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Case Study No. 2

Gambia Mixed Farming and Resource Management Project (635-0203)¹

by

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Botswana Agricultural Technology Improvement (633-0221)
Gambia Mixed Farming and Resource Management (635-0203)
Lesotho Farming Systems Research (632-0065)
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ROCAP Small Farm Production Systems (596-0083)

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Gambia Mixed Farming and Resource Management Project (635-0203)

The Gambia Mixed Farming and Resource Management Project (MFP) was authorized, as a four year project, in 1979, for \$6,000,000. The Project Grant Agreement was signed with the Government of The Gambia (GOTG) in August 1979. MFP was implemented by the Ministry of Agriculture and Natural Resources (MANR), while technical assistance (TA) to the project was provided by the Consortium for International Development (CID), with Colorado State University (CSU) as lead university. The TA contract, signed in February 1981, provided five TA positions, including agricultural economist (Chief of Party), rural sociologist, maize agronomist, forage agronomist, and range ecologist. With the TA contract not being signed until February 1981, the TA team did not begin arriving in country until spring 1981. After the second evaluation of the project, an agricultural marketing specialist was added to the TA team.

The MFP was evaluated two times: an early mid-term evaluation in April 1983 (Osburn, et al., 1983); and a final evaluation in March 1986 (Corty, et al., 1986). The first evaluation found that the authorized funds and duration were not sufficient to meet the project's objectives. OAR/Banjul amended the project, extending its original PACD from September 30, 1983, to March 31, 1986, and increasing its funding from \$6,000,000 to \$9,000,000.

The present case study is based on information drawn from both evaluations.

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

The Gambia is a small (10,690 square kilometers), densely populated country having a predominantly agricultural economy, in which groundnut is the major crop and the most important source of export earnings and government revenue. The MFP was designed during a period when the GOTG was undertaking efforts to cope with the Sahelian drought, to slow and reverse environmental degradation, and to improve agricultural production. During the 1970s, stagnant production and declining terms of trade led to a progressive deterioration in the country's balance of payments. Increasing population and declining food grain output led to an increase in food imports. As a result, increasing diversification and production of crops and livestock became major national goals (Corty, et al., 1986:2). To move toward these goals, donors assisted the GOTG in launching several major agriculture and resource management projects.

As stated in the PP, the goal of the MFP was "to increase the economic well-being of the rural people of The Gambia." The purpose was "to foster intensification and integration of crop and livestock enterprises within existing Gambian farming systems so as to contribute to increasing net rural family incomes on an ecologically sound sustained yield basis." Following the first evaluation, the project was amended to include a sharpened statement of purpose, as follows: "to foster intensification and integration of maize, forage and range management (livestock) enterprises to demonstrate feasibility of increasing farm incomes through...agricultural diversification" (Corty, et al., 1986:v).

The basic technical idea underlying the project was to devise and field test technological packages for maize, forage, and range management, with this research being carried out by a team of TA personnel and MANR counterparts. The second evaluation recognized that:

This is a high risk and, in terms of discernable rate of return, expensive business. . . . It was undertaken after exploring alternative approaches and investments which were found wanting, and bet on the eventual pay-off of investment in applied agricultural research by university scientists and extension of innovations on the historical American model (Corty, et al., 1986:2).

It is important to note here that MFP was not conceived, designed, or initially implemented as a FSR/E project. Indeed, the objective of MFP's fifth component (Socio-Economic Unit) was to plan and evaluate projects, not to participate in and support the development of FSR/E. However, during project implementation, MFP began, albeit only slowly and to a limited extent, to engage in FSR/E-type activities.

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

MFP's initial design had foreseen that the project would need at least five years of field activities and \$9,000,000 to achieve the project's purpose. However, as the second evaluation noted, AID had seen

fit to retain the full design but permit only four years of project life (the clock running before the contracting process had even begun) and \$6 million. Thus it was known from the beginning, and especially after the...TA...contract was negotiated...that the project would have to be adjusted soon into its actual implementation (Corty, et al., 1986:3).

As early as the first evaluation, design problems were seen as having hampered implementation. MFP's designers intended "to promote the integration of crop and livestock production and... support national resource planning" (Osburn, et al., 1983:1). The PP identified six components: (1) land resource and use evaluation, classification, and cartography; (2) grazing areas development and management; (3) improved crop (maize) and forage production and management; (4) improved rural technology (credit for purchase of farm carts); (5) strengthening MANR evaluation and planning capacity (data collection and analysis by a socio-economic unit); and (6) agricultural skills training and communications (largely participant training).

