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Final Project Completion Report

NORTHEAST RAINFED AGRICULTURAL DEVELOPMENT
PROJECT (NERAD)
USAID Project No. 4930308

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APPENDIX A: A Summary of The NERAD Promising Processes, Methodologies, and Technologies for Rainfed Agriculture in Northeast Thailand.

LIST OF ACRONYMS AND ABBREVIATIONS

DOA	Department of Agriculture
DOAE	Department of Agricultural Extension
DTEC	Division of Technical & Economic Cooperation
FAO	Food & Agriculture Office of the United Nations
FSR	Farming Systems Research
IRRI	International Rice Research Institute
LOP	Life of Project
MANRES	National Resource Management Project
MOAC	Ministry of Agriculture & Cooperatives
NERAD	North East Rainfed Agricultural Development
NEROAC	North East Regional Office of Agriculture
NESSI	North East Small Scale Irrigation Cooperatives
PP	Project Paper
RRA	Rapid Rural Appraisal
RTG	Royal Thai Government
TA	Technical Assistance
UNDP	United Nations Development
USAID	United States Agency for International Development

1. INTRODUCTION AND OVERVIEW

This project completion report reviews the objectives, accomplishments, history, beneficiaries and transferable lessons learned from the NERAD (Northeast Rainfed Agricultural Development) project. It provides information useful in future efforts for policy makers, planners, and implementing organizations in the Royal Thai Government (RTG), USAID//Thailand, and development organizations worldwide.

CONTEXT OF THE PROJECT

The NERAD project, which started in August, 1981, and reached its PACD on February 28, 1989, was designed to assist the rainfed farmers in Northeast Thailand. While half of the 17 million hectares in the region is devoted to farmland, very little of the land is or can be irrigated. Most of the two million rural households in the Northeast depend on erratic rainfall for necessary crop and livestock water. In addition to unreliable water supplies, farmers must cope with low fertility, debris, and sandy soils. Because of limitations like these, per capita income in the Northeast is the lowest in Thailand, and the region is home to some seven million Thais living in "absolute poverty".

Improving rainfed agriculture could boost income, but additional research and extension was necessary to deliver effective technologies and resolve agronomic constraints. Research and extension support for rainfed agriculture systems in Thailand has traditionally been limited because (1) Northeast farming systems are diverse and environmental factors vary; (2) most

research is discipline or commodity oriented rather than systems oriented, and (3) research seldom follows an adaptive approach and the results are thus often not relevant to farmers needs.

In addition, the Thai agricultural bureaucracy is cumbersome. The Ministry of Agriculture and Cooperatives (MOAC) consists of 12 departments, highly centralized in Bangkok, with few incentives or mechanisms for the departments to coordinate implementation or cooperate at the field level.

As a result of a 1981 RTG policy, each of Thailand's four regions has an official Regional Office of Agriculture and Cooperatives (ROAC). The purpose of these offices is to decentralize MOAC operations at the regional level. NERAD was implemented by the Northeast Regional Office (NEROAC) (located at Tha Phra, in Khon Kaen province). Earlier USAID projects helped to strengthen NEROAC's institutional capacity.

General Assessment of Project Outcomes

NERAD can be described as a project that had a slow and shaky beginning and a strong and successful finish. The shaky beginning was in part caused by what most people concede was a poorly written Project Paper. The project objectives were highly ambitious and subject to multiple interpretations. While there was ambiguity at the purpose and goal level, the input activities and budget were described with 29 pages of detail. This overspecificity caused the PP to be regarded as a "blueprint" for the first couple of years. This reduced the flexibility the project needed and the extent to which Project Management could influence the implementing agencies.

The strong finish occurred because in the last three and a half years of the project, the project team focused on identifying, consolidating, replicating, and disseminating their findings. The project produced an impressive set of well-documented analyses, reports, handbooks, and other useful final products. During the last year, a series of ten workshops were held to analyze lessons learned and transfer both policy and technical implications to interested users so as to sustain the relevant aspects of the effort.

Interviews with key people in USAID and the implementing agencies lead to the conclusion that NERAD has been reasonably successful. (All interviewees were asked to rate NERAD on a 1 (poor) to 10 (fantastic) scale, compared with other development projects in Northeast Thailand. This unscientific but illuminating survey revealed an average score of 7.5).

Indicators and evidence of project success include the following facts:

- * the most recent MOAC budget requested 14 million baht (\$560,000) to continue the NERAD approach using regular RTG funding,
- * NERAD's most promising innovations have been built into other donor projects, and into the ongoing operations and policies of selected MOAC departments,
- * some fundamentally new discoveries were made about the conditions of Northeast soils, with major implications for the overall development strategy for the Northeast,

- * a couple dozen promising processes, methodologies, and technologies were developed by the project and documented in some 100 user manuals and handbooks which have enjoyed wide popularity (as evidenced by over 2,000 requests for 50,000 copies of publications from Thailand and internationally),
- * many of NERAD's most important features have been incorporated into USAID's upcoming MANRES (Management of Natural Resources) Project, and
- * hundreds of agricultural personnel at provincial and local levels have been trained in processes, methodologies, and technologies developed under the project.

