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Case Study No. 9

Philippines Farming Systems Development Project--Eastern Visayas<sup>1</sup>  
(492-0356)

by

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<sup>1</sup>This CDIE Working Paper is one of the case studies prepared for a cross-cutting analysis of A.I.D. FSR/E projects, A Review of A.I.D. Experience with Farming Systems Research and Extension Projects (A.I.D. Evaluation Special Study, forthcoming). The 12 FSR/E projects reviewed in this series are:

Botswana Agricultural Technology Improvement (633-0221)  
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Nepal Agricultural Research and Production (367-0149)  
Philippines Farming Systems Development-Eastern Visayas (492-0356)  
Guatemala Food Productivity and Nutritional Improvement (520-0232)  
Honduras Agricultural Research (522-0139)  
ROCAP Small Farm Production Systems (596-0083)

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Philippines Farming Systems Development Project-Eastern Visayas  
(492-0356)

The Philippines Farming Systems Development Project-Eastern Visayas (FSDP) (492-0356) was authorized, as a five-year project, in September 1981, for \$3,000,000 (which included \$1,400,000 in grant funds and \$1,600,000 in loan funds). The Government of the Philippines (GOP) was to provide \$2,813,000 in budgetary support to the project. The original PACD (9/30/86) was subsequently extended for one year.

USAID/Philippines employed the host country contracting mode, whereby the GOP contracted for the project's TA directly with Cornell University. The PP provided for one TA team member, an agricultural economist (farm management); however, during contracting, 36 months of the short-term TA were reallocated to create a second TA position (rural sociologist). The agricultural economist served as the contractor's Field Representative (FR) until his departure from FSDP, at which time the rural sociologist became the FR. At approximately the same time, a position for an agronomist was added to the TA team, thereby returning the total number of TA team members to two.

FSDP was evaluated twice: a process evaluation conducted in September-November 1983 (Mazo, et al., 1983); and a mid-project evaluation in May 1985 (Sajise, et al., 1985). An audit of the project was issued in 1987 (A.I.D., 1987). A third evaluation scheduled for mid-1986 was preempted when the new government of President Corazon Aquino came into power. This case study is based on material discussed in the aforementioned evaluation and audit reports as well as on material from the PP (A.I.D., 1981).

Concept - What was the basic technical idea underlying the project?

Agricultural research in the Philippines traditionally focused on constraints to increased production of lowland, irrigated crops (e.g., rice). Farmers in upland and rainfed areas unsuitable for monoculture, generally found agricultural research with a single commodity focus irrelevant to the mix of crops and livestock which they produce. What was needed, according to the PP, was "a shift in emphasis from a single commodity focus to a resource endowment focus which analyzes the interaction between the farmer and the resource base he has to work with to increase production and income on his small land area (PP, p. 3).

FSDP was designed as the first activity under the Mission's "emerging Rainfed Resources Development portfolio" (PP, p. 3). The project's target area, the rainfed and upland areas of the Eastern Visayas, comprised Region VIII of the Ministry of Agriculture and Food (MAF).<sup>3</sup> The project's goal was "to improve the livelihood of the small farmers in selected rainfed areas of Region VIII." The project's purpose was "to establish a proven mechanism for adapting rainfed, agricultural technologies to the resource conditions found in Region VIII and to disseminate such technologies as appropriate."

FSDP was conceived as a FSR/E project to serve small farmers. According to the PP, GOP interest in FSR came from

the realization that many farmers, particularly in rainfed, upland environments have not benefitted from recent technological innovations. ...proper utilization of rainfed, upland resources is becoming a critical resource management issue...and interest in developing appropriate, sustainable, technologies for these areas is growing (PP, p. 12).

In the view of the PP, the "farming systems approach" had already "proven effective in other areas of the Philippines" and would provide the FSDP with a means

to adapt existing technologies to the resource conditions found in Region VIII. . . . FSR emphasizes...production trials, planned and carried out by and with farmers on their own fields. It is not a substitute for the more traditional research...and provides feedback which can help refine or redefine research priorities.... The...approach...readily fosters the adoption by small farmers of improved technologies since the farmers...are involved in the development and testing of such technologies (PP, p. 4-5).

Accordingly, the project's "intent" was "to establish a mechanism for developing and testing dissemination of improved rainfed technologies" (PP, p. 7). Further, the PP noted that "the existing farming system is the starting point or building block from which any changes and improvements must be made" (PP, p. 16). Similarly, the PP indicates that the "starting point for recommending any change in the present farming system will be the agricultural practices currently being used by the farmer-cooperators" (PP, p. 21). Further, the PP states that FSDP's activities would

be directed toward assisting the small, rainfed farmers in

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<sup>3</sup> The current Ministry of Agriculture and Food's acronym (MAF) is used in this case study, even in places where the former Ministry of Agriculture's acronym (MOA or MA) would apply. Where "MA" has been replaced by "MAF" in a cited quote, the substitution is indicated as follows: [MAF].

making low cost improvements to their present agricultural practices while encouraging development and usage of optimal farming systems. This will focus on testing and adaptation of selected, existing technology for both crop and livestock production to fit differing conditions and not on the development of wholly new technology (PP, p. 21).

Design - How was this basic technical idea translated into a project?

The design of the FSDP provided for three outputs, as follows:

1. Establishment of six field sites at which farmer cooperators would participate in agricultural research in collaboration with an interdisciplinary team. Assessment of market opportunities and completion of researcher- and farmer-managed trials, resulting in improved farming systems which can be disseminated to other farmers in the region.
2. Increased capacity of MAF staff to plan, coordinate, and undertake FSR and disseminate technologies.
3. Improved administrative and research capacity of the Visayas State College of Agriculture (VISCA) to support farming systems development in the region. VISCA will have also trained farmers, researchers, and extension workers to undertake FSR.

The direct target beneficiaries were estimated to be some 360 small farm households in Region VIII.