While the PP provided considerable detail on these components, the first evaluation found that the PP had failed to define "a guiding, integrating concept" (Osburn, et al., 1983:7). Overall, the design was found to be "overly complex and diffuse" (Osburn, et al., 1983:1), and the project's components (except training) "unwieldy and over-ambitious" (Osburn, et al., 1983:7). Further, the PP provided "virtually no implementation plan" (Osburn, et al., 1983:4). Indeed, the "Implementation Plan" provided was judged to have "a specious specificity" (Osburn, et al., 1983:7). In one place, the plan listed a detailed, six page budget for supplies (e.g., Gooch-type crucibles @ \$5). Yet the plan provided no breakdown of use of time among activities by the TA team members, "nor a planned sequence of events -- even within components, much less as integrating across components" (Osburn, et al., 1983:7). What was the result?

When it came time to contract [f]or services, ...practical matters...arose, centered around the technical assistance team and the team's composition and duration. This resulted in a changed (and improved) project from that outlined in the PP -- but one that is, while more pointed, also more expensive (Osburn, et al., 1983:4).

By the time contracting had been completed, the TA had been increased from 18 to 25 person years and field operations from four to five years. With the redesign of the project, the "changed" project's scope of work required

five rather than the four years envisioned in the project's budget, at a cost of \$4,987,693 instead of the...\$2,711,878 indicated in the Project Paper.... This implied a total project cost of \$9 - 10 million, which conforms to the original estimate before the project was reduced in cost (though not in substantive scope) to \$6,000,000 during AID/W review in 1979 (Osburn, et al., 1983:1).

While the authorized funding level (\$6,000,000) was for four years, the TA funding requirement was 84% higher in the "changed" project than in the PP, a \$2,711,878 shortfall.

Viewing the difficulties in the project's original design (e.g., there were six separate Logical Frameworks in the PP) and the "changed" project that evolved during project contracting and early implementation, the first evaluation proposed a revised Logical Framework that recognized the project's major thrusts as improving maize, forage, and range production through research, trials, and demonstrations with farmers and Livestock Owners Associations (LOAs), supported by participant training and socio-economic (SE) data collection and analysis.

The project's SE data collection and analysis component was to be implemented by a Socio-Economic Unit (SEU). The SEU was to establish a capability within the MANR to do *ex ante* project planning and *ex post* evaluation. Its functions were to include providing quantitative and qualitative information describing and analyzing livestock and land use systems; field testing project-developed technological packages to assess their relevance to farmers; monitoring changes in farming systems to ascertain if project interventions (packages and/or strategies) proceeded as anticipated; and building up a core of trained Gambians with a micro SE orientation.

The SEU's planned activities were to include, in project years one and five, a baseline survey to determine the characteristics of farming systems incorporating livestock as well as the constraints faced by livestock producers in each farming system. Commencing in project year two, the SEU was to conduct a survey of livestock and crop enterprises, to obtain a thorough understanding of the main farming systems incorporating these enterprises, inputs and outputs for each enterprise, estimates of productivity and income derived from these enterprises, detailed information on cash flow, decision-making and management practices, and quantitative technical information requested by other project scientists. Commencing in project year two, special surveys were to be conducted to evaluate technologies being tried in other project components.

The SEU was also to provide training of counterparts in conducting and analyzing field surveys, with opportunities for advanced degree training in overseas institutions. To ensure that the SEU's activities would be coordinated and relevant vis-a-vis other project components, the unit was also to conduct an extended planning session every six months to discuss and agree on an annual work plan, and short meetings every two months to discuss progress (Osburn, et al., 1983:65-66).

The SEU's senior core staff members were to be comprised of three agricultural economists (two Gambian and one expatriate) and two rural sociologists (one Gambian and one expatriate). The project designers envisaged that the agricultural economist (Chief of Party) would provide leadership and guidance to the SEU in carrying out its mandate.

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

Approximately two years passed between project authorization in 1979 and the TA team's arrival in country in spring 1981, two and one-half years before the original PACD. Early field implementation was disrupted by an attempted coup d'etat in mid 1981.

Despite the increased size and duration of the project's TA component, there was a growing realization that the project was "too ambitious and cumbersome" (Osburn, et al., 1983:5). This led OAR/Banjul to reduce the project's scope by limiting the natural resources management activity to production of land-use maps, eliminating the farm carts credit component, and reducing long- and short-term training.

The second evaluation reported that the MFP's major problem revolved around a three year separation of the project's Socio-Economic Unit (SEU) from the project's other technical thrusts, a gap which was only partially closed during the project's last two years (Corty, et al., 1986:30). The discussion now explores this gap, focusing on two of MFP's technical thrusts: (1) maize improvement and (2) the Socio-Economic Unit (SEU).

1. Maize Improvement

The PP assumed that two years of TA would be required to develop a maize production improvement package. But the project began to recognize, during field implementation, that several years would be needed to bring a maize package to farmer trials. Indeed, there was a growing recognition that the project's activities lacked comprehensiveness. Ideally, the project's SEU

would have analyzed baseline and intensive village (farm systems) data prior to extension of packages for farmers' trials. And before significant efforts to promote commercial production (of maize), marketing studies would have been completed which determined its potential...as a cash crop (Osburn, et al., 1983:6).