On the other hand, the following points must also be considered:

- * As one MOAC official noted, NERAD has identified many promising technologies, but few proven ones.
- * Fundamental changes in the way that MOAC departments interact has not been institutionalized; while the behaviors and attitudes of many technical staff and some lower-level policy makers have been changed, the changes have not been totally accepted and its not certain whether the integrative behaviors initiated by the project will continue after funding ceases.

- The institutional capacity of NEROAC has not been notably strengthened, even though selected individuals have improved their skills and the justification for the regional centers has been strengthened.

It is perhaps premature to judge the ultimate impact of NERAD. NERAD has set the basis for high potential payoffs for millions of rainfed farmers in the Northeast, but these payoffs will unfold long after the PACD and through other delivery mechanisms. At this stage, we can conclude that the leading indicators of probable success are present.

2. PURPOSE AND GOAL

During early years of the project there was considerable confusion over the purpose and goal. As USAID's original NERAD project officer (for the first five years) wrote in his end of tour report, "The NERAD project has been described as having multiple personalities because of the different focuses and supposed confusion over purpose, as exhibiting schizophrenia tendencies, as a multiple-headed hydra because of the nine implementing agencies. There is a some validity in these criticisms. Since project start-up, it was blatantly obvious that the various agencies were not sharing the same perspective. But what was not realized at the time was that many of these perspectives were incompatible with each other and with the Project Management Center's interpretation of project purpose".

Several things contributed to this confusion. The Project Paper was itself confusing, the various implementing departments (as well as consultants) held different perspectives, and Farming Systems Research (FSR) was new to Thailand.

ORIGINAL AND REVISED OBJECTIVES

The Project Paper violated many of the principles of good design and Log Frame Logic. The original project *purpose* was "to establish in representative tambons of Northeast Thailand a replicable agricultural development program for increasing farm productivity and farm income, particularly among lower income farmer in the rainfed agricultural

development", to support a *goal* of "increased economic well-being of poorer Northeast Thailand Farm Families".

The difficulty with this purpose statement was that it included three separate means-ends hypothesis--a replicable program, in order to increase productivity, in order to increase income. Purpose level indicators included development of management systems for integrated development in the same breath as increases in real incomes. This caused real confusion concerning the real purpose. There was justification for (and proponents arguing for) the project as 1) area development, 2) R&D, 3) institutional strengthening, 4) bureaucratic reorientation, 5) extension of individual agro technologies, 6) better linkages between research and extension, or 7) some combination of these.

Rather than specifying a clear purpose with illustrative inputs, the PP presented the inverse--an ambiguous purpose and highly detailed input activities and budgets. The Project Paper laid out 29 pages of detailed budget by activity, agency, and location for the seven year LOP.

For example, it specified the number of shallow wells per district over the seven years. Because of this detail, field managers had an input orientation, and for the first few years scrambled around to make sure that things occurred "on the ground" as specified in the PP, even though the real project intent dealt with changing behavior of the system. And because the PP took on the aura of "the Bible", Project Management had little leverage over the implementing departments whose "piece of the pie" was laid out in detail.

In addition, the PP included some wrong assumptions. For example, it spoke of a set of "off-the-shelf" proven technologies which could be implemented immediately. But it turned out that there were no proven technologies ready to go.

The NERAD project team put much time and effort into revising the Log Frame. The multiple revisions reflected the underlying complexity of the project and the need to reach consensus on the projects main thrust. Over the years, perhaps a dozen different Log Frame versions were developed. (It should be noted that revising a Log Frame over time is not necessarily bad. In fact, as the project evolves and the implementing system learns, it becomes appropriate to revise the Log Frame to reflect the current understanding about what is possible.)

The "final" Log Frame was established in February, 1987. This multi-page document consisted of five levels of objectives (goal, intermediate goal, purpose, outputs, and intermediate outputs) as follows:

Goal: Increased economic well-being of poorer Northeast Thailand Farm Families. (Same as before.)

Intermediate Goal: To institutionalize and replicate within MOAC research and development approaches for optimizing the performance of rainfed agro-ecosystems in accordance with national policies and farmer's needs in Northeast Thailand.

Purpose: To identify and develop replicable approaches for agricultural research and development which increase farm productivity and income particularly among low income farmers in rainfed agricultural areas of Northeast Thailand.

The revised Log Frame followed “sound design logic” and placed indicators at the appropriate levels.

3. ACCOMPLISHMENTS

This section reviews some of the key accomplishments of the project, then examines issues concerning impact, spread effect, and sustainability.

KEY ACCOMPLISHMENTS

In March, 1988, NERAD prepared a document entitled A Summary of NERAD Promising Processes, Methodologies, and Agriculture in Northeast Thailand Technologies for Rainfed. (Agriculture NERAD Technology Working Paper No. T0). That paper described its most important contributions under three categories as follows:**

1. Integrative Structures and Processes. These consist of establishing organizational structures and processes to improve integration and coordination among the many government agencies involved in the project. Key structures and processes included:

- * Technical Work Groups
- * Annual Technical Workshops
- * Technology Development Process
- * Tambon Planning
- * NERADICS Information & Coordination system
- * The NERAD Pre-replication Model

** (For further detail, that summary document is attached to this project completion report as Appendix A).

Many of these processes have been built into the donor projects. For example, Annual Technical Workshops have become a common feature of virtually all donor projects administered by NEROAC.