Drawing on the work of farming systems (FS) practitioners, the PP provided a review of the FS concept and proposed a model for operationalizing FSR in the Eastern Visayas. This model identified five stages: (1) selection of target areas; (2) descriptive or diagnostic stage; (3) design/prescriptive stage; (4) verification stage; and (5) dissemination stage/pilot production program.

The PP identified nine general steps for carrying out the project's FSR/E approach:

1. At each field research site within a recommendation domain, a field team or Site Research Management Unit (SRMU) was to be established. Each SRMU was to include a combination of MAF personnel as well as a farmer-cooperator who would be involved in the team's planning and decision making process (PP, p. 5).

2. Each SRMU was to conduct a baseline study to identify the constraints and the opportunities of the existing farming system(s).
3. Based on the results of the baseline study and other data sources, each SRMU was to conduct farm-level, researcher-managed trials, with the project providing non-land production inputs, the SRMU providing the management, and the farmer-cooperator providing the land and labor.
4. Selection of the production technologies to be included in the farm-level trials was to be made by VISCA and the MAF Technical Staff, in consultation with the SRMUs and farmer-cooperators. These technologies were to be drawn from

those available which have potential application in the target area. Emphasis will be placed on improving... existing systems although the introduction of new plant and animal materials may be appropriate depending on evaluation of the baseline data. In cases where solutions to the identified constraints are not available for testing in farmers fields, VISCA will conduct research trials under more controlled conditions on the college campus (PP, p. 6).

5. Trials were to be evaluated following each harvest.
6. Trials were to be repeated over several seasons. Based on experience and results,

[the farmer] will decide whether or not to increase the size/extent of [his] involvement and whether to expand the technology developed on the contracted portion of his land to other areas of his farm. The final measure of success will be improvement in...traditional farming systems that are adopted spontaneously by other farmers in communities contiguous to the test area, or which can be extended to other farmers through normal extension channels, and that have net positive effects on farm household employment, nutrition, income and livelihood (PP, p. 6).

7. Following two years of researcher-managed trials, the extension service was to take the results that seemed promising and test them in multilocational, farmer-managed trials. At this stage, the farm family would provide its own land, labor, capital, and management inputs. Further, looking beyond the farmer-managed trials, the PP stated that "no later than the third

year of project implementation improvements to farmers existing farming systems will have been identified and will be ready for dissemination outside of the research areas" (PP, p. 18).

8. Training in organizing and operating SRMUs, and in research methodologies to be used in farmers' fields, was to be provided by VISCA to SRMU personnel and farmers. Training was also to be provided to upgrade the economic research capabilities of selected VISCA and MAF staff, and to improve the skill of SRMU workers to do economic analyses.
9. An intensive evaluation was to be conducted during the project's third year to identify "second generation issues" related to the wider dissemination of the new technologies.

The information gained...could form the basis for a follow-on activity. This follow-on activity would focus on the development of supporting systems...[that]...could include, but not be limited to cooperatives, agricultural credit, extension services, processing, storage, and marketing (PP, p. 7).

The PP noted that FSDP would differ in several ways from other FS projects that were already being implemented. First, the link between extension and research would be strengthened from the outset by having research and extension personnel working together on the field teams. Second, the field teams would begin by conducting research directly with the farmer cooperators rather than be starting at the experiment station and then moving to the farm level for verification. Finally, the project would build on and utilize the reorganization of the MAF which had integrated its separate bureaus under a single regional director. It was expected "that by incorporating the above features into the project design that the time and resources required to move from the research to the dissemination stage will be minimized" (PP, p. 13).

To support the proposed strategy for implementing FSR/E, the project's design provided the following inputs:

Field Support -- This input was to assist in meeting operational expenses of the Project Director's Office (in the MAF), the Technical Coordinator for Research and Development Office (in VISCA), and the SRMUs, and to cover other project expenses (e.g., construction and commodities).

Training -- This input included degree training (10 Ph.D., 16 M.S.); short-term fellowships and non-degree training (study tours and short courses); and in-service training (a two- to three-month training program at VISCA for SRMU members and MAF/Region VIII and VISCA staff); and workshops and seminars.

Technical Assistance -- This input included a long-term (48 mm) consultant, an agricultural economist (farm management), to assist VISCA and the MAF/Region VIII implement the project. While the project design provided 48 mm of short-term consultant (STC) support, it provided no short-term TA from rural sociology or anthropology. However, as earlier noted, during the contracting of the project, 36 mm of STC were reallocated to provide for a long-term position for a rural sociologist.

Special Studies -- This input, beyond providing funds for a study of infrastructure and agricultural support services, preparation of a PID for a follow-on project, and design of the follow-on project, provided for indepth socioeconomic studies of each target area. The PP felt that these studies might "fall beyond the purview of MAF and VISCA personnel...actually conducting the FSR" (PP, p. 20). The purpose of these studies was

to gather baseline data so that impact on beneficiaries can be measured at a later date. Other special studies such as time allocation studies, the role of women in farm-level decision making, factors influencing farmers to adopt new technology may also be conducted. Particular attention will be paid to market analysis of crops where marketable surplus is projected to expand as a result of project activities (PP, p. 20).

The project's organizational structure was spelled out in a Memorandum of Agreement (Mazo, et al., 1983:Appendix E) between the MAF/Region VIII and VISCA. First, overall policies, rules, and guidelines for the coordination and implementation of the project's FS activities were to be formulated by a Regional Project Management Committee (RPMC) that would include, among others, the MAF/Region VIII Regional Director, the President of VISCA, the FSDP Project Director (designated by the Regional Director), and Region VIII farmer representatives.

Thus, the Regional Director was to establish a Project Director's Office (PDO) and appoint a Project Director (PD) who would

have general supervision of project activities including those in Research Development at VISCA. Overall project management and field operations will be the responsibility of the Project Director.... All official project communications will be channeled through the Project Director...for appropriate action (Mazo, et al., 1983:Appendix E).

The MAF was also to provide an interdisciplinary team for each Site Research Management Unit (SRMU). Each SRMU was to be staffed by MAF personnel reassigned or newly hired to fill various project positions (agronomist, extensionist, economist, economic researcher, research assistant, driver, clerk, etc.).