However, while the MFP assumed that maize could become a valuable cash crop (e.g., animal feed) and an important element in human consumption, the project "did not provide for a thorough examination of the potential for increasing consumption" (Osburn, et al., 1983:6). Thus, albeit MFP was an ambitious project, the project's original design did not provide for certain activities potentially useful in guiding project implementation. As an example, that design did not provide a TA component to address input and output market considerations (Osburn, et al., 1983:6).

During the project's first two years, the TA team focused on training local staff, reconnaissance of existing research on and practices for specific commodities, and trials. During 1982, MFP tested a maize technological package with 156 farmers in 65 villages receiving intensive TA from 70 Agricultural Assistants and Demonstrators trained by the project. The project also scheduled trials (or what could be called maize commercialization efforts) to be conducted over the next three seasons by the Department of Agriculture (DOA). The favorable yield results of the maize technology package are summarized in the Evaluation section.

Despite the favorable results of the project's maize component, the first evaluation cautioned that maize had been

the one thrust of the project which has moved more quickly and effectively than planned.... ..if the DOA moves this quickly into...maize promotion it will learn fairly soon if the maize package developed by the project is viable. But doing so makes assumptions about...input delivery system and produce markets which are tenuous and could put farmers at risk (Osburn, et al., 1983:14-15).

The evaluation also expressed concern that farmers might achieve lower returns paralleling the decreased intensity of trained extension services that would likely be given to each farmer in a broader program. Further, the evaluation noted that:

It is by no means certain that the Gambia Cooperative Union (GCU) and the Gambia Produce Marketing Board (GPMB), which would provide inputs and/or credit on the one hand, and buy the produce at some set price on the other, will be able to play their roles (Osburn, et al., 1983:15).

Institutionally, a survey in two localities had shown that lack of money was a constraint to the purchase of fertilizer. Prior to 1984, the project had provided fertilizer without cost to farmers for demonstration purposes. In 1984, a decision was made that the MFP would assist in organizing kafos (local organizations) comprised of about ten members, with the maize technology package being made available to member farmers of the kafos. The objective was to demonstrate how the kafos could serve as revolving credit organizations.

Each member of a kafos was to plant one hectare of maize and provide the seed, with the fertilizer being obtained through the kafos on credit. In this trial, the participating farmers were selected by the project's maize agronomists, not the SEU. The trial of providing fertilizer to farmers through the kafos had mixed results:

While the revolving credit system was explained to the villagers, they still didn't fully understand the changes that had taken place, or chose not to repay their fertilizer debts fully, perhaps in the hope they would receive it anyway. . . . Farmers who repaid their fertilizer loans received their next fertilizer bags at the previous year's price. This was certainly an important incentive to help repayment rates but it is unclear that it can be continued (Corty, et al., 1986:28).

As the second evaluation noted, the issue that arises is whether any local group(s) would be able to handle a revolving fund for fertilizer credit and its repayment. While fertilizer could be sold on a pay as one can basis, this would impact negatively upon smaller, less wealthy farmers.

2. Socio-Economic Unit (SEU)

The first evaluation found that the MFP's Socio-Economic Unit (SEU) had been successful in recruiting, training, and using Gambians as enumerators and coders. This trained manpower, the evaluation noted, would be a valuable resource for conducting the planned surveys on the maize commercialization efforts and the final baseline survey. Activities undertaken by the SEU during its initial eighteen months (September 1981 - March 1983) included a baseline survey and intensive village studies by sample survey.

While the two social science expatriates (an agricultural economist and a rural sociologist) provided leadership for the development of the socioeconomic studies, the first evaluation felt that they lacked experience in designing and conducting large-scale data collection programs, and in analyzing data with computerized data processing. Indeed, the evaluation noted:

The fact that survey instruments were developed for the Baseline Survey, Intensive Village Studies, and the Farm Management Studies of the Maize Technology Package, is due largely to the resourcefulness of the SEU technical advisors. By tapping resources available in-country...and through consultations with visiting experts and the U.N. resident advisor to MANR, survey instruments were developed. Learning on-the-job, ...however, ...has caused unfortunate delays (Osburn, et al., 1983:70-71).

Further, as the first evaluation also observed, any data collection effort is useful only to the extent that it provides quality information to users on a timely basis. While the SEU was generally on schedule in initiating its mandated surveys and studies, the same could not be concluded for output delivery.

There had been numerous delays in developing and pre-testing survey questionnaires as well as in coding the questionnaires. While delays were also encountered in processing data at CSU, the SEU lacked micro-computer facilities and familiarity in the use of such facilities for computerized data processing. By the time of the first evaluation (April 1983), the computerized results of the baseline survey, for which preparation for data collection started in September 1981, were still unavailable, largely because the SEU lacked experience in large-scale data collection, processing, and analysis.