2. Analytical Tools and Techniques. These consist of developing and refining analytical methodologies which could improve understanding of important farmer problems and assist in identifying appropriate solutions.

- * Agroecosystems Analysis
- * Rapid Assessment Technique
- * Agricultural Triage
- * Sustainability Analysis
- * Lorenz Curves and Equitability Analysis
- * On Farm and Multilocational Trials

Many of these have been adopted by RTG agencies and other donor projects. For example, The Thai New Zealand Water Resources Development Project uses NERAD's agricultural triage criteria to screen their water resource development requests from villagers.

3. Technical Innovations and Technologies. These consist of designing and testing agricultural technologies and practices that help farmer meet their subsistence and income needs in a sustainable way. Key ones are:

- * Direct Sown Rice
- * Cooperative Buying Groups

- * **Modified Shallow Wells**
- * **Pre-Rice Green Manuring**
- * **Papaya Ringspot Virus Disease Control**
- * **Simple Farm Implements**
- * **Fish in the Rice Paddy**
- * **Shallot Production from Seed**
- * **Kenaf Varietal Improvement**
- * **Native Chicken Development**
- * **Soil Fertility Improvement by Liming**
- * **Integrated Water Resource Utilization**
- * **Sericulture Improvement**

The impact of these is potentially tremendous. For example, fish in the paddy has proven it is technically and economically possible to harvest fish in Northeast paddies, thus increasing protein consumption (and as an unexpected bonus, it was found that the fish also improved rice productivity). The Department of Fisheries has since adopted this technology; several other of these technologies have been incorporated into donor projects and regular RTG programs.

DISSEMINATION MECHANISMS

Two reasonably innovative strategies contributed to spreading the impact of NERAD results and increasing the chances of sustainability. These are (1) extensive documentation and dissemination, and (2) lessons learned and hand-off workshops.

Documenting and Disseminating Project Results Through Publications

The mechanism for much of NERAD's impact and diffusion has been publication of project results under the framework of "NERADICS" (Northeast Regional Information and Coordination System). NERADiCS is a systematic attempt to identify, organize, store, and make available information in a format useful to other users.

Under the NERADICS framework, NERAD will have generated an impressive number of high quality technical reports, user manuals, and handbooks. Nearly 100 have (or will be) written, most are available in both English and Thai. Demand for these publications has been strong--some 2,000 requests have been received from users in Thailand and in other countries. Many are the basis for training programs by MOAC departments and donor projects throughout Thailand.

Lessons Learned and Project Hand-Off Workshops

NERAD made a substantial investment in workshops to identify and transfer lessons learned to both technical and policy level personnel in MOAC and in provincial governments. During the final year of the project, they conducted a series of ten workshop/seminars. These workshops brought together members of the various line agencies to review and analyze major problems and technologies available for their solution, to determine future R&E priorities, to share lessons learned, and to document the current state of knowledge in the form of user handbooks.

Workshop topics ranged from technical subjects such as water utilization through policy issues. The workshop sequence was:

- * NEROA Internal Workshop to Develop Action Plan for NERADICS Activities (January, 1988)
- * Farming Systems Workgroup Meeting to Plan NERADICS Workshops: Roles and Data Needs (January, 1988)
- * Workshop on "Analytical Techniques and Methodologies for Farming Systems Research and Extension" (March, 1988)
- * Workshop on "Soil Fertility Management in Northeast Thailand" (June, 1988)
- * Workshop on "Water Utilization for Rainfed Agriculture in Northeast Thailand" (August, 1988)
- * Workshop on "Livestock, Forestry, Fruit Tree, Sericulture Development in Northeast Thailand" (September, 1988)
- * Workshop on "Economics, Marketing, and Community Organization for Rainfed Agricultural Development in Northeast Thailand" (November, 1988)
- * Workshop on "Review of Cropping Systems Research in NERAD and Guidelines for Future R&D in Northeast Thailand" (December, 1988)

- * Workshop on "Determining Guidelines for Sustainable Rainfed Agricultural Research and Development in Northeast Thailand Based on Lessons Learned From NERAD" (January, 1989)
- * Workshop on "Replication of NERAD to 17 provinces of the Northeast" (February, 1988)
- * Seminar on "Policy and Planning Implications of the Results of the NERAD Project Experience in Northeast Thailand" (January, 1989)
- * Workshop on "Replication of NERAD in 17 provinces" (February, 1989)

Workshop formats emphasized transfer of information and generation of practical written outputs. For example, the soil fertility management workshop generated a dozen different handbooks, most of which were put into both English and Thai. Key department personnel received author by-lines, which promoted ownership and utilization of results.

EXAMPLES OF NERAD SPREAD EFFECT AND IMPACT

NERAD's impact beyond the project is apparent in examining its influence on USAID projects, other donor projects, RTG programs, and institutions outside Thailand.

