRI

1. Fulfill the attached papers for each subject researched in the Project.
2. Present organization and change in number of personnel of NWSRI in these 10 years by classifying them into general staff and researchers.
3. Local budgets of National Weed Science Research Institute (NWSRI) from the beginning of the Project to the present.
4. What subjects have to be continuously researched in NWSRI after the termination of the cooperation by the government of Japan?
5. Locations where the present researches are under way.
6. Problems for executing the research and counter measures to be taken.

7. Facilities constructed and equipment procured after the termination of Japanese cooperation.
8. Results of research published in academic societies and list of reports published after the termination of Japanese cooperation.
9. List of ex-counterpart personnel, including their present positions and duties.
10. Measures taken or to be taken to improve the capability of researchers in NWSRI. If you have an instance to receive a degree, a doctorate or others with foreign countries except Japan, please explain it.
11. Results of research extended to the farmers and procedures of extension and the method of evaluation.
12. Concrete measures to further extend the result of research obtained in the Project.

ATTACHED PAPER

QUESTIONNAIRE on INDIVIDUAL SUBJECT RESEARCHED

Subject:

Sub-title:

Executed year: from _____ to _____

Name of Institute:

Name of Japanese Expert:

Name of Counterpart Personnel:

Result of evaluation at the time of Project completion.

A B C D To be continued Completed

(A: Beyond the target, B: Achieved the target,

C: Less achieved the target, D: Not achieved the target)

Remaining theme to be continuously researched:

1. Has the remaining theme been researched continuously?

(yes or no)

2. If yes above, concrete theme under researching.

Expected result of the research

Any problem to carry out the research and your proposal to solve the problem.

3. If no in item 1 above, reason why the research couldn't be continued.

Your proposal to solve the problem.

4. In case the subject of research is classified into A or B,

Possibility of extension of the result of research to farmers.
(yes or no)

If no, please mention the reason why the result cannot be extended and also describe your proposal, if any, to solve the problem or constraint.

5. How is the ex-counterparts are involved in the present research work?
6. List of equipment provided under the Japanese cooperation and their conditions of utilization and maintenance.
7. Remaining problem on this subject of research.

Measure to solve the problem.

Possibility of the cooperation by the Government of Japan.

EX POST EVALUATION
ON
THE IRRIGATED AGRICULTURE DEVELOPMENT PROJECT (IADP)
IN
THAILAND.

March, 1989

QUESTIONNAIRE to CLCO

1. Please show the following statistical data in these ten years.
 - (1) promotion of land consolidation
 - (2) expansion of multi-cropped area
 - (3) national average of the unit yield of rice
2. Present organization and change in number of personnel of Project Center of IADP in these 10 years.
3. Local budgets of the Project Center of IADP from the beginning of the Project to the present.
4. List of equipment provided under the Japanese cooperation and their conditions of utilization and maintenance.
5. List of ex-counterpart personnel, including their present positions and duties.
6. Any comments for sustaining further development of the IADP.
7. Your request, if any, for the further cooperation of Government of Japan on the irrigated agriculture development in Thailand.

EX POST EVALUATION
ON
THE IRRIGATED AGRICULTURE DEVELOPMENT PROJECT (IADP)
IN
THAILAND

March, 1989

QUESTIONNAIRE TO ALRO
ON
Chao Phya Pilot Project

1. Present organization and change in number of personnel of Chao Phya Pilot Project in these 10 years by classifying them into the general staff and the technical staff.
2. Local budgets of Chao Phya Pilot Project from the beginning of the Project to the present.
3. List of main machinery and equipment provided under the Japanese cooperation and their conditions of utilization and maintenance.
4. List of facilities constructed and equipment procured with local budgets.
5. List of trainees trained in Japan, including their present positions and duties.
6. Present conditions of the agricultural infrastructures of pilot farm and their maintenance program.
 - (1) field rearrangement
 - (2) farm roads
 - (3) irrigation and drainage facilities
 - (4) empoldering dikes
7. Water Management
 - (1) Technical matters advised to farmers in the pilot area and staff concerned for effective water management.
 - (2) Training and/or guidance program on the water management techniques to farmers in the pilot area and their vicinities.
 - (3) Have the farmers in the pilot area familiarized themselves with the water management techniques introduced?