VISCA, to be responsible for research leadership and training, was to provide a Technical Coordinator for Research and Development (TCRD) and a project training coordinator. Technical support to the SRMUs was to be provided by a VISCA Technical Support Unit staff comprised of an agricultural economist, an agronomist/soil scientist, an animal scientist, a plant protection scientist, a horticulturalist, an agricultural engineer, and a rural sociologist.

Technical input was also to be provided through project-financed on-campus research relevant to ongoing FSR activities at the SRMUs. VISCA was also to conduct an in-depth socioeconomic study of each target area to provide baseline data so that the project's impact on beneficiaries could be evaluated.

Implementation - How was the project managed by the host-country implementing agency, the TA team, and USAID?

When the FSDF began in 1981, the project "suffered the pangs of a newly started project" (Mazo, et al., 1983).

There was no money when the core project staff was organized. Funds for the first year could not be carried in that year's annual budget..., prompting the Ministry of the Budget to shell out funds from its sources for foreign-assisted projects. Releases of funds were delayed. In fact, a portion of the 1982 funds was released only in 1983 (Mazo, et al., 1983).<sup>4</sup>

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<sup>4</sup> The actual funds made available in 1982 were only 55% of programmed funds, while actual releases reached only 71% of available funds which turned out to be only 39% of programmed funds. Actual funds made available in 1983 were only 66% of programmed funds, while actual releases reached 95% of available funds which turned out to be 63% of programmed funds (Mazo, et al., 1983:50). "While the percentage between the programmed funds and the budgetary allocation increased between 1982 and 1983, the absolute amount actually decreased by some P1.6 million. Actual releases, however, increased in absolute amount by P240,792.00" (Mazo, et al., 1983:50).

Further, supplies and materials had to be borrowed from other projects and funds to get the project started. As of the first evaluation, the TCRD indicated that the VISCA Technical Staff was operating on funds for 1982 which were only released in 1983.

Up to the time of the first evaluation in fall 1983, funding to VISCA had come only from the AID-provided funds.

No GOP funds have been released yet even up to the first week of November 1983. This is an indication of the tight budgetary situation being experienced by the government.... National leadership has made several pronouncements to effect savings and minimize budgetary deficit through budgetary cuts. It is very likely that the present economic situation arising out of the devaluation of the peso will trigger off a decreasing trend in releases of GOP funds for the project in the ensuing years (Mazo, et al., 1983:50).

The first evaluation noted that project's participants had not considered "the economics of project implementation," more specifically, "recurring costs for salaries, transportation, etc." (Mazo, et al., 1983:58). The evaluation concluded that:

Greater project stability might be attained in the ensuing years if the more recurrent costs for project operations, such as vehicular maintenance, gasoline, and other operating expenditures, can be channeled to the loan/grant funds, while the GOP funds are allocated for salaries...of the project staff (Mazo, et al., 1983:50).

The evaluation suggested that USAID/Philippines should consider the possibility, in any extension of the project, of allowing AID funds to cover a greater share of recurring operating costs.

Another problem noted by the first evaluation was that the research team leaders at VISCA and the SRMUs were not aware of how much funds were being (or had been) set aside for their particular research or site.

This lack of information hinders the team leaders from planning and programming for particular research activities in their areas of responsibility. This could very well be a vital factor in the success or failure of the farming systems project (Mazo, et al., 1983:52).

As previously noted, the TA team included an agricultural economist who also served as the contractor's FR, and a rural sociologist who had been added to the team during the contracting of the project. The first evaluation encountered that FSDP staff felt that the agricultural economist's duties as FR had diverted his attention from providing technical support to the socioeconomic studies being developed by the SRMU economists.

While the rural sociologist had assisted in developing the socioeconomic studies during the project's first two years, the designation of this individual as FR, following the departure of the agricultural economist, meant that the rural sociologist's administrative duties as FR began to reduce the amount of time he could provide to support the SRMU economists.

During FSDP's first two years, on-farm trials were a major field activity. During this period, the TA team did not provide any long-term TA support in agronomy. The trials were designed by VISCA Technical Staff and SRMU staff, although not necessarily in a coordinated manner. Not surprisingly, the first evaluation expressed concern over whether the on-farm trials were truly consistent with a FS approach.

For example, the first evaluation found that the project's crop trials in any one farm were introducing at least three modifications. In some cases, this included the introduction of expensive production inputs (commercial fertilizers and pesticides). In other cases, the modification included "the change of the main crop" (Mazo, et al., 1983:324).

Given the PP's position that "the existing farming system is the starting point or building block from which any changes and improvements must be made," the evaluation questioned "why...the main crop...grown by...farmers during the past years is changed." The evaluation noted that this "may be viewed as tantamount to a total change" of the existing FS (Mazo, et al., 1983:24). The evaluation also expressed concern over the project "introducing more than one or two major modifications at the same time" in an existing farming system, also noting this as being "tantamount to ...total change in the farming system" (Mazo, et al., 1983:2).

Viewing the modifications being tested, the first evaluation expressed concern that FSDP staff "may be thinking incorrectly that the goal of farming systems research is to introduce an entirely new farming system and the role of...verification trials is to demonstrate the superiority of [the] new system (Mazo, et al., 1983:25). The evaluation cautioned that, where the proposed changes "are well beyond the financial capability of the farmers" and "they are no longer receiving...help from the project, such introduced changes will not be absorbed into the system" (Mazo, et al., 1983:2).

An example of a questionable research initiative was a study of ducks that was not linked with the farmers' crop production activities or conducted in sites where farmer-cooperators had previously raised ducks. This, the evaluation felt, indicated

a seemingly widespread misconception that the purpose of FSDP-EV is to introduce a new livestock system to replace, rather than modify, the existing systems of the farmer-cooperators. The suggestion of one of the researchers to have separate cooperators for livestock further displays a serious misunderstanding of what is meant by integration of crops and livestock under a farming systems approach to research (Mazo, et al., 1983:25-26).