Influence on USAID Projects

NERAD has influenced other USAID/Thailand projects. For example, NERAD's work on papaya ringspot virus control has been turned over to USAID's Agricultural Technology Transfer Project for pilot extension activities, to be followed by regional extension by DOAE (Department of Agricultural Extension). (These virus studies have also been used by FAO's Regional Office for Asia and the Pacific to prepare a regional profile on the subject.) The STDB recently approved a project entitled "Tissue Culture for the Propagation and Development of Papaya that are Tolerant to Papaya Ring Spot Virus" in order to develop resistant varieties.

In addition, NERAD has had a major influence on the design of MANRES (Natural Resource Management) Project. This project will continue working with the promising technologies and processes, and bring the Ministry of Interior into the process. Some key NERAD staff will be involved with MANRES; thus providing continuity.

Influence on Other Donor Projects

NERAD is having a surprisingly large influence on other donor funded projects in Thailand, both ongoing and upcoming. These other projects provide ideal mechanisms for the dissemination and institutionalization of promising methodologies in the region. Here are several examples:

- an external team which evaluated the FAO/UNDP Phu Wiang Integrated Watershed Development Project recommended including

several of NERAD's promising technologies (direct sown rice, modified shallow wells, fish in the paddy, and native chicken improvement),

- officials of the Thai Australian Tung Kula Ronghair Project attended one of NERAD's RRA (Rapid Rural Appraisal) training workshops and later joined them in conducting an RRA in the field,
- a World Bank funded project has used the results of NERAD's RRA in three locations and is considering using their agricultural technology triage process (developed to screen experimental cropping systems technologies and set future research and extension priorities) as a possible tool for screening DOA's research results and experimental technologies throughout Thailand,
- An IRRI project in Thailand has taken the NERAD green manuring work as the basis for its rice improvement program for both its on-farm and on-station trials. Thus, many of the questions raised by NERAD's trials are now receiving the detailed on-station research necessary.

Besides these, MOAC has funded a feasibility study of a \$30 million five year IFAD project entitled "Northeast Agricultural Diversification and Income Generating Activities Project" (to will be implemented in six provinces covering 10-12 sites of 5,000 rai each, using a multi-agency integrated approach). It is expected that the project management center will be at NEROA, and that NERAD organizational approaches (committees, workgroups, etc.) will be used for project management. The NERAD activities

being considered for replication by the IFAD Project include papaya ringspot virus eradication, green manuring, native chickens, modified shallow wells, direct sown rice, cropping systems technology development process, pest management techniques, rapid assessment techniques, and farmer group organizing. The IFAD project will further refine these activities, with the goal of replication throughout the region.

The key diffusion mechanism to other projects has been NERAD's Project Director, who during the NERAD project also became the NEROA Director. As overseer of 12 donor-funded and regular RTG projects, he is insisting that processes like the Technical Work Groups and Annual Planning Workshops, as well as techniques like Agrosystems Analysis and Rapid Assessment be actively used. He has stated that "the most useful aspects of NERAD have been the group organizing processes and management tools like Linear Responsibility Charts, and I make sure that other projects use these tools."

Influence on RTG Programs

The last workshop on "Replication of NERAD in 17 provinces" occurred just before project termination. The chief MOAC officials from 17 provinces and the chiefs of provincial planning offices under the Ministry of Interior were invited to participate in the workshop. Workshop formats emphasized how to replicate NERAD models and to utilize analysis tools and key activity handbooks. Each province could choose to use the following:

1. **NERAD's complete process of area analysis, technology triaging, integrated planning and implementation, and field manager type of coordination and management.**
2. **Selected NERAD technologies, methods or activities integrated into the existing program of the provinces.**
3. **Analysis tools (manuals) to improve the planning process and better address local problems through appropriate technologies.**

Four new provinces (Loei, Mahasarakam, Buriram and Yasothon) chose to go for a complete model like the Muang Suang, Pre-Replication site in addition to the former NERAD provinces.

Work groups agreed to test selected technologies, methods and activities in their provinces on a trial basis. For NERAD provinces, a process has already started to expand promising technologies through a farmer training program.

Participant feedback on NERAD's various manuals and handbooks was very positive because of their practical value in improving the planning and implementation of ongoing projects.

NERAD technologies are being incorporated by ongoing RTG programs. Perhaps the most important indicator of sustainability is that MOAC now has a 14 million baht budget request to continue the NERAD approach.

There is also selected use through various agencies. For example, the Department of Fisheries set guidelines, developed handbooks, and trained 120 officials from all 17 Northeastern provinces in fish/rice cultivation in paddy fields and adopted the activity into its regular regional program. The DOAE (Department of Agriculture Extension) is conducting a program to train every sub-district agricultural official (Kaset Tambon) in Thailand in the use of rapid rural appraisal, agroecosystems analysis, and area analysis techniques.

The master plan for the RTG's 'Isarn Khieo' or Green Northeast development program incorporated some NERAD contributions. The NERAD Project Director and three of the project TA staff were among the advisors who prepared briefing papers for the program, provided information, and held many meetings with individuals concerned with the program. Isarn Khieo is an opportunity to replicate and institutionalize the project's most promising outputs.