- (4) Present constraints on the water management in the pilot area.
 - (5) Proposed counter measures for the above.
8. Rice cultivation in the trial farm and pilot area.
- (1) Records of unit yield of rice in the trial farm and the pilot area from the beginning to the present.
 - (2) farmers' economy in pilot area (gross income, production costs and benefit).
9. Activities of water management organization
- (1) Present conditions of water management organization in the pilot area.
 - (2) Main activities of water management organization.
 - (3) Joint cooperative activities such as distribution of agricultural materials, collection and forwarding of agricultural products and other activities, if any.
 - (4) Present constraints on the water management organization in the pilot area.
 - (5) Proposed counter measures for the above.
10. Improved agricultural techniques of rice cultivation
- (1) Improved agricultural techniques of rice cultivation to be introduced in the pilot farm.
 - (2) Result of introduction of the improved agricultural techniques to a few model farms which were selected in the pilot area.
 - (3) Have the farmers in the pilot area familiarized themselves with the improved agricultural techniques of rice cultivation introduced?
 - (4) Training and/or guidance program to farmers in the pilot area and their vicinities on the improved agricultural techniques.
 - (5) Present constraints to introduce the improved agricultural techniques of rice cultivation to farmers.
 - (6) Proposed counter measures for the above.
11. Agricultural extension
- (1) Main items to be extended.
 - (2) Procedures of extension.
 - (3) Activities on agricultural extension.
 - (4) Method of evaluation.
 - (5) Present constraints of extension.
 - (6) Proposed counter measures for the above.

12. Any comments for sustaining further development of the Chao Phya Pilot Project.
13. Your request, if any, for the further cooperation of Government of Japan on the irrigated agriculture development in Thailand.

EX POST EVALUATION
ON
THE IRRIGATED AGRICULTURE DEVELOPMENT PROJECT (IADP)
IN
THAILAND

March, 1989

QUESTIONNAIRE TO RID
ON
Mae Klong Pilot Project

1. Present organization and change in number of personnel of Mae Klong Pilot Project in these 10 years by classifying them into the general staff and the technical staff.
2. Local budgets of Mae Klong Pilot Project from the beginning of the Project to the present.
3. List of main machinery and equipment provided under the Japanese cooperation and their conditions of utilization and maintenance.
4. List of facilities constructed and equipment procured with local budgets.
5. List of trainees trained in Japan, including their present positions and duties.
6. Present conditions of the agricultural infrastructures of pilot farm and their maintenance program.
 - (1) field rearrangement
 - (2) farm roads
 - (3) irrigation and drainage facilities
7. Water Management
 - (1) Technical matters advised to farmers in the pilot area and staff concerned for effective water management.
 - (2) Training and/or guidance program on the water management techniques to farmers in the pilot area and their vicinities.
 - (3) Have the farmers in the pilot area familiarized themselves with the water management techniques introduced?

- (4) Present constraints on the water management in the pilot area.
 - (5) Proposed counter measures for the above.
8. Rice cultivation in the trial farm and pilot area.
 - (1) Records of unit yield of rice in the trial farm and the pilot area from the beginning to the present.
 - (2) farmers' economy in the pilot area (gross income, production costs and benefit).
 9. Activities of water management organization
 - (1) Present conditions of water management organization in the pilot area.
 - (2) Main activities of water management organization.
 - (3) Joint cooperative activities such as distribution of agricultural materials, collection and forwarding of agricultural products and other activities, if any.
 - (4) Present constraints on the water management organization in the pilot area.
 - (5) Proposed counter measures for the above.
 10. Improved agricultural techniques of rice cultivation
 - (1) Improved agricultural techniques of rice cultivation to be introduced in the pilot farm.
 - (2) Result of introduction of the improved agricultural techniques to a few model farms which were selected in the pilot area.
 - (3) Have the farmers in the pilot area familiarized themselves with the improved agricultural techniques of rice cultivation introduced?
 - (4) Training and/or guidance program to farmers in the pilot area and their vicinities on the improved agricultural techniques.
 - (5) Present constraints to introduce the improved agricultural techniques of rice cultivation to farmers.
 - (6) Proposed counter measures for the above.
 11. Agricultural extension
 - (1) Main items to be extended.
 - (2) Procedures of extension.
 - (3) Activities on agricultural extension.
 - (4) Method of evaluation.
 - (5) Present constraints of extension.
 - (6) Proposed counter measures for the above.

12. Any comments for sustaining further development of the Mae Klong Pilot Project.
13. Your request, if any, for the further cooperation of Government of Japan on the irrigated agriculture development in Thailand.

EX POST EVALUATION
ON
THE IRRIGATED AGRICULTURE DEVELOPMENT PROJECT (IADP)
IN
THAILAND

March, 1989

QUESTIONNAIRE TO DOA
ON
Suphan Buri Station

A. GENERAL

1. Present organization and change in number of personnel of Suphan Buri Rice Experiment Station and Training Center (Suphan Buri Station) in these 10 years by classifying them into the general staff and the technical staff.
2. Local budgets of Suphan Buri Station from the beginning of the Project to the present.
3. List of main machinery and equipment provided under the Japanese cooperation and their conditions of utilization and maintenance.
4. List of facilities constructed and equipment procured with local budgets.
5. List of trainees trained in Japan, including their present positions and duties.