Another example was the deworming of swine using an expensive drug that might not be within the farmer's reach at project end.

The first evaluation found, in all but one of the sites, evidence that farmer participation did not go beyond farmers being asked about their problems and giving their consent for the project to conduct trials in their fields. The evaluation team reported "many cases wherein a farmer-cooperator appears to have had little control over the choice of the cropping pattern for the verification trials thereby suggesting that farmers have had little say about the proposed solutions" (Mazo, et al., 1983:32). This point was supported by a number of instances cited by the evaluation (Mazo, et al., 1983:30, 32):

- Growing crops on fields where farmers indicated another crop as the traditional crop.
- Planting crops in spite of the farmers' warning that the timing was wrong and could bring about severe pest infestation, with the project telling the farmers that timing would not be an important factor because insecticides could be applied if needed.
- Planting rice in a farmer's field even after the farmer indicated that he preferred to eat corn and would now have to buy it.
- Not considering farmers' preference for the eating qualities of the traditional rice variety and that this variety commands a price almost twice that of the variety the project was trying to introduce.
- Ignoring the farmer's wife in the design of procedures to gain farmer cooperation in identifying production constraints, despite project case studies having shown that the farmer's wife plays a major role in making decisions about the investment of family resources.
- Basing design of cropping trials (e.g., choice and timing of planting of individual crops) on agronomic considerations, without reference to seasonal variability in market demand and prices or the farmer's knowledge about these factors.

Thus, as the first evaluation found, it was not surprising that most farmer-cooperators did not feel or act

as partners of the site teams in the conduct of the experiments. A number of them have been involved only in plowing the field and, in many cases, all other labor was either provided by SRMU or by hired hands. Some farmers said that they are participating in the experiment because of the free inputs which include fertilizers, planting materials, animals and labor (Mazo, et al., 1983:33).

The minimal participation of farmer-cooperators, combined with their apparent perception of not being members of the site teams, led to a situation where the farmers had a minimal understanding of what was being done by the project in their fields. As the evaluation team reported,

all but two of the farmers interviewed...believed that the trials are demonstrations of new technology that is already proven and that they are expected to adopt them. There was ...no appreciation of farmers for the notion that the trials represented experiments to test and to compare different approaches under farm conditions (Mazo, et al., 1983:33).

Some farmers did not know the varieties of the crops planted in their fields; few farmers could tell the rationale for rotating leguminous crops with grain crops. Where farmers had not been kept apprised on the cost of inputs applied in a trial, they would have a difficult time evaluating the advantages, if any, of a new practice as compared with traditional practice. The evaluation also noted that the project, in designing trials, may have failed to consider competing demands on the farmer's labor that precluded farmers from greater participation in the trials.

The first evaluation noted a need for more on-the-job orientation in FSR/E, to ensure that SRMU staff adequately understood the FSR/E concept, its implementation requirements, and the rationale for conducting on-farm trials. For example, the evaluation formed a number of impressions:

- That the project staff's only intent in gathering data was to prove the relative advantage of improved technology.
- That project staff were often attributing the farmer's failure to adopt new technology to stubbornness or ignorance of scientific farming.
- That the project was not studying the potential impact on market prices if crop yields were to increase tremendously.
- That the project was not adequately considering the

role of farmer wives in deciding what farm activities to undertake.

- That the project was not considering how government policies affect farmer decisions.

While the intent of the project was to develop the MAF's capability to carry out FSR/E, this would require that the site-level MAF personnel on the SRMU teams be able to provide station- or university-based researchers with feedback on farm-level production constraints that might be investigated in the "back-up research program." However, by the time of the first evaluation, the planning and implementation of the "back-up research" program had been delayed.

The first evaluation found that the studies proposed in the draft VISCA "back-up research program" were not linked in any way with the project's farm-level trials or even with specific problems at the project sites (Mazo, et al., 1983:34). Further,

[MAF] site personnel informed the Evaluation Team that they [had] not made any suggestions to the VISCA Technical Team on the specific back-up research to be conducted, and they seem not to feel comfortable to do so. This may be an indication that, aside from feeling inadequate in research background, they might still be under the usually inhibiting influence of a "professor-student relationship"...experienced during their college days in VISCA. ...most of the [MAF] personnel are VISCA graduates and had been students of the VISCA Technical [Team] (Mazo, et al., 1983:34).

Such "inhibited feelings," the evaluation noted, would not be conducive to the site teams developing an effective working relationship with the VISCA Technical Team. On the other hand, since the personnel on the site teams had limited experience, the project would need to exercise caution not to set unrealistically high expectations for "the input of the site personnel in the identification and planning of the back-up research program" (Mazo, et al., 1983:35).

During implementation, the original project staffing pattern was modified several times. One modification was the addition of a Project Monitoring Officer to the PDO. Also, a second economist position (economic researcher) had been added to each SRMU, and a part-time home management technician had been detailed to each site. The evaluation questioned whether there was a need for having two economists at each site, especially since the voluminous socioeconomic data gathered by the project had not been analyzed. On the other hand, while the PP had provided for a livestock specialist in each SRMU, no SRMU had been assigned a livestock specialist.

While SRMU personnel were expected to perform to a certain extent as researchers, their training and experience were largely in extension. Not surprisingly, SRMU personnel felt that they needed more training on experimental design, field plot techniques, statistical analysis, and report writing. The economists and economic researchers, mostly recent college graduates, voiced a need for more training in socioeconomic research.

More than eight VISCA instructors and researchers had been assigned on an almost full-time basis to the project. The first evaluation found that VISCA's role in the SRMUs had become much greater than originally envisioned. While the PP had identified the Project Director's role as providing general project supervision including the development of project-supported research at VISCA, the PP indicated that the VISCA-based TCRD would play a leadership role in formulating the project's research program both on campus and at the project sites.