Students from the Asian Institute of Technology's Agricultural Systems Program took a study tour at NERAD and requested this occur annually.

Influence on FSR Outside Thailand

NERADICS publications have been popular outside Thailand. Requests from other countries have come from Nepal, Philippines, India, Pakistan, Indonesia, Laos, Sri Lanka, Bhutan, several African countries, and the USA.

International institutes have also shown interest. ISNAR is considering using NERAD as the Thailand case study for their program on research and extension linkages. CIMMT has requested assistance in using NERAD's

analytical handbooks as training materials for courses they conduct for DOAE in Central Thailand. IRRI has distributed the NERAD promising technologies document to all countries in their farming systems network. In addition, both ILEA in the Netherlands and IIED asked NERAD to write an article on sustainability analysis for publication in their international newsletter.

NERAD has been notified that some of their publications will be used in international postgraduate courses on integrated rural development planning at the Settlement Study Centre in Israel.

Several requests have come from USAID missions in Asia and Africa, and from government agencies and development projects in those areas.

4. SUMMARIZED PROJECT HISTORY

The first year, 1982, was devoted to start-up in NEROAC and the departments. Much work was put into planning activities to lay the groundwork in the target sub-districts, and to develop administrative mechanisms to coordinate implementation.

Year two (1983) was the first real activation of the Project, with teams conducting assessments of cropping systems in four of the nine principal villages, and the subsequent planning and implementation of cropping systems on-farm trials. During year two, the departments began to implement their activities as laid out in the project design.

By 1984-85 the Project was in full implementation, with several work groups engaged in coordinated planning and the departments implementing almost 50 activities for sustaining what worked.

Both a mid-term evaluation and audit occurred in June, 1985. The June evaluation observed:

"A lack of mutual understanding as to what is really a main theme of the project has resulted in a shift of emphasis. Activities to be coordinated are regarded as more important than the project concept. As a consequence, integration of ideas and institutionalization of the project concept do not receive adequate attention. The organizational structure for the project implementation is also a constraint to the

institutionalization of the concept and lessons learned into the line departments of the MOAC.”

An audit in September, 1985, noted some project deficiencies and strongly recommended that a strategy for replication be developed, as well as a management system to measure objectives and milestones.

1985-86 was a transition period in many respects. There was substantial USAID mission turnover (including the NERAD project officer and the Agriculture Division chief). The new mission team seemed much more supportive of the project and the new theme was to “consolidate”. Project objectives were clarified and the philosophy seemed to shift from “how can we cut NERAD losses” to “how can we consolidate NERAD gains”.

During 1987 and 1988, emphasis was put on a strategy for capturing lessons learned and the NERADICs concept was born. Outside consultants were asked to help the project develop strategies to sustain the effort and transfer lessons learned. Production of written documents went into high gear, and the ten workshops were held to consolidate learnings and identify new strategies.

5. BENEFICIARIES, DIRECT & INDIRECT

The ultimate beneficiaries are the farmers in the Northeast. Selected NERAD farming systems technologies could ultimately benefit hundreds of thousands of farm families and impact millions of the rural poor.

Project, NEROA, and MOAC department staff benefitted by learning new technologies and methodological skills. One interviewer expressed the view that "NERAD's greatest impact will be as the persons affected by this project climb the ladder and have the opportunity to leverage what they learned".

Several hundred tambol level agriculture and extension officers and others benefitted through training provided by the project. Finally, other donor projects (their TA staff and RTG implementors) benefitted from the NERAD contributions they have incorporated into those projects.

6. LESSONS LEARNED

As the project reaches its end, the 20-20 vision of hindsight helps to illuminate lessons learned. While some of these lessons learned may be painful, the value in examining them is to benefit from experience, take advantage of what worked, and avoid making similar mistakes in the future.

This section presents major transferable lessons in a generic form which have applicability worldwide. (The more microscopic Thailand-specific lessons are further identified and documented in the technical workshops.) Some of these are not truly new lessons learned so much as old lessons relearned. The key lessons learned are:

1. Project Papers should guide but not constrain projects
2. Project success requires effective project management--and this begins in USAID
3. Project success demands effective 'product champions' both in the donor and in the implementing agency
4. It's never too late for a project to succeed
5. The full extent of project success is not always apparent at PACD
6. Evaluation and audits must be strategically sequenced in time to provide maximum value
7. Build on procedures and processes that already exist in the environment
8. Project by their nature disrupt their host organizations; they should contribute something in return

9. Information and monitoring systems to support decision-making need to be initiated early in the project
 10. Doing less but doing it better is better than trying to do more but doing it worse
 11. Projects must recognize the subtle reward structure and build in equitability
 12. Institutionalization takes place through changes in the behaviors and attitudes of key people
 13. It's important to visibly and liberally share the credit
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1. Project Papers should guide but not constrain projects

In fairness to their authors, most PPs represent the best job people can do with the resources and knowledge they have available at the time.

