Institutionalizing a FSR/E Approach : NERAD Case Study

Chales Alton[1/]

INTRODUCTION

One of the most frequent criticisms of farming systems research is that "it is an ideology in search of a methodology". In some cases this criticism is justified when overzealous farming systems advocates strike out at the commodity or disciplinary approach and revert to the other end of the pendulum, abandoning the systematic approach which its title implies. Obviously, the difficulty of arriving at any sort of a unified methodology is exacerbated by several factors: its all-encompassing nature in the technology generating complex, which includes the research and extension spectrum; its interdisciplinary nature; and its focus on complex and highly variable agro-ecosystems.

First, the agricultural establishment in most countries is confused by farming systems work since it really is not research nor extension in their conventional bifurcated way of thinking. In fact, it lies in that gray area between research and extension. Many now prefer to use the term "farming systems research and extension" (FSR/E). This confusion is only compounded by the notion of FSR/E transcending all stages of the technology innovation process from beginning basic research through the end diffusion and adoption by the target farmers. This requires linkages of any FSR/E effort with all stages of the technology innovation process : research, development, testing, adaption, integration, dissemination, and diffusion/adoption. Secondly, due to its interdisciplinary nature it is difficult to get discipline and commodity-bound scientists and technicians to arrive at common understandings, structures, procedures, etc., in order to attack the challenge at hand. Thirdly, in part the emphasis on FSR/E has been necessitated by the failure of the traditional commodity approach in dealing with small susbisistence-oriented farmers who were confronted with highly variable agro-climatic and socio-economic environments. Lastly, MOAC sponsored FSR/E projects are all development projects. This means that they are trying to develop replicable mechanisms for future FSR/E activities.

Presently, many attempts are being made to develop farming systems methodologies, especially by the various international institutes. A number of countries are attempting to apply these methodologies to various national farming systems programs and projects. However, they are confronted with the task of trying to operationalize these concepts and methodologies within the existing institutions of the agricultural establishment.

In Thailand we have several of these farming systems projects, each one taking somewhat a different approach, for reasons probably highly correlated to the number of agencies involved in the design of the projects. So in many ways certain methodological parameters are placed on the projects by the design teams. The ensuing farming systems approach has involved those various departments. Quite obviously, that is itself is the first institutional constraint-being limited to those designing departments.

1/ USAID Project Officer, NERAD Project.

This paper will focus on some the constraints of institutionalizing such a FSR/E Approach from the experience of the Northeast Rainfed Agricultural Development (NERAD) Project. There will be no argument that this is the best way to do FSR/E, nor is it the best way to institutionalize it. It is only meant to critically view some of the institutional constraints of establishing such a FSR/E Approach from the eyes of a single project. The assumptions used in this NERAD FSR/E Approach will be examined, and subsequently a possible governmental effort will be posited which would be needed to institutionalize such an approach. From that reference point we can begin to discuss constraints to attaining such a goal.

ASSUMPTIONS OF NERAD

The first and most important assumption is that of the central role of the farmer in the FSR/E Approach. It is a people-based approach rather than one based on a particular resource (eg., land) or on a commodity (eg., rice), for which the technology comes from the experiment station alone. It regards the farmer (synonymous with farm family) as a rational, self-reliant, and opportunity recognizing decision maker. His understanding of his environment and resources have resulted in the rational choice of his existing farming activities. He will only alter these mix of activities when he sees the new technological innovation to be significantly advantageous over the one it replaces. He makes this decision within the context of his overall farm enterprises and off-farm employment opportunities.

The second assumption is that the FSR/E Approach here is complementary and supplementary to the traditional commodity approach of the various departments. The technology generated by the various experiment stations are required for FSR/E on-farm testing and adaption of the technology, while the stations need their technology to be tested in the real world farming system where they are expected to be adopted. This feedback and feedforward of information amongst the various researchers, between research and extension, and from the field level to policy makers are all important attributes of the FSR/E Approach.

From this second assumption follows the third one, that the farmer's participation in the technology innovation process from the beginning will indirect the technology towards types more appropriate for adoption by other farmers.