The project design assumed that the agricultural economist (also COP) would provide leadership to the SEU. However, the COP "never assumed his role" and short-term TA to fill the gap was never acquired (Osburn, et al., 1983:71). While the project design envisaged that the survey data would be available to guide other TA personnel in technology development, the delays in analyzing the data precluded early availability and utilization of the data for field implementation. Although the unavailability of survey or study results at the time of the first evaluation precluded a thorough assessment of the quality and potential usefulness of the data that had been collected, the evaluation concluded that: "It remains to be seen how useful these will be to the...project" (Osburn, et al., 1983:16).

The design of the MFP had envisaged that "the SEU...would provide the critical linkage" (Osburn, et al., 1983:73) between the project's multiple, but interrelated disciplines. While the first evaluation found that the SEU had not performed this role, the second evaluation highlighted the factors that contributed to this lack of performance. The PP had

required large amounts of data collection which...precluded involvement in the identification of farmer and herder constraints and...implementation ideas. ...while the rural sociologist and agricultural economist were setting up the baseline survey and oriented themselves to data collection, the rest of the team were exploring constraints to production of maize and livestock. Yet, the PP suggested that the baseline survey be the one utilized to identify constraints, both social and economic, in...agricultural and livestock practices (Corty, et al., 1986:Annex C, p. C7).

The SEU may not have been open to active involvement in the project's field implementation. But the PP had called for 2.5% sample of all Gambian compounds to describe and analyze farming systems. Efforts by the project to change this requirement were not acceptable to the GOTG. Further, the delays in data processing and analysis increased the tension within the project. By the time of second evaluation (March 1986), the analysis of the farming systems data collected during the first two years had still not been completed.

As a result, the second evaluation could not find much evidence that the SEU had made any substantial input into the project's implementation components. The evaluation concluded that the purposes for establishing the SEU, to bridge the gap between the components and disciplines represented in the project and to increase the efficiency of the developmental and implementation foci of the project, had not been achieved.

The SEU had held meetings with the Ministry's Planning, Programming and Monitoring Unit (PPMU) but these meetings focused on the development of survey questionnaires. While the SEU was occasionally consulted by the project's maize agronomist and the range specialist, these consultations were on an ad hoc basis. As of the time of the first evaluation, the planning sessions (every six months) and the short meetings to discuss progress (every two months) stipulated in the Project Agreement had never been convened.

As a result, the SEU's research agenda was developed solely by the SEU, with no indication of priority on any of the studies/surveys. While the Project Agreement stipulated that the MFP would conduct a marketing study, the SEU's work plan for 1983/84 did not include any marketing study. The SEU's limited manpower precluded doing all the required studies simultaneously, and the lack of planning sessions precluded identifying and reaching a consensus on information needs and priorities.

Further, there was minimum feedback and coordination between the SEU and other TA team members. Commenting on work plans for the coming planting season, the first evaluation reported that

the maize agronomist intends to put 2,500 hectares under cultivation for corn commercialization. This decision was reached on the basis of one demonstration trial involving the "best" farmers, and in spite of the fact that the results of the Farm Management Studies of the Maize Technology Package have not yet been analyzed. ...the decision to commercialize was made even without the availability of solid information on the market situation for corn. ...corn is not a major staple in The Gambia, and the extent of the demand for corn production...is still unknown (Osburn, et al., 1983:74).

Also, the project design had envisioned that the services of four Gambian social scientists, or in their absence four Peace Corps Volunteers (PCVs), would provide a link between the SEU and the MFP's other components. SEU technicians in collaboration with the technical scientists involved in the other MFP components were to draw up a work plan for these four individuals. However, as of the time of the first evaluation, neither the four Gambian social scientists or four PCVs had been provided to the SEU.

The first evaluation concluded that the SEU needed to

conduct several more intensive socio-economic studies directly related to the project's major thrusts (e.g., maize and livestock marketing, mixed farm management as promoted by the project's demonstrations, and socio-economic dimensions of range management by LOAs). The evaluation also noted the need to move the project in the direction of conducting integrated trials and demonstrations of maize-forage-range production and management at the village level.

As a follow up to the first evaluation, several changes were made in the project. These included the gradual return of the Gambian SEU members from their training in the U.S.; three new TA team members (an agricultural economist, a rural sociologist, and a marketing specialist to identify patterns and constraints in maize and livestock marketing); shifting of SEU data processing operations from CSU to microcomputers in country; and dropping of the Intensified Village Studies, this last change freeing up SEU staff time so that there could be greater collaboration between the SEU and the other technical thrusts of the project. Also, with the TA team's new agricultural economist and rural sociologist, a number of changes took place, including implementation of a program of integrated village trials and the development of a new farm management instrument to replace the FAO Farm Management Data Collection and Analysis Survey program that had not proved workable for the project.