Several things can be done to make PPs more relevant. First, they should strike a reasonable balance between providing clear objectives and providing flexibility to modify the strategy as experience is gained. They should point to the direction but not describe the specific road. Inputs should be illustrative, with provisions made for updating plans and budgets on a rolling basis.

Second, detailed implementation arrangements should not be in PPs because key actors can change and the project circumstances at the time implementation begins are usually considerably different than when projects are designed. One way to handle this is to keep the implementation plans in PPs brief and spell out more implementation details in an Annex to the Project

Agreement (a suggestion made by USAID/Thailand, which in fact does this now).

Third, designs should build in explicit start-up mechanisms, such as activation workshops attended by key implementing to re-create the project design, develop realistic implementation plans, identify roles and responsibilities, establish monitoring procedures, and so forth. These mechanisms should continue to be used and evolve through the project.

2. Project success requires effective project management--and this begins in USAID

While development professionals frequently point to the need for effective project management in the host implementing agencies, the requirement for solid project management applies to--and begins in--USAID missions as well.

Effective mission management boils down to having the right people for the job, making clear their roles and responsibilities, and working together as a team to support the project.

USAID's first NERAD project officer (a former PCV in Thailand) had a strong background in rural development and agriculture, and fluency in the Thai language. He was technically knowledgeable, creative, dedicated, and well liked by the RTG agencies he worked with.

But it could be argued he was doing the wrong job. While he carried the title of project officer, he functioned more as a technical expert than a project officer monitoring project progress and looking out for USAID interests. He lacked understanding of AID systems and his relations with his mission colleagues were less than optimum.

During quarterly project reviews in the mission, he would describe difficulties the project faced, but had not presented his own recommended solutions. As a result, NERAD earned a reputation as a “problem project” by mission management. (Perhaps mission leadership responds best and are most supportive of projects which have moderately challenging problems. Those with few problems do not need top management attention; those with numerous problems may be perceived as too difficult to solve.)

This changed later, as personalities within USAID changed and the project was looked at with fresh perspectives.

3. Project success demands effective ‘product champions’ both in the donor and in the implementing agency

This lesson is strikingly similar to the conclusion reached by Peters and Waterman in their breakthrough excellence literature (In Pursuit of Excellence) which documented what makes successful companies. Simply put, success requires committed, creative “product champions” who believe in the project, will fight for its success, and can build a team. Such champions must exist in both the donor and implementing agency.

For the RTG, the “product champion” must be someone with appropriate technical skills, who has necessary respect, influence, and connections, and who is willing to use those resources on behalf of the project. NERAD was fortunate to have this kind of individual as its project director, who during the project life also became NEROA's director. He in turn was supported by a technical assistance team which had some outstanding and dedicated individuals.

Similar requirements exist on the donor side. It takes someone who will support the project, and fight for it internally. Successful project officers must have the political and presentation skills to “market” the project internally.

The new mission players assigned to the project met these requirements. They imposed tough but realistic new demands on the project, and played an appropriate mission role in supporting the project. They orchestrated a number of actions concerned with enhancing sustainability in time for those concerns to be incorporated into the project.

4. It's never too late for a project to succeed

It is interesting to note that both NERAD and several other mission projects undertaken during the same period (Northeast Small Scale Irrigation, Lam Nam Oon Integrated Rural Development Project) were considered to be of questionable value during early years and were candidates for deobligation. But they turned out to be more successful than expected.

The lesson here is that each project has its own gestation period. The early struggle and confusion which NERAD went through was a function of ambitious project design, and a complex environment. Projects must go through their own learning curve. Mission management should identify and monitor a set of indicators showing that effective processes are being used which can reasonably be expected to lead to eventual success.

5. The degree of project success is not always apparent at PACD

Clearly successful and clearly unsuccessful projects are easy to spot. When projects end and there is little in the way of benefits or few leading indicators of probable success, one can reasonably conclude that projects will be unsuccessful. And in cases where there is already an ongoing benefit stream with replication occurring, one can reasonably conclude it as a success.

But projects like NERAD fall somewhere in the middle. There are strong indicators of probable success, but most of the technologies are still "promises", not "proven". The chances are good that NERAD will have a very significant impact, but the true judgement must be made years down the road,

There would be tremendous learning value to the mission in coming back in a couple years to conduct an ex-post evaluation of the impact of a series of related USAID projects--not just NERAD, but NESSI, Mae Chaem Watershed Development Project, Khon Kaen University Research Development Project, Sericulture, and similar projects in the agriculture and rural development portfolio which began in the early 1980's. This evaluation

could determine how and what innovations were continued, discarded, diffused, or otherwise adapted.

6. Evaluation and audits must be strategically sequenced in time to provide maximum value

Both evaluations and audits serve useful management purposes. But for maximum benefit, their relationship in time must be deliberately planned

Evaluations are more “user-friendly” than audits and are best used on projects perceived to have difficulties, when there is still sufficient time for changes. Missions can influence the composition of the evaluation team to ensure it includes professionals whose talents can benefit the project, and whose perspectives are “make it work” rather than “find fault”.