Fourthly, the FSR/E Approach is seen as a mechanism to not only link research and extension but also to bring about a concerted, integrated, and coordinated interdisciplinary effort to solve the small farmers' problems. The solutions to these problems are typically not limited to a single discipline or commodity.

Fifthly, these real world problems are highly localized in the Northeast due to the highly variable agroclimatic and socio-economic conditions in the region.

EFFORT NEEDED TO INSTITUTIONALIZE A FSR/E APPROACH

A serious FSR/E based project, such as NERAD, needs basic concurrence, if not active support from key actors. In Thailand, this includes the MOAC, from the Minister down to provincial and district operations staff. This support differentiates a full-blown FSR/E program from the present disparite set of projects in the MOAC.

However, FSR/E projects such as NERAD can begin to assist in building coalitions within the MOAC in order to gain future support for such a FSR/E program. There has to be a definite strategy to reorient the agricultural establishment in the MOAC from the conventional research and extension structures, approaches, and methodologies into a valuable FSR/E Approach. This approach should not be in opposition to the existing commodity/discipline approach but only as a linkage between research and extension to supplement and complement it. If the FSR/E Approach is to be institutionalized, then its organization and management must be a part of the whole innovation technology process. While farmers are the target of technological improvements through FSR/E, the government agencies are its ultimate clients. The problem at hand is get agencies who have traditionally focused their efforts on activities or commodities to begin think and behave in terms the farm as a whole, and how to best apply their individual and combined research/extension tools to support the whole farm.

This reorientation process begins with certain key concepts such as productivity, responsiveness, accessibility, integration and learning. First, productivity should be viewed in terms of the whole farm not just a particular enterprise. Optimal farm productivity will undoubtedly entail suboptimal productivity in most of the enterprises in both space and time. This is a difficult concept to accept for those who are oriented towards maximizing the physical production of a single commodity. Equally as difficult is for people in the agricultural establishment to accept such enterprises as on-farm cottage industry and off-farm employment as part of the farming system.

Secondly, the MOAC's effort to assist farmers to increase their productivity is best done by increasing the technical options available to the farmer. The FSR/E Approach can assist the agricultural establishment to provide these technical options by involving the farmer in the development of the technology: assisting him in developing skills in its use: and most importantly, helping him to sharpen his decision-making capacity. Implicit is the recognition of the importance of taking the problem from the farmer's point of view. His understandings and categories can be used in the formation of the government's response to his needs and wants. The whole technology innovation process needs to be linked to a systematic identification of farmers, problems, then to the systematic testing and evaluation of possible alternative solutions under actual farming conditions. The lack of operational linkages between on-farm conditions in technology development has in the past resulted in low acceptance of the new practices by traditional farmers. In short, if the farmer perceives the resulting technological innovations to be in response to his needs then he will more likely accept them.

Thirdly, this governmental response should be integrated. Effort among the different agencies should be coordinated. This includes the proper timing an sequencing of the activities of the different agencies. And this effort must be linked closely to the farm/community base.

Fourthly, the MOAC's FSR/E services must be readily accessible to farmers in order for them to utilize it. Systems must function well, and deal with the farmer's problems in a timely fashion since he is the chief client of the agricultural establishment.

The last and perhaps most important concept of FSR/E Approach which has to be operationalized is that of the importance of learning in the process. Many new

things will be tried in all phases of the technology innovation process. These lessons learned pertain to the actual technology, the process we manage and the actual implementation. Mechanisms for monitoring, reporting, and evaluating these new structures, procedures, and methodologies must be put in place in a systematic way. We waste precious resources by not documenting and sharing these lessons learned.

INSTITUTIONAL CONSTRAINTS TO A FSR/E APPROACH

Different issues which serve as constraints to institutionalizing a FSR/E Approach in NERAD will be examined in terms of management, technology, and operations. Most of these should have some relevancy to other similar projects.