By the time of the second evaluation, a clearer picture of the role of the SEU in the MFP had emerged. This picture showed that, throughout the project's life, there had been

a tension between the data gathering functions of SEU and project implementation. Key to this tension was SEU's reluctance or inability to alter its stringent data collection requirements.while the technical components were in the field identifying constraints to production in agriculture and livestock, SEU was not involved. . . . To compound problems, there were unforeseen difficulties in data processing and analysis some of which were never resolved. This led to the SEU not being able to perform the functions which were envisioned: to bridge the gap between the components and disciplines represented in the project and to increase the efficiency of the developmental and implementation foci of the project (Corty, et al., 1986:15).

This, the second evaluation concluded, "was probably an overly idealistic goal and an impossible one under the conditions" of the project (Corty, et al., 1986:15).

At the same time, it should be noted that the MFP was not conceived or designed in terms of any explicit model of FSR/E that defined how the SEU could most effectively participate in and support the project's technology development and transfer activities. Not surprisingly, although the second evaluation never explicitly promoted FSR/E, the evaluation recommended that the SEU's Intensive Village Studies

should be terminated after the second round of data collection. In their place, less frequent but more focused and immediately usable socio-economic and farm level studies should be undertaken (Corty, et al., 1986:Annex C, p. C3).

The first evaluation had identified the need to correct the lack of project integration by introducing integrated village trials that brought the different technological packages together. However, these trials were not initiated until the project's fourth year.

In April 1984, in response to the first evaluation and a Project Amendment, the MFP held extensive internal discussions and consultations with OAR/Banjul aimed at getting the SEU to play a more participatory and supportive role in the project. These explorations led to the idea of identifying the project's social science activities as "Agricultural Development Services" (ADDS) that would have the role of collaboratively supporting technology development, testing and extension. According to one of the project reports, the term ADDS

is explicitly substituted for the former "Socio-Economic Unit", a term which emphasized a...separated work agenda. By far the bulk of the ADDS work for the remainder of the project centers on field evaluation of technology packages, developing marketing strategies for the outputs of MFP technical thrusts, collaboration in the design of on-farm trials and characterizing and analyzing the various mixed farming systems in The Gambia. All...these activities must be done with biological and social scientists interacting closely together (cited in Corty, et al., 1986:Annex C, p. C5).

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

The second evaluation concluded that the MFP's "original conception did not lend itself to a unified objective or procedure; so no unified, completely coherent set of results can be ascertained" (Corty, et al., 1986:31). However, the first and second evaluations noted several project accomplishments.

Compared with the first evaluation's findings, the second evaluation noted favorably the change in the SEU's responsiveness to the project's information needs. Compared with the large-scale data collection predominating the SEU's work in the project's early years, the second evaluation found that the replacement TA rural sociologist had opted to conduct

relatively short surveys on specific important issues.... This will help project management to understand the range of changes induced and to shift policies if need be. . . . In addition, these [short surveys] can be done with a short turnaround time and with the use of a desk calculator. They are an excellent alternative to overly intensive data collection...with slow turnaround time (Corty, et al., 1986:Annex C, p. C13).

Also favorably noted was the replacement TA agricultural economist's work in designing the Gambian Agricultural Data System.

These activities were important in strengthening the SE data collection and analysis capability of the SEU. However, one may conclude that these activities may be seen as supplementing the progress that the SEU made during the project's latter years in becoming more directly involved in field activities (i.e., on-farm trials and demonstrations of improved technology).

Compared with the SEU's limited impact, the project was very successful in preparing and delivering a tested maize production technology package to farmers. This success was demonstrated by

the increase in maize area from about 2,600 hectares at the beginning of the project to 18,000 hectares by [the] end of 1985. The average national yield has increased from 1.6 t/ha to 2.5 t/ha and there is a significant increase in number of maize growing farmers. The production and food preparation training to several women's societies (40-70) was fairly successful.... Women have learned to produce maize as a field crop, consume maize flour in a number of recipes, improve...family diets, and to sell surplus maize when the price is high (Corty, et al., 1986:13a).³

Also, more than 100 Agricultural Assistants and 300 Agricultural

³Most harvested maize was used locally, while marketed maize often found its way into Senegal where prices were as high as D900 per ton. In October 1985, the GOTG increased the producer floor price of maize 54% (from D390 to D600). Also, marketing arrangements were changed. Instead of the Grain Produce Marketing Board (GPMB) buying the crop, local cooperative societies were authorized to buy all cereals and sell to the Gambian Credit Union (GCU). However, farmers were able to sell in the local market at higher prices than those offered by the GCUs.

Demonstrators had been trained and were able to carry on some of the work.

But the first evaluation also highlighted several difficulties encountered by MFP in term of inadequate project support by the GOTG, the COP, and OAR/Banjul.