B. TRAINING

1. Training courses executed from the fiscal year 1985 to the present.
(Name of training course, the year of execution, duration, subject, etc.)
2. Number of trainees by organization.
3. Result of training and the method to evaluate it.
4. Problems for executing the training, if any, and counter measures to be taken.

C. EXPERIMENT

1. Items of experiment under execution on the improved agricultural techniques of rice cultivation.
2. Remaining theme to be studied.
3. Problems for executing the experiment and counter measures to be taken, if any.
4. Results of experiment extended to farmers.
5. Procedures of extension and the method of evaluation.
6. Present constraints to introduce to farmers the agricultural techniques of rice cultivation developed at the Station.
7. Proposed counter measures for the above.

D. OTHERS

1. Any comments for sustaining further development of the Suphan Buri Station.
2. Your request, if any, for the further cooperation of Government of Japan on the irrigated agriculture development in Thailand.

3. 農地改革研究訓練センター要請書

Request for New Grant Aid and Technical Assistance Project
from JICA

(Three years indicative plan 1990-1992)

Project Summary

1. Project Title: Establishment of Land Reform Research and Training Institute of Thailand
2. Requesting Agency: Agricultural Land Reform Office (ALRO)
Ministry of Agriculture and Cooperatives (MOAC)
3. Proposed Source of Assistance: Japan International Cooperation Agency (JICA)
4. Project Objectives:
 - 4.1 To provide information and training on land reform for ALRO's staff, farmers, landholders, students and any other interested individuals.
 - 4.2 To undertake research on various topics relating to land reform or which help promote land reform activities.
 - 4.3 To be the national institute for data collection and exchange of knowledge and technical assistance in land and land reform.
 - 4.4 To coordinate with other agencies and local or foreign technical institutes in order to promote research, study, and technical assistance on land reform which will support land reform implementation.
5. Type of Assistance:
 - 5.1 Grant Aid (GA)
 - 5.2 Technical Assistance (TA)
6. Requested Assistance: 24,391,680 Baht
 - 6.1 Grant Aid 21,091,680 Baht
 - 6.1.1 Research and Training Institute Buildings 17,791,680 Baht (See Annex 1).
 - 6.1.2 The Durable Articles Necessary for the Institute 3,300,000 Baht (See Annex 2).

- 6.2 Technical Assistance 4 Experts, 3,000,000 Baht
- 6.2.1. - 1 Sociologist, 21 man/month
 - 6.2.2 - 1 Land Reform Planning and Training Specialist,
12 man/month
 - 6.2.3 - 1 Land Reform Specialist, 18 man/month
 - 6.2.4 - 1 Monitoring and Evaluation Specialist, 12 man/
month
7. Counterpart Fund: 9,000,000 Baht
8. Project Location: At Pathumthani Province, about 40 kilometres
from Bangkok
9. Project Duration: The implementation plan is for three years
from April 1990 - March 1993.

The necessities of the Research and Training Institute Construction

Items	Cost of construction (Baht)
1. Training institute building	4,000,000
2. Nutrition and recreation building	300,000
3. Trainees lodging building	4,970,000
4. Guard station	80,000
5. Reception house/training officers boarding house	700,000
6. Kitchen and laundry building	570,000
7. Outdoor Stadium	
- Basketball	158,000
- tennis	200,000
8. Airconditioning System for Conference room	463,680
9. Workers' resident	780,000
10. Garage for 10 Cars	150,000
11. Flag Pole 12 meter high	20,000
12. Fences and gates	1,800,000
13. Cost for area maintenance and other Public utility expenses such as road water supply electricity especially for 10 acres.	2,500,000
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Total	17,791,680

The Durable Articles necessary for the Institute

Items	Number	Price	Price (Baht)
1. Omni Bus (45 seats)	1	1,000,000	1,000,000
2. Mini Bus (12 seats)	1	680,000	680,000
3. A car with 1,600 cc. for contacting lecturers	1	670,000	670,000
4. Communicating system within the Institute	1	200,000	200,000
5. Broadcasting system in the training room with 60 seats	1	60,000	60,000
6. Broadcasting system in the training room with 40 seats	2	50,000	100,000
7. Telerecording system	2	150,000	300,000
8. A colour television (with the size of 24")	4	22,500	90,000
9. Audio - visual aids necessary for training, such as slide projection	3	200,000	200,000
Total amount			3,300,000

JICA