Organization and Management of FSR/E Approach

UNDERSTANDING AND SUPPORT: For it to be viable, the FSR/E Approach must be understood and supported from the highest levels within the MOAC. This means that from the ministerial level through Directors-General (D-Gs) of the departments out to field staff there must be at least some nominal commitment to FSR/E. Without this support system officials and departments cannot work towards the increased productivity of the whole farm. Presently this commitment only exists in limited circles.

POLICY: The NERAD Project and other farming systems projects in Thailand report to national committees which are nominally composed of the D-Gs of the involved agencies. Obviously, most of these people are too busy to sit on the committee for all the projects for which their respective departments are responsible for. Also, a D-G's motivation may be limited unless his particular department has been given the responsibility as lead agency. And, lest we forget, it is difficult to affix credit to any particular discipline or agency when we speak of improving the system as a whole. These factions result in a diverse set of projects--many involved with less than senior level people. There is no single committee that oversees FSR/E projects as a whole in order to transmit the lessons learned about the technology innovation process. Nor is there any group which sets a unified set of policy goals and objectives in FSR/E in the MOAC.

COORDINATION: There is obvious confusion regarding the authority to set policy, plans and guidelines to do FSR/E work. There is no umbrella organization who has the clear authority to do FSR/E work. The Farming Systems Research Institute (FSRI) within the Department of Agriculture (DOA) has been given the assignment to "coordinate" FSR/E activities across departments yet it has been no clear authority to command resources for such an approach outside of a department which deals with crops only. Even within the DOA there seems to be no clear definition of roles of FSRI vis-a-viz the other institutes and technical divisions which are either commodity or discipline oriented.

The Northeast Regional Office of Agriculture and Cooperatives (NEROAC) at Tha Phra, as one of the regional arms of the Office of Permanent Secretary (OPS) in the MOAC, has also been given the dubious task of "coordinating" across departments in projects where more than one department is involved. The OPS here is a supposedly umbrella organization within the MOAC, yet if one looks at the organization chart of the MOAC, it has quasidepartmental status and really is not above anything. So in the case of NERAD there are two organizations which supposedly have similar mission.

Their responsibilities are similar, but authorities to carry out these responsibilities are vague. This results in confusion in implementation.

INTERDEPARTMENTAL COOPERATION : Traditionally the MOAC had been divided along broad disciplinary lines into departments such as : animal science, agricultural economics, crop science, fisheries, forestry, land developmant, etc. There has been much cooperation across disciplines (departments), but from time to time policies, personalities, and bureaucratic bottlenecks have not only discouraged cooperation but have provided incentives for departments to establish in house capability in a discipline for which another department has recognized expertise. This serves as a disincentive to cooperation. This situation hinders a FSR/E Approach which depends on interdisciplinary cooperation, which in the MOAC context implies interdepartmental cooperation and coordination.

INTRADEPARTMENTAL COOPERATION : Many times project activities involve more than one division or section of an agency. There seems to be almost as much trouble in communicating and coordinating within a department for any given activity as there is between departments. Unless departmental coordinators have sufficient rank, they cannot not represent their division, let alone for the other divisions of the department, which may be responsible for an activity. Departments are not the monoliths that we outsiders many times perceive them to be.

PERSONNEL : Even in agencies involved in NERAD (including NEROAC and DOA) which are committed to farming system, there still are personnel constraints to FSR/E activities. These limitations include : staffing, monetary incentives, time, career development, and personnel management. It is difficult to get senior staff to work on these FSR/E projects since they require a lot of time up-country ; this conflicts with professional and family commitments in Bangkok. Due in part to the rules and regulations of the Civil Service Commission (CSC), senior staff are not properly rewarded financially for working on these projects. In addition to salary, the per diem is too low for them to be able to stay up-country as a FSR/E activities warrant. Agencies have difficulty allocating personnel for proper time periods to these FSR/E activities. Agencies do not admit to the amount of time required in systems work. Under the present system career development opportunities for staff, who either live up-country or who work there a high proportion of their time, is highly questionable. Finally, it is difficult for agencies to supervise their staff closely when they are so dispersed when engaged in FSR/E activities.