First, the GOTG faced difficulties in meeting the recurrent costs of agricultural development services. Even financing of

routine activities, such as maintenance of the crop trial and seed multiplication efforts at the major research stations, is uneven and at times cut below survival level. The...institution providing rural credit (The Gambia Cooperative Union), that importing fertilizer and rice and purchasing groundnuts and other export crops (the Gambia Produce Marketing Board), and that intended to promote livestock trade (the Livestock Marketing Board), are all foundering in unprofitability and debt (Osburn, et al., 1983:19).

Second, the TA team's COP (an agricultural economist) was too burdened with minor administrative duties, with the result that the analysis of agricultural economic data lagged.

Third, some of the delays in project implementation may also be attributed to the fact that OAR/Banjul, as a Schedule B post under Delegation of Authority 140 (revised), must acquire concurrence from REDSO/WCA in Abidjan on virtually all project implementation documentation.

In the last analysis, the second evaluation concluded "that many of the gains registered by MFP will not be sustained without continuing outside inputs" (Corty, et al, 1986:30). Considerations relating to the institutionalization of FSR/E are addressed below in the section on Institutionalization.

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?

Beyond the 14 Gambians who received degree-level training, the MFP provided rigorous training to the Gambians, with SEU's enumerators being "probably the best trained cadre of data collectors in The Gambia" (Osburn, et al., 1983:74). The Gambian counterparts to SEU's technical advisors were also well-trained.

At the time of the first evaluation, there was an expectation that a soon to be implemented UNDP-sponsored project would establish, in the MANR, a Planning, Programming and Monitoring Unit (PPMU) that would include a Farm Economic and Rural Sociology Section. The UNDP project required as a condition precedent that positions for the proposed PPMU staff be established as permanent positions within the Ministry. This condition was met by the GOTG. Further, an agreement in principle had been reached between the GOTG, UNDP, OAR/Banjul, and the MFP for the MFP's SEU to staff the Farm Economic and Rural Sociology Section.

One of the reasons underlying the first evaluation's recommended extension of the project's PACD for at least three years was to provide the SEU the additional time needed to train Gambian counterparts to work independently on data collection, processing, and analysis; to carry out socio-economic surveys and studies; and "to provide an opportunity to initiate a multi-disciplinary approach to technology development which closely involves farmers, as originally envisioned in the Project Paper" (Osburn, et al., 1983:75). The second evaluation noted, by the PACD, the MFP will have trained three Gambian scientists who could become members of the PPMU staff (a rural sociologist, an agricultural economist, and a computer specialist).

The first evaluation concluded that there was every reason to believe, by end of project, that MFP will have "materially improved" the ability of the GOTG, including the PPMU,

to address agricultural development problems and opportunities, including agricultural diversification. . . . it will have a better trained and experienced cadre of agricultural scientists...and dozens of agricultural assistants, demonstrators and survey enumerators. It will have an agricultural base-line, given one time-series by its repeat toward the end of the project, and additional farm systems' data and analysis that will be basic to the planning of future interventions. . . . [PPMU's] expertise will have been improved by its involvement in socio-economic research supported by the project, especially in marketing and farm systems analysis (Osburn, et al., 1983:22).

While the SEU was to have been folded into the PPMU by the end of the project, the second evaluation found this had already taken place in the sense that the SEU Gambian counterparts were already working primarily at PPMU. However, the evaluation noted, given current financial constraints, that the GOTG would not give high priority to upgrading the physical facilities and staffing of PPMU. Recognizing the importance of the PPMU, the evaluation recommended that TA (an agricultural economist, a rural sociologist or anthropologist, and a data processing and computer specialist) be provided to the PPMU.

Generally, the first evaluation found that the GOTG had done an excellent job in providing the MFP with counterparts and candidates for training. However, the first evaluation found that the GOTG had not made any contribution for operating costs (fuel, night allowances of extension personnel, and so on). The amount in question was an estimated \$200,000. The evaluation pointed out that the GOTG, particularly the MANR, did not have the recurrent cost budget allotment to cover this commitment.

Since the GOTG participated in A.I.D.'s Sahel Development Program (Section 121 of the FAA of 1961 as amended), there was no statutory requirement that the GOTG as a recipient country share in the cost of the project. OAR/Banjul made a policy decision that the GOTG could be relieved of certain commitments for supporting agricultural development projects, where the projects do not imply or are not establishing governmental entities which could not be maintained at the completion of the project.

In relieving the GOTG of its commitment to support MFP local costs, the first evaluation noted that the magnitude of operating costs involved placed a significant constraint on the flexibility with which remaining (and added) funds could be used for continuing and new activities. The evaluation addressed this issue by proposing a new project budget (\$9,000,000) but recommended that frequent strategic planning sessions be held during implementation, and that quarterly financial management and projection reports be prepared, "so that all project resources are put to their best use, ...especially if cost overruns threaten completion of some activities and choices have to be made" (Osburn, et al., 1983:13).