However, by the time of the first evaluation, the evaluation team found that the PDO had delegated to VISCA the responsibility for all research decisions. The PD felt that VISCA had the technical capabilities to assume responsibility for technical leadership, and that the job description for the PD (PP Annex E) did not specify a technical leadership role. The evaluation concluded that the PD had not provided as much leadership in technical matters as required for successful project implementation.

The evaluation also concluded that administrative support needed to be provided to the PDO and the TCRD office.

the Project Director and the Technical Coordinator for Research and Development were observed to be enmeshed in ...administrative matters which could be delegated to other personnel with lesser technical matters to attend to. Thus, the pattern may be further modified to provide for someone to handle...purely administrative tasks at the PDO and TCRD office. This will also provide more time for the Project Director and Technical Coordinator to attend to the more substantive technical matters of the project (Mazo, et al., 1983:38).

One adjustment made by FSDP to deal with "the reduced role and corresponding lack of availability of technical expertise in research on the part of the PDO" (Mazo, et al., 1983:44) was the creation of a Steering Committee (SC) to review the research program prepared by the SRMUs. The SC, as a working group of the RPMC, was to be an institutional link between VISCA and the MAF, and to provide a forum for evaluating research proposals from the SRMUs and the VISCA Technical Team, and for identifying and resolving issues related to project implementation.

However, even with the SC, there were differences in perspective among the parties involved. The first evaluation felt that responsibility for developing research should remain with VISCA but recommended that PDO capability in research, economics, and management be strengthened to enable the PDO to provide leadership and participate in formulating and implementing FSR by SRMUs and VISCA.

Interestingly, while the PDO deferred research decisions to VISCA, the first evaluation noted the

comments...from the SRMU personnel about confusion over whether they were to follow suggestions from the PDO or from the VISCA Technical Team. The [evaluation] team also heard comments of members of the Technical Team on their frustration resulting from the hesitancy of some site researchers to follow their suggestions and their failure to acknowledge involvement of VISCA personnel in the conduct of field trials in some areas (Mazo, et al., 1983:44).

The first evaluation also noted that VISCA's decision to involve economists and social scientists in the Technical Team, "as a response to the...complaint that research...ignores these concerns,"

contributed to the limited ability of VISCA...to assume greater responsibility for the...research program. The apparent absence of an organizational system to feed economic and social data into decision[s] on field trials ...limited the effectiveness of the team (Mazo, et al., 1983:44-45).

The problem of integrating VISCA's participation could have been solved by strengthening VISCA's authority and responsibility vis-a-vis the FSR/E process. However, as the evaluation noted,

this solution would not have been consistent with the project purpose of establishing within MAF line agencies the institutional capability of carrying out [FSR] and of linking research to capabilities (Mazo, et al., 1983:45).

While acknowledging the need to strengthen PDO's capability to take on greater responsibility in carrying out FSR/E at the farm level, the first evaluation also saw the assignment of VISCA professionals to SRMUs as being highly desirable. However, the evaluation cautioned that "there is a need to carefully and explicitly define this role as advisory, with responsibility for final decisions, and corresponding responsibility for blame or credit with the PDO and the SRMUs" (Mazo, et al., 1983:45).

Given approximately 72 research locations scattered over the Eastern Visayas (6 sites and 12 farms per site) and problems with transportation including travel time, the evaluation questioned whether this number of research locations could be adequately supervised and visited regularly by the PD, the VISCA Technical Team, and the TA team members. As the evaluation pointed out,

the existing farming systems of the farmers are neither understood nor appreciated by the majority of the staff involved in the project. The generally large number of locations at each site where field tests are underway may have prevented the SRMU staff from spending time to fully understand the existing systems and how these should affect the proposed interventions (Mazo, et al., 1983:56)

The first evaluation concluded that the project had too many too many research locations, and in view of the lack of experience of project participants in implementing FSR, that the project have fewer sites and not more than four or even two research locations per site: "one cooperators who experiments with one change in his system, and a second cooperators with a similar farm but not using the innovation." As the project gains experience, then on-farm trials could be expanded to additional locations and sites.

The first evaluation found no indication that the FSDP had made any effort to involve farmer organizations or any other community organizations in the project. "Group involvement came only in the group meetings organized for the purpose of briefing the farmers of the project, but all dealings between the project and the farmers are on [an] individual farmer basis" (Mazo, et al., 1983:42).

By the time of the second evaluation, FSDP was entering its fourth year. Most construction of infrastructure facilities and equipment acquisition as well as degree and short-term training had been completed. While the second evaluation found that the project's initial diagnostic phase had been weak, the project had evolved toward "a more...problem-solving approach" (Sajise, et al., 1985:1), and "from a cropping systems approach to a farming systems approach" (Sajise, et al., 1985:25).

While the project had placed a greater emphasis on farmer participation, the second evaluation found that field research at most sites had not yet moved beyond researcher-managed trials, that recommendation domains were not clearly defined, and that technologies needed further testing and refinement under different conditions. On a positive note, the evaluation did find that the SRMUs and the VISCA back-up researchers were developing "a needed problem-solving approach in which problems are... farmer-identified. Interdisciplinary work is developing; and, in all, the project is moving towards a true farming systems approach" (Sajise, et al., 1985:3).

The project's broadened approach included the addition of livestock specialists in the SRMUs; it also included consideration of the interaction of ecosystem variables within the farming system. However, the second evaluation expressed concern over the project's pre-mandated focus on major commodity cropping patterns and recommended that the project's scope be further broadened to include other aspects of FS in the project's target area (e.g., minor crops like vegetables, non-crop production activities such as cheese production). In this regard, the evaluation noted that FSR "must consider the sustainability of the possible recommendations and the implications of that sustainability in terms of farmer willingness to make necessary trade-offs" (Sajise, et al., 1985:61).

One indicator of the greater participation of farmer-cooperators was the involvement of cooperator organizations in the development of the work plans of the SRMUs, the evaluation of research results, and the extension of technologies. While the second evaluation recognized that SRMUs were playing and could play an extension role, research needed to be emphasized over extension until technologies were better developed.