DECENTRALIZATION : For the FSR/E Approach to be truly effective, that is, for the whole technology innovation process to be responsive to farmers' needs and accessible to them, it must be highly decentralized. Since there are as yet no clear, unified policy guidelines within the MOAC as to how to achieve this decentralization, confusion exists in how agencies delegate responsibilities to the changwats and amphoes. In NERAD departments vary in delegating the authorities to plan, program, budget, monitor, and evaluate activities to the field level. Some have delegated all these authorities and responsibilities and others very little. This not only results in confusion, but also it excludes field level staff, who better understand the problems of that location, from fully participating when they many times have the responsibility of implementation.

So far, the success of the project in decentralization (and inter-departmental coordination at that level) can be attributed to the diligence of the Field 'Managers (FMs), but they are only temporary to the life of the project.

FINANCIAL MANAGEMENT : This whole area may be the biggest institutional nightmare of all. The number of individuals involved in it are almost legion. There are nine agencies participating in the project in four changwats with four different sources of funding : loan and grant funds from USAID, counterpart funds through DTEC, and regular Royal Thai Government (RTG) funds through the traditional budgetary process. Thus to add to the institutional complexity, we have the Ministry of Finance (MF), the Bureau of the Budget (BOB), DTEC, and USAID. Each having their own requirements and procedures. Problems exist from the beginning of the budgetary process, whereby supposedly "bottom-up" needs for project activities are percolated up from the Tambon Council to the departments in order to submit the budget ceilings for departmental activities in a future fiscal year. At the heart of these problems is that an effective mechanism does not yet exist to elicit meaningful village participation in this planning process. We are asking farmers to plan for activities two years into the future. Then we have to live with activities which are many times not flexible enough to be responsive to the changing conditions.

EVALUATION : The main purpose of evaluation is to provide project management and policy makers information about the effectiveness of a project. It is a tool that should be used before, during, and after the project. In NERAD there are two misconceptions about evaluation that confuse participating departments. First, they do not understand that evaluation is only a tool to assist us to learn the about project effectiveness--whether in its managerial, technical, or operational dimensions. Evaluation recommendations can suggest possible alternatives to improve the design or performance of the project. The function of evaluation is not to discipline. Secondly, evaluation is not just the responsibility of a single department. It's true that the economic dimension is the bottom line, but conclusions cannot be reached without proper consideration of physical and biological factors. These difficulties in part stem from the lack of a methodo logy for evaluating the institution-building aspects of FSR/E.

Technology

METHODOLOGY : The NERAD Project along with other FSR/E development projects in Thailand are searching for a methodology which is appropriate to its environmental setting and institutional structures. The methodologies developed by the internatioal centers are useful, but they are institutionally neutral. These methodologies are more research than development oriented. Presently, most of the farming systems projects in Thailand are development oriented. The NERAD Project is aiming at not only developing the farm as a system but also in assisting the government to develop a systems approarch for the technology innovation process.

RESEARCH/EXTENSION RELATIONSHIP : At the present the relationship of research to extension within the MOAC is not clear. In general the Department of Agricultural Extension (DOAE) is supposed to do extension outreach at the village level through their Tambon Extension Agent (TEA). The other departments are supposed to coordinate their activities through the TEA when they are in the field. In actuality,

this is accomplished in varying degrees, but one thing is certain, the officials of all the departments involved are still confused about their roles and respdnsibilities. This confusion is only compounded when FSR/E projects and activities are implemented, since they by definition defy the standardly accepted conventions of interdisciplinary research and extension roles. Now DOA and DOAE seem to be the only two departments, that are trying to define this relationship.

INTERDISCIPLINARY COOPERATION : In the previous section cooperation was dealt with from the management perspective. The bottom line of those impediments is how the technical dimension of the project suffers when there is poor cooperation and coordination. In addition there is a serious lack of social science input, in the form of either anthropology or rural sociology, on these interdisciplinary teams. Rerely are any of these social scientists employed by any of the agencies. Many times when they are used it is when the project is in trouble because of some socio-cultural oversight, and they need one of these social scientists to wave their magic wand to recitfy everything. As with economists, these anthropologists and sociologists should be used as an integral part of the technology design team from the beginning.