In NERAD, the evaluation results were painful, but they gave the project the leverage it needed to influence the departments in ways they could not have achieved on their own. The NERAD evaluation was conducted in June, 1985, and the audit in September, 1985. As a result, the findings were more or less independent and could not benefit from and support each other.

A better combination of timing would be to do the evaluation, followed by an audit roughly a year later. This way the audit could look at how well the evaluation recommendations were implemented.

7. Build on procedures and processes that already exist in the environment

NERAD introduced a considerable number of new task forces, working groups, and planning systems both in the MOAC and in the changwats. Many of these were valuable and necessary, but most will not survive the project.

When new systems and procedures are introduced to support projects and the project is their only rationale, the procedures will most likely come to a grind to a halt when the project ends.

It's much better to build the procedures into ongoing planning processes. Doing so does not impose new artificial behaviors, but modifies existing ones to accommodate new needs.

8. Project by their nature disrupt their host organizations: they should contribute something in return

Relations between the NERAD leadership and existing NEROA units were not ideal before the project and did not substantially improve during the project. The project chose to set up its own administrative procedures, and bypass the regular administrative units NEROA. The stated reason was to comply with the unique donor requirements, speed up the system, and that the capacity wasn't in NEROA. To some extent, this was true. But this caused some resentment of the NERAD project, and NEROA staff did not go out of their way to be helpful. As a result there was an uneasy tension between the two.

To the extent that sustainability was based on having concepts or technologies adopted by NEROA staff, this was not fully achieved. There was some modest carry-over in areas like planning more effective meetings. But there was no wholesale adaptation, because the regular staff had little connection with the project. Perhaps a more explicit strategy to "share the goodies" would help situations like this.

Projects need to decide on the trade-off between performance and capacity-building. While building special project units can enhance near-term performance, the drawback is that doing so does not leave behind residual capacity.

9. Information and monitoring systems to support decision-making need to be initiated early in the project

Project information needs cannot generally be met through available data; special information systems must be created. This begins with the definition of information needs, followed by specification of data elements, formats, collection mechanisms, etc.

To do so takes time. Project information systems must go through a learning and refinement process until they provide useful information. Thus it is essential to begin early. NERAD went through a frustrating early experience with designing and redesigning their monitoring systems till they finally worked, but their experimentation and learning by doing approach eventually paid off.

10. Doing less but doing it better is better than trying to do more but doing it worse

Most projects are highly ambitious in what they attempt to accomplish, perhaps because Project Papers are marketing documents, which promise great things in an effort to “sell” projects. This project was no exception, and the team attempted to mount and sustain many different initiatives as laid out in the PP.

The natural momentum would be to continue to expand the project in the final two years; a wise USAID staff member introduced the idea of “consolidate”. That forced the project team to really look at what had promise, and to focus on doing that well and documenting it, rather than spreading their resources over doing a lot of different things and doing them less well.

11. Projects must recognize the subtle reward structure and build in equitability

For most government employees, projects require additional work for which they are not rewarded. There must be incentives for them to commit the additional time and effort necessary. Small rewards like modest per diem payments can make a big difference in how host personnel perceive the project.

Reward structures must be equitable (or at least perceived as such). In some cases, MOAC personnel traveling in the field with NERAD staff would receive no lodging allowance but only per diem. When project and ministry

personnel traveling to the field together receive unequal payments, this can cause ill feelings that affect project relationships. Perceptions like this that can make or break a project. The overall incentive structure must be considered with an eye on equitability and issues like the differences between grant and loan incentives must be examined for their implications.

12. Institutionalization takes place through changes in the behaviors and attitudes of key people

Questions have been raised as to how much of the NERAD approach has been institutionalized, especially as key project staff move on to take on new assignments.

Institutionalization exists in the minds of people, not in buildings or equipment. The NERAD approach has strongly affected a large number of staff. Some of the key NERAD staff have moved elsewhere--some have been reassigned to other parts of the MOAC, key consultants have gone to Department of Technical and Economic Cooperation or to other donor projects.

This is not necessarily bad, for it is impossible to hold a team together. By spreading out and going elsewhere, they will take what they learned with them and influence their new projects and environments. The mechanisms for sustainability and replication cannot always be precisely identified in advance.

The NERAD project greatly influenced the thinking and perceptions of the NEROA Director, who is a rising star in the MOAC. In his position as NEROA director, he influences the design and implementation of other

projects, and has incorporated many of the NERAD technologies identified earlier in both donor and RTG projects.

Institutionalization occurs by changing people, not by constructing buildings. And whether projects should construct new facilities at headquarters should be carefully considered, especially when those facilities are not operational till late in the project.

13. It's important to visibly and liberally share the credit

An old saying goes "There is no limit to what you can accomplish if you don't care who gets the credit". One of the TA advisors was an extremely prolific writer and played a leading role in writing the handbooks. On one key document, he included the NEROA directors name as a co-author. This action greatly increased the distribution and popularity of these handbooks.

The general recommendation (especially for foreign TA members) is to consider by-lines as a "psychic reward" and work to spread the credit, especially to share by-lines with local personnel. This will create ownership, increase distribution, and promote utilization. Individuals like to get credit.