The second evaluation noted that FSR projects "may inevitably evolve over time. Practitioners learn by experience and adjust methods periodically to better serve farmers" (Sajise, et al., 1985:31). The evaluation team recommended that FSDP's strategy would be more effective if the following were carried out:

- having SRMUs give more attention to problem identification and the use of descriptive information on farmers' problems to identify specific issues or hypotheses to subject to further research;
- making better use of exploratory survey procedures;
- paying more attention to research methodology;
- devoting a smaller share of project resources to cropping pattern trials;
- changing somewhat the nature of farmer participation;
- getting back-up research more closely related to problems faced by resource poor farmers; and
- taking better advantage of the multidisciplinary composition of the SRMU teams and VISCA technical group.

Also, FSDP needed establish the necessary links with government agencies (e.g., Bureau of Lands) to clarify land classification and tenure issues in most project sites.

Further, the second evaluation team outlined a sequence of operational procedures to implement FSR (Sajise, et al., 1985:33-34). This, however, suggests that FSDP had not established, even three years into the project, an adequate sequence of operational procedures for implementing FSR effectively and efficiently.

The second evaluation also noted the project's pre-mandated focus on crops grown by upland farmers which effectively directed research resources to previously neglected crops but "eliminated problem identification as the first step in the farming system approach at the site level" (Sajise, et al., 1985:32). Thus, while most SRMUs merely targeted their efforts on farmers with less than 3 hectares of land, there was little stratification of the target population due

to the implicit assumption that all farming households in upland areas are relatively homogeneous.... . . . The various sondeos, socioeconomic profiles, and baseline studies reflected an assumption of homogeneity with data presented largely in terms of modal distributions. Cooperator selection and technologies being developed and methods of working with site farmers have, as one result, assumed homogeneity. . . . Understanding diversity would allow for better targeted research and extension efforts, and would allow for a better understanding of cases of adoption and non-adoption (Sajise, et al., 1985:35, 57).

While the need for stratifying farmers became apparent to most SRMU teams as project implementation proceeded, the evaluation recommended that greater attention be given to training SRMU teams in how to develop research proposals based on stratifying farmers and defining recommendation domains.

FSDP had come to place increased emphasis on participation of farmer-cooperators, and made progress in "adopting more of an interdisciplinary and locally relevant problem solving approach to research" (Sajise, et al., 1985:25). But the second evaluation team cautioned the FSDP against putting

an overemphasis on trying to improve farmer welfare through mobilization of farmers and their existing resources at the expense of trying to develop new technologies.... Both... approaches--farmer mobilization and technology development--are being used simultaneously by the...FSDP-EV and some confusion appears to exist as to the effects of each on production. While mobilization of farmers certainly can have significant short-term benefits, long-term benefits can be limited if the farm system itself is not significantly changed (Sajise, et al., 1985:23-25).

Evaluation - How was the project's performance measured or assessed?

Looking back on the project's first two years, the first evaluation concluded that FSDP had generated

a high degree of interest and enthusiasm among all the participants - the project staff, the consultants, and most important, the farmers. Very significantly, the project has brought about the beginning of an understanding of the dynamics of farming systems and the practices and concepts of farming systems research (Mazo, et al., 1983:Foreward).

While the second evaluation noted, two years later, that FSDP had made progress in introducing new technologies in the form of improved crop varieties and management practices, the evaluation team found that it had been "unable to identify technologies completely ready for broad extension" (Sajise, et al., 1985:27).

One problem was that the work of the SRMU teams placed project personnel in the position of being perceived by cooperators (and non-cooperators) as extension workers, not as researchers. When members of the second evaluation team asked cooperators what was the project's purpose, farmers usually responded "to give advice to farmers" (Sajise, et al., 1985:46). Asked how they had benefitted from the project, the same cooperators cited the new crops and varieties, the provision of inputs (e.g., fertilizers) for cropping pattern trials, and livestock dispersals.

This pattern led the second evaluation team to express concern over FSDP's involvement in extension. First, the team felt that the project should avoid placing itself in a position of providing inputs and advice to a small, select group of cooperators. Yet in interviewing non-cooperators, the team found that these farmers knew little about the project's activities; this led to the conclusion that the project's activities were, for the most part, not having an impact on non-cooperators. While this potentially could be explained by a lack of interaction between cooperators and non-cooperators, that there were no "technologies completely ready for broad extension" may have been a contributing factor.

The second evaluation also noted that FSDP's extension role had the effect of hiding the project's main purpose (technology development) from farmers. Indeed, the team noted:

What little was known about the project by non-cooperators related to the extension role of introducing new crops and varieties. Very few farmers, cooperators and non-cooperators, had any notion that [FS] involves research to develop and screen new technologies (Sajise, et al., 1985:47).

There were various problems involved in establishing VISCA's support to FSDP. For example, project-supported back-up research at VISCA had tended to be oriented more to disciplinary interests of the VISCA Technical Team and less to immediate problems and needs at the sites. This problem, however, had been overcome by the time of the second evaluation; indeed, the evaluation team reported that it was impressed by the assignment of VISCA Technical Team members to specific sites to ensure that they would interact with farmers and SRMU teams on a regular basis. This, the evaluation noted, would help to ensure that VISCA's back-up research is responsive to the problems of resource poor farmers. However, the evaluation also noted that there was an increasing demand by the SRMUs for technical help that the VISCA staff could not adequately meet because of academic commitments. Yet, as the second evaluation noted, a monthly visit of a Technical Team member to the SRMUs is not adequate (Sajise, et al., 1985:70).

The second evaluation noted that the project's substantial administrative load precluded the TA social scientist (the rural sociologist) currently serving as FR from providing vital TA in social science. The evaluation recommended that, during the remaining LOP, a long-term social scientist be provided or that substantial local administrative assistance be provided to the project's rural sociologist.