Despite GOTG difficulties in meeting recurrent cost commitments, the first evaluation identified the government's technical and institutional support of MFP as a "major success" of the project. However, while MFP was not conceived or designed to include broad institution-building or mass farmer assistance initiatives, the project depended on the maintenance of regular governmental services (research, seed multiplication, extension, even credit and input/output trading). The evaluation noted a "creeping malaise in these quarters" (Osburn, et al., 1983:21) that could jeopardize project operations, and cautioned that uncertainty about the future donor assistance "severely restricts

the ability of donors to design and finance adaptive research and demonstration projects" (Osburn, et al., 1983:21) like the MFP. However, projects like the MFP could "be seen as valuable first steps toward a transformation of the agricultural economy" (Osburn, et al., 1983:21).

Although the MFP was not conceived, designed, or initially implemented as a FSR/E project, the experience gained in implementing MFP played a major role in the development of the follow-on \$17,700,000 Gambia Agricultural Research and Diversification (GARD) project (635-0219). GARD was designed as a seven-year project and the first phase of a planned fifteen- to twenty-year commitment by AID to improve agricultural research and production in The Gambia. Further, the project contains a major FSR/E component. The GARD PP was written by a PP team led by Elon Gilbert, an agricultural economist and prominent FSR/E practitioner. The following brief review of the FSR/E-related content of the PP provides an indication of the anticipated evolutionary path of FSR/E in The Gambia.

The PP states that the purpose of GARD is "to test, generate, adapt and promote the adoption of improved crop and livestock technologies that meet farmers' needs and expand and diversify Gambia's agricultural economy. One of the conditions that the PP identifies as an indicator of achievement of project purpose is "on-farm research activities being conducted which identify farmer constraints and opportunities to test improve agricultural technologies."

The PP identifies five distinct but mutually supportive components, three of which relate specifically to the support of a FSR/E approach to applied and adaptive research:

1. Establishment of an Agricultural Research Management System (ARMS) which will set agricultural research priorities in the light of farmers' needs recommendations, and GOTG policy objectives; and will enforce these priorities through procedures by which research programs will be designed, reviewed and funded.
2. Expansion of Farming Systems Research and Extension (FSR/E) activities which have already been successfully launched in the Eastern portion of the country and linking these activities to component research and extension programs in the context of ARMS.
3. Design of and assistance to technology promotion activities for farmers at large, including training of field workers, monitoring and feedback of results and finance for specific pilot promotional efforts (A.I.D., 1985, pp. 1-2 of Action Memorandum, emphasis added).

In outlining the project strategy for GARD, the PP noted that within the research system,

major emphasis will be given to...expansion and strengthening of Farming Systems Research and Extension (FSR/E) activities aimed at identifying, testing and extending improved technologies to farmers in collaboration with the Extension Service and Private Voluntary Organizations (PVOs). FSR/E is an approach designed to link the research system to its clients and to accelerate the process by which relevant technologies are identified and eventually utilized by agricultural producers (A.I.D., 1985:9).

Accordingly, one of the identified project outputs was "the expansion and integration of FSR/E activities as a recognized and valued component of research and extension in The Gambia" (A.I.D., 1985:10).

Reviewing ongoing on-farm research in The Gambia, the PP states: "FSR/E activities already exist in The Gambia" (A.I.D., 1985:20). Basically, this was a reference not to the on-farm work of the MFP but rather to field work, during the 1984 cropping season, of a team comprised of a Gambian agronomist and a farm management economist supported by ODA. That team carried out reconnaissance surveys in selected areas of the country and planned to lay out an initial set of on-farm trials around Sapu in the 1985 cropping season, with support from IBRD's Agricultural Development Project II (ADPII).

To assist these efforts, prior to the availability of GARD funds, USAID/Banjul and the University of Florida's Farming Systems Support Project (FSSP) agreed to fund an on-farm trials workshop for mid-May in The Gambia, just prior to the planting season. Participants were to include current and prospective research staff involved in FSR/E, prospective members of the TA team for GARD, and Agricultural Assistants who would be assisting with the on-farm trials work during the upcoming season.

Subsequently, the GARD project would provide funds for the continued development of FSR/E activities in The Gambia by two regional FSR/E core teams, one each for the eastern and western regions of the country. Core team membership was to be Gambian, but GARD was to provide each team with long-term TA in the form of a full-time Research Extension Liaison Officer (RELO) who would be based at a regional research station and be responsible for developing promotional campaigns. The PP noted:

without careful, detailed promotion strategies -- as to target groups and areas, inputs and delivery, and technical focus -- and specifically trained extension workers, efforts to induce adoption of innovative practices usually fail in The Gambia as elsewhere (A.I.D., 1985:24).