DOWNSTREAM/UPSTREAM RELATIONSHIP : This refers to the relationship of research done on experiment stations and in universities to that of the flow of priority needs through the FSR/E work done in farmers' fields. It is the information feedback and feedforward functions between and among agencies whereby the technology is constantly being fine tuned. This relationship operationally has been institutionalized only within DOA--between FSRI and the various institutes and technical divisions--even those roles in a single department are yet to be clearly defined and operationalized. The downstream/upstream relationships between the other departments are even more vague. And finally, outside of the Asian Farming Systems Network of IRRI, the relationships with the international centers is informal at best.

TECHNICAL REVIEW : There seems to be no systematic technical review of FSR/E activities across departments other than at the project level. These technical lessons learned mostly remain with the FSRI if at all. If the FSR/E Approach is to be institutionalized, these lessons learned and plans for future activities will have to be made at a higher level with broader participation. This could be a subcommittee of a National Farming Systems Committee.

UNIVERSITY INVOLVEMENT : Participation by universities thus far in NERAD has been limited to contracts for research or a service and informal involvement in workshops, trianing, or rapid assessment. There are problems of funding university activities outside of this mode since the project lies within the MOAC and the universities are under the Office of University Affairs. Transfer of funds between ministries is complicated. The whole relationship of universities with the MOAC in FSR/E activities is illdefined. Each have different comparative advantages which have yet to be fully exploited.

Operations

MANAGEMENT OF FIELD TEAM : Most of the institutional constraints at the field level revolve around the coordination of the on-site team. At present it is done by Field Managers (FMs), who are constrained by similar factors that plague NEROAC's role within the MOAC. In addition to this, the FMs have to deal with the departments who have differentially delegated authority and responsibility to their field

level staffs in the implementation of NERAD activities. Therefore, there is much confusion over the coordination operations planning and implementation, such as roles, timing, communications, logistics, reporting, monitoring, etc. Delays or changes in implementation are not well communicated between departments or with the FMs. They have to wear four hats in the field : liaison with central department officials, liaison with amphoe and changwat department officials, coordination of technical activities at the sites, and interface with the villagers.

FIELD OPERATIONS : Most of the bottlenecks in the field revolve around the lack of understanding of FSR/E objectives, methods, and procedures by officals and farmers. In the case of farmers it is the result of : poor understanding—where he still thinks that he is involved in a give-away project instead of a development project, where he is encouraged to make his own decisions and to be self-reliant ; poor training—where he is treated like an object to whom knowledge has to be transfered to rather than an equal participant in the education process ; and poor communication—where he is talked down to rather than engaged in a dialogue as a full partner. In the case of field level officials it is the result of : improper understanding of the farmer's indiogenous knowledge, skills and decision-making processes ; poor training in FSR/E procedures resulting in inadequate technical knowledge and skills ; bureaucratic constraints and conflicts which hinder interdepartmental cooperation ; funds not getting to the field at proper time or amounts to implement activities ; and unelearly defined roles between central department and changwat/amphoe officials, where communication has many times been top-down, resulting in less than effective activities and hurt feelings.

MARKETING : This large institution looms over all projects as a constraint. We still do not deal with it in the manner which it deserves. FSR/e projects are still too much production-driven. When in fact the farmer is more of an economic man than we readily admit. Volumes could be written about these marketing constraints. It has yet to be determined what portion of enterprises that are being looked at in FSR/E trials are to be economically viable in the marketplace at the particular time.

SUMMARY

It has been the purpose of this paper to elucidate some of the institutional aspects which constrain such FSR/E projects as NERAD from having a viable FSR/E Approach. Obviously, there are other dimensions than the institutional to these constraints. There are certain issues that such a mixed group as this can discuss and hopefully clarify. Perhaps this may help in removing parts of the constraints. None of the following are really new to most people here, but I will only reiterate some to emphasize the urgency of resolving them :

* National FSR/E Policy Committee
* FSR/E Methodology
* University/MOAC interface
* Downstream/Upstream Communications