Assessing the overall contribution of the project's TA component, the second evaluation noted a "prevailing perception" among FSDP staff and VISCA that the TA had "not been very effective in establishing new diagnostic tools and research designs... on-site" (Sajise, et al., 1985:79). A preference for long-term TA for a project extension or follow-on was seen as being needed in two areas: (1) training and extension, and (2) agricultural economics/economic anthropology with extensive FSR/E experience.

Institutionalization - How did the project provide for the implementing agency to develop a sustainable capability to continue to perform the types of activities supported by the project?

The FSDP was originally authorized in September 1981, as a four year project. What progress had been made to institutionalize FSR/E in the MAF/Region VIII?

By the second evaluation (May 1985), MAF/Region VIII officials felt that FSDP should be integrated into the Ministry's system of four Regional Integrated Agricultural Research Stations (RIARS). With a mandate to study cropping patterns in rainfed lowland and upland fields, RIARS management had decided to use a FS approach and to expand RIARS activities in upland areas.

However, as early as the first evaluation, little attention

or consideration had been given to integrating FSDP functions and activities into existing MAF programs beyond the LOP. Nor had the project addressed the potential for linking implementation of FSDP with the MAF's extension delivery system, despite an MAF extension unit being present at all FSDP sites. The evaluation reported that

the "Special Project" status of the FSDP-EV had isolated the project from the rest of the [MAF]. Middle and lower level MAF staff who are not part of the project indicated a pervasive feeling that the project is not part of [the MAF]. ...there has been little thought given to the relationship of the project to the RIARS (Mazo, et al., 1983:46).

Further, there had been "no attempt at examining the implications of staffing patterns, qualification[s], salaries, etc. for eventual integration, nor any consideration of a possible RIARS role in the management of administrative control of the project" (Mazo, et al., 1983:46).

The second evaluation recommended that FSDP be integrated into the RIARS system by August 1985, and proposed an organizational structure for this integration. The FSDP PD would become the Assistant Manager of RIARS, and the site research teams (FSDP's SRMUs and RIARS' Provincial Technology Verification Teams) would be renamed Field Research Management Teams (FRMTs). Also, FSDP's RPMC would be dissolved, and the RIARS' Regional Research Council (RRC) would be expanded to include RPMC members not already members of the RRC. However, the Steering Committee of FSDP would remain and be expanded to include other staff members of the MAF including the Manager of RIARS and others.

The second evaluation recommended that a special committee, consisting of staff from VISCA, FSDP, RIARS, and the MAF/Region VIII Office, be formed by June 1985, to prepare details for the merger recommended by the evaluation. The integration of the FSDP into RIARS would, in the evaluation's view, secure the institutionalization of FSR/E by virtue of stabilizing the critical positions of the SRMU (renamed FRMT) personnel. Also, the evaluation stated its assumption that "a major follow-on activity" would provide for the "multiplication" of the FSR/E approach through "the involvement" of Agricultural Production Technicians, Subject Matter Specialists, Extension Technicians, and Municipal Agricultural Officers (MAOs). Finally, there was an assumption that the follow-on activity would address the required support services for technology adoption. The second evaluation recommended that support for a follow-on activity should be funded by USAID/Philippines for a period of three years, with corresponding counterpart funds from the GOP. This follow-on support was deemed to ensure the institutionalization of FSR/E in the regular structure of the MAF.

What became of these recommendations? In the fall 1986, an audit of the FSDP was conducted (A.I.D., 1987). As of November 30, 1986, \$2.3 million or 50 percent of the \$4.6 million in AID funds obligated for FSDP had been expended. While the audit noted that FSDP had made progress in developing appropriate agricultural technologies for the farmers in the project's target area, the audit concluded that FSDP would not be cost effective unless actions were taken to ensure that these technologies were disseminated to as many small farmers as possible.

Unless the technologies developed by the project are disseminated to as many small farmers as possible the project will have limited impact because only the 360 families targeted during the research phase will benefit from the more than \$2.3 million expended during this phase of the project (A.I.D., 1987:20).

The audit noted that to ensure that dissemination continues after FSDP ends, the activities supported by the project needed to be institutionalized within MAF/Region VIII.

A review of the PP indicates that the project design took the following position:

that no later than the third year of project implementation improvements to farmers existing farming systems will have been identified and will be ready for dissemination outside of the research areas. At this stage, it may be appropriate to test alternative methods for dissemination of the technologies.... Procedures and a detailed plan for dissemination of the technologies will...be developed at the appropriate time in the project implementation process" (A.I.D., 1981:18).

The audit noted that the project had "assumed that technology was available for rainfed, upland areas." But neither "the existing methodologies nor the specific technologies available proved suitable to the project areas" (A.I.D., 1987:3).

In May 1985, FSDP began more basic research to implement the recommendations of the mid-project evaluation (Sajise, et al., 1985). The audit noted that the project's implementors had

discovered that intensive diagnostic studies were necessary to identify the...needs and problems of small farmers. Based on the results of these studies, the project then began researching, developing, and testing new technologies to address these needs and problems (A.I.D., 1987:3).

However, the project focused on technology development, with only limited emphasis being placed on technology dissemination.

Further, the audit found that the detailed planning and

budgeting necessary "to ensure dissemination" had not been completed, and project activities had not been institutionalized" in MAF/Region VIII "to ensure continued dissemination of proven agricultural technologies" (A.I.D., 1987:2).

The initial draft proposal for extending the project for one year emphasized technology research and development but did not contain specific plans and a budget for dissemination, nor did it discuss methods for institutionalizing project activities in MAF/Region VIII. This draft, prepared by the contractor (Cornell University) and MAF/Region VIII, had not been approved by USAID/Philippines at the time of the audit.

Following discussion between the audit team and USAID/Philippines officials, FSDP staff and USAID/Philippines prepared a considerably improved final plan or proposal for a one-year extension of FSDP. This proposal stated that FSDP would begin to "disseminate proven on-farm research mechanisms to a wide audience" of MAF/Region VIII and VISCA staff "and disseminate appropriate upland technologies to a wider audience" of extension agents and upland farmers. Also, the proposal provided for TA to design a three-year follow-on activity focused on technology dissemination. The proposal indicated that MAF/Region VIII was undergoing reorganization but that USAID/Philippines and VISCA project personnel would ensure that the revised MAF/Region VIII structure institutionalizes FSR/E activities.