Accordingly, the RELO would service as a technical advisor to the principal agricultural officers in a region, and have as his/her major responsibilities to: (1) identify innovations for promotion to farmers at large; (2) assist preparation and review of yearly promotion plans; (3) plan specific campaigns; (4) identify financing sources and organizational structures best suited to these campaigns; (5) organize the application of GARD resources, as necessary, for support of pilot promotions; (6) plan and lead technical training for field workers; (7) plan and oversee monitoring of promotion campaigns; and (8) facilitate rapid, direct feedback to the research system (A.I.D., 1985:24).

Additionally, approximately 50% of the Chief of Party's time was to be devoted to participation in FSR/E activities in the western portion of the country.

Each regional FSR/E core team was to be comprised of three or four researchers in crop agronomy, animal production/nutrition/health, extension, and social science. The core team would also have access to a larger FSR/E group composed of representatives of other disciplines, such as agroforestry, crop protection, and agricultural engineering. FSR/E reports were to be reviewed by the Technical Secretariat of the National Agricultural Research Advisory Board to facilitate screening of research proposals and reassessing priorities.

The FSR/E regional teams would supervise two-person village teams composed of personnel from the extension services: one agricultural assistant (AA) and one livestock assistant (LA). Each village team would be responsible for conducting on-farm trials, and collecting the data required to monitor the trials, in one or more representative villages in an agricultural zone.

Additional prospective information on how the GARD project would implement FSR/E activities is provided in the PP but, of course, would not necessarily be predictive on how FSR/E was eventually implemented by the project. It is of interest to note, however, that the PP states that:

On-station research in The Gambia has identified promising technologies which have not yet been tested in farmers' fields. Pending the development of technologies based on farm-level constraints identified in the FSR/E process, technologies currently available will be used to design on-farm trials in the initial years of the FSR/E program (A.I.D., 1985:23).

Further, the PP notes that linkages between research and extension would be further consolidated during the implementation of a Training and Visit (T and V) system under ADPII.

Also, the PP notes that FSR/E requires strong links with the component/off-farm research activities on various crops and animals in different disciplines.

The two activities are complementary and not substitutes for one another. A major linkage occurs through the fact that nearly all the FSR/E team members will continue to be involved in component research activities on-station. In most cases, team members will actually have major responsibilities in terms of these component research activities which will facilitate the two-way flow of information. The major impact of FSR/E activities upon component research is expected to come through this direct linkage (A.I.D., 1985:23).

Further, the GARD project would provide for conducting, under the auspices of the PPMU, a series of special socioeconomic studies (e.g., on policy issues).

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A.I.D.

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Osburn, James, Robert Adams, Ans Burgett, Thomas Eponou, Howard Sprague, and Gloria Steele

1983 Early Mid-Term Evaluation of Gambia Mixed Farming and Resource Management Project (635-0203). (PD-BAN-055)

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.⁴

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

⁴An 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).

Gambia/MFP - Mixed Farming and Resource Management Project
(635-0203)

Initial Authorization: 1979 (for 4 years)

Goal: "to increase the economic well-being of the rural people of The Gambia"

Purpose: "to foster intensification and integration of crop and livestock enterprises within existing Gambian farming systems so as to contribute to increasing net rural family incomes on an ecologically sound sustained yield basis"

Outputs: MFP was not conceived, designed, or initially implemented as a FSR/E project. MFP contained seven subprojects aimed at:

1. Developing land classification maps;
2. Improving livestock nutrition and grazing management policies;
3. Initiating programs to improve forage production and management program for increasing the supply of livestock feed;
4. Improving rural transportation and on-farm use of animal traction;
5. Improving the health and nutritional status of livestock;
6. Recognizing the socio-economic characteristics of small farmers; and
7. Training Government of The Gambia personnel to enable them to implement a mixed farming policy; and
8. Increasing Gambian production and use of maize for human and animal consumption.

The objective of MFP's fifth component (Socio-Economic Unit) was to plan and evaluate projects, not to participate in and support the development of FSR/E. However, during implementation, MFP began, albeit only slowly and to a limited extent, to engage in FSR/E-type activities in collaboration with other project components (e.g. maize).

Implementing Agency: Ministry of Agriculture and Natural Resources (MANR), and the Socio-Economic Unit thereof.

TA Contractor: Consortium for International Development, with Colorado State University as lead university.

Evaluations: Two -- an early mid-term evaluation in April 1983 (Osburn, et al., 1983); and a final evaluation in March 1986 (Corty, et al., 1986).

Constraints: C.4, C.6, C.8, O.3, O.6, O.7, O.9, O.10, G.1, G.2, G.3, G.5, G.6.

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Honduras Agricultural Research Project (522-0139), CDIE Working Paper No. 112--Case Study No. 11. (PN-ABC-083)

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