Institutions deserve credit too. In addition to carrying MOAC and NEROAC identification, the project handbooks being sent out should contain the USAID logo on the cover (this suggestion was given to the TA team and will be done with the remaining reports). Donors like credit too, and their contributions deserve recognition.

7. REVIEW OF WARRANTIES AND PROJECT COVENANTS

All of the covenants listed below were met:

Article 6: Special Covenants

SECTION 6.1 Project Evaluation. The Parties agree to establish an evaluation and monitoring program and plan as part of the Project within six (6) months of the date of this Agreement. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter: (1) evaluation of progress toward attainment of the objectives of the Project; (2) identification and evaluation of problem areas or constraints which may inhibit such attainment; (3) assessment of how such information may be used to help overcome such problems; and (4) evaluation, to the degree feasible, of the overall development impact of the Project.

ACTION: USAID issued PIL No. 7 dated June 14, 1982 approving the monitoring and evaluation plan finding that it met the requirements of Section 6.1 of the Project Loan Agreement ("Project Evaluation").

SECTION 6.2 Use of Pesticides. Procurement and use of pesticides for the purposes of the project shall comply with A.I.D.'s environment procedures regarding the procurement and use of pesticides.

ACTION: On January 8, 1981, USAID sent a cable to AID/W requesting permission to use a limited number of pesticides for use in the NERAD project. On January 16, 1981 AID/W responded. The project followed AID/W response in complying with AID's environmental procedures for pesticides.

SECTION 6.3 Road Improvement. The Government will improve at no cost to the Project on a priority basis any roads that appear to be significant constraints to meeting Project objectives.

ACTION: All the roads connecting with project sub-districts and villages to markets provide adequate access during harvest periods to facilitate orderly marketing of increased agricultural production. The road network was maintained and allowed for access to necessary agricultural inputs and extension services for the implementation of the project.

SECTION 6.4 Taxation.

- (a) This Agreement and the Loan will be free from, and the Principal and interest will be paid free from, any taxation or fees imposed under laws in effect in Thailand.
- (b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Loan, and any property or transaction relating to such contracts and (2)

any commodity procurement transaction financed under the Loan, are not exempt from identifiable taxes, tariffs duties or other levies imposed under laws in effect in Thailand the Borrower will pay or reimburse the same with funds other than those provided under the Loan.

ACTION: This covenant has been applied to all transaction under the NERAD project throughout the life of project.

8. POST-DISBURSEMENT REPORTING AND RESIDUAL MONITORING

The disbursement termination date was permitted for 9 months after the Project Assistance Completion Date (PACD) of February 28, 1989 to allow adequate time for the MOAC to finish all disbursements. No post-disbursement reports are required or recommended.

During the last two years of the project, the project concentrated on dissemination of the project results and institutionalization. Many specific working groups established at the early stage of the project were dissolved. The project was carried on under the organizational framework of the MOAC. Therefore, there is no need for further project monitoring required by USAID.

9. SUMMARY FINANCIAL STATEMENT

The Figure on the following page summarizes the financial status for the period 8/31/81 through 2/28/89. This figure was prepared by the USAID/Thailand Accounting Office.

9. Summary Financial Statement As of 03/15/89 - For the period of 08/31/81 - 02/28/89

Project Element	G R A N T			L O A N		
	Obligations	Commitments	Actual Expenditure	Obligations	Commitments	Actual Expenditure
01 Technical Assistance	2,313,433	2,182,113	2,123,092	-	-	-
02 Administrative/Technical Support	123,793	123,713	100,458	1,130,000	1,030,160	853,237
03 Soil/Land Modification	26,599	25,314	25,314	130,000	112,605	110,000
04 Demonstration & Research	294,907	294,907	294,907	-	-	-
05 Economic Studies Support	247,003	246,057	234,067	-	-	-
06 Evaluation/Monitoring	150,017	105,441	97,832	82,000	47,538	40,481
07 Cropping System	--	-	-	750,000	684,176	506,579
08 Farming System	-	-	-	765,000	716,468	643,160
09 Extension Support	-	-	-	445,000	417,024	368,061
10 Other Agricultural Support	-	-	-	186,000	124,986	107,271
11 Water Resources Development	-	-	-	690,000	668,555	668,555
12 Contingency/Inflation	<u>14,249</u>	<u>-</u>	<u>-</u>	<u>122,000</u>	<u>49,290</u>	<u>-</u>
Total	<u>3,170,000</u> =====	<u>2,977,545</u> =====	<u>2,875,670</u> =====	<u>4,300,000</u> =====	<u>3,850,802</u> =====	<u>3,297,345</u> =====

- Note: (1) Since the Terminal Disbursement Date is 9 months after the PACD, USAID expects to pay almost the total amount of both grant and loan commitments.
- (2) The uncommitted grant funds, in an amount of \$192,455 will be deobligated and reassigned as regional PD&S to be obligated in support of further USAID projects in agriculture.
- (2) The uncommitted loan funds, in an amount of \$449,198, will be deobligated and be returned to the U.S. Treasury.

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