While the one-year extension proposal was deemed by the audit to be "a good beginning, it did not specifically plan for institutionalization of project activities...or plan and budget for technology dissemination" (A.I.D., 1987:3). The audit stressed that:

For this project to have impact on farmers..., the research methodology must be integrated into the activities of the [MAF/Region VIII] and the research must be linked with the division of the [MAF/Region VIII] responsible for extension. Neither of these can occur if the project continues to be implemented outside the [MAF/Region VIII] structure. In addition, in order that proven agricultural technologies can be successfully disseminated, a specific plan needs to be developed which will:

- identify a target number of direct beneficiaries;
- identify a strategy for reaching these farmers;
- identify the inputs necessary for achieving dissemination; and
- set a timetable for dissemination to take place (A.I.D., 1987:3-4).

Accordingly, the audit recommended (1) that USAID/Philippines develop a plan (including strategy, budget, inputs, and time-table) to disseminate agricultural technologies that had proven successful under the project, and (2) that USAID/Philippines ensure that the design of follow-on activities include a plan for institutionalizing FSR/E in MAF/Region VIII.

While the audit acknowledged that the final plan or proposal for the one-year extension addressed the issues of dissemination and institutionalization, the audit took the position that

addressing the issues....in the plan...does not constitute sufficient action to ensure that these objectives will be achieved. While the one-year plan is a good beginning, dissemination and institutionalization will be the subjects of the three-year add-on activity. Therefore, the two recommendations cannot be closed until the design and plans for the add-on activity are completed and address the concerns of this audit report (A.I.D., 1987:5).

The FSDP was finally extended, including a TA component, for one year to the end of 1987. Further, USAID/Philippines granted the FSDP a three-year extension, effective January 1, 1988, without a TA component (Tully Cornick, personal communication). However, the available secondary documents provide no further indication of the status of institutionalization of FSR/E in the MAF/Region VIII. In the long run, given the MAF's extension mandate,

the primary agricultural research component will probably remain in the regional agricultural colleges. The linkages that we [a former member of the TA team speaking], in conjunction with the MAF and VISCA, tried to develop between these two institutions were predicated on the assumption that this was the long term solution to the integration of research and extension in the Philippine context (Tully Cornick, personal communication).

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## Annex A. Project Description Sheet.

This Project Description Sheet lists the core, operational, and generic constraints identified in this project, per the following codes: core (C), operational (O), and generic (G). A positive (+) sign after a constraint indicates that the project was effectively coping with the identified constraint.<sup>5</sup>

Core Constraints (C)

- C.1 Farmer Orientation
- C.2 Farmer Participation
- C.3 Locational Specificity of Technical and Human Factors
- C.4 Problem-Solving Approach
- C.5 Systems Orientation
- C.6 Interdisciplinary Approach
- C.7 Complementarity with Commodity and Discipline Research
- C.8 Technology Testing in On-Farm Trials
- C.9 Feedback to Shape:
  - a. Agricultural Research Priorities
  - b. Agricultural Policies

Operational Constraints (O)

- O.1 Stakeholder Understanding of FSR/E
- O.2 Agricultural Research Policy/Strategy Defining Role of FSR/E
- O.3 Long-Term Commitment of Resources
- O.4 Existing Research Capability and Shelf Technology
- O.5 Consensus on FSR/E Methodology
- O.6 Capability to Process Farming Systems Data
- O.7 Consensus on Criteria for Evaluating FSR/E
- O.8 Links with Extension
- O.9 Links with Agri-Support Services
- O.10 Links with Farmer Organizations

Generic Constraints (G)

- G.1 Project Management Structure
- G.2 Government Funding to Meet Recurrent Costs
- G.3 Staffing with Trained Manpower
- G.4 Management of Training
- G.5 Management of Technical Assistance
- G.6 Factors Beyond a Project's Control

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<sup>5</sup>An analysis of these constraints in 12 FSR/E projects appears in A Review of A.I.D. Experience with Farming Systems Research and Extension Projects, **A.I.D. Evaluation Special Study** (forthcoming), available from A.I.D.'s Document and Information Handling Facility (per instructions on last page of this report).

Philippines/FSDP - Farming Systems Development Project-Eastern Visayas (492-0356)

Initial Authorization: 1981 (for 5 years)

Goal: "to improve the livelihood of the small farmers in selected rainfed areas of Region VIII"

Purpose: "to establish a proven mechanism for adapting rainfed, agricultural technologies to the resource conditions found in Region VIII and to disseminate such technologies as appropriate"

Outputs:

1. Field research sites established: (a) specific improvements in current farming systems identified and disseminated; (b) site-specific and multi-locational trials completed; (c) farmers trained and participating in research; (d) Ministry of Food and Agriculture (MAF) staff trained; and (3) physical facilities completed;
2. Improved capacity of the Visayas State College of Agriculture (VISCA) to support farming systems development in Region VIII: (a) on-campus trials completed in support of field research trials; (b) farming systems teams established; (c) VISCA conducting training in farming systems; (d) VISCA staffed trained; and (e) physical facilities completed; and
3. Improved capacity of Region VIII MAF to plan, coordinate, and undertake farming systems research: (a) Project Director's Office established; (b) MAF Regional staff trained; and (c) physical facilities completed.

Implementing Agency: Region VIII/Ministry of Food and Agriculture, and Visayas State College of Agriculture (VISCA).

TA Contractor: Cornell University.

Evaluations: Two -- a process evaluation in 1983 (Mazo, et al., 1983); and a mid-project evaluation in 1985 (Sajise, et al., 1985). A project audit was issued in 1987 (A.i.D., 1987).

Constraints: C.2, C.3, C.4, C.5, C.6, C.8, C.9.a, O.4, O.5, O.8, O.9, O.10 (+), G.1, G.2, G.4, G.5

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