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Shotgun wedding or happy marriage? integrating PRA and sample surveys in Malawi

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• Introduction

PAPPPA (Poverty Alleviation Programme Pilot Project Agroforestry) is a soil conservation and agroforestry project for small holder farmers which is implemented by the Malawi Ministry of Agriculture and Livestock Development and funded by the European Union. It is a large scale project with 89 sites¹ involving in excess of 20,000 households and stretching across a diversity of agroecological zones in Malawi. This article describes how the project has combined PRA with formal sample surveys to reap the benefits of both approaches in its beneficiary adoption and assessment monitoring.

Project monitoring and evaluation

The project conducts regular physical implementation monitoring. Every three months a report is produced giving numerical details on the progress of the project's implementation at all sites. However, in order to monitor the effect that the project has been having on farmers and to gather their responses to the project's interventions, Beneficiary Assessment studies were conducted in 1993 and 1994 using PRA techniques. These studies used a wide range of tools including mapping, ranking, seasonal and work diagrams, transects and focus groups' discussions.

From 1996 it was decided to generate a picture of the degree of adoption by beneficiaries of

project interventions on an annual basis (including soil conservation methods, agroforestry techniques to improve soil fertility, improved seeds, and water and sanitation facilities) and to find out the reasons for adoption or non-adoption of practices so that project management could adjust their strategies. While statistical accuracy and the ability to generalise the results of a sample survey were considered essential for the task, it was also important to utilise the fast, flexible feedback available from PRA.

This situation raised a number of questions that needed addressing:

- Can PRA be used for effective regular monitoring of the adoption of project strategies and its impact on beneficiaries within a large scale Government project? Would the constraints imposed by limited time availability and shortage of personnel allow PRA to be used effectively?
- Is it possible to cope with some stakeholders' requirements (e.g. the donor, the implementors and Ministry planners), for numerical data on responses to the project that can be easily presented, yet still benefit from the flexibility of PRA investigation?
- Must the study use only a uni-modal approach or can the advantages of sample surveys and PRA methods be synthesised to produce a workable union?

The study design

PAPPPA Monitoring and Evaluation staff decided that it was worthwhile trying to combine the PRA with surveys. However the study design had to consider the constraints of

¹ Sites refer to the catchment area of a stream or small river. It may cover more than one village and include from 50 to over 500 households.

the institutional environment in which the project operated including:

- a limited financial budget for beneficiary adoption and assessment monitoring;
- limited availability of trained staff in either PRA techniques or formal surveys;
- a narrow time window in which the study had to be organised and completed; and,
- the wide variety of farming systems covered by PAPPPA.

Multidisciplinary teams were formed to conduct studies in selected sites (see Box 1). Team members conducted a random sample questionnaire survey, which was followed up with immediate in-field analysis of key issues. The study concluded with further investigation of the main issues raised by the survey using PRA. It was expected that this would produce both statistically reliable data on the adoption of project strategies and would also allow project staff to investigate in depth the reasons for acceptance or rejection of those strategies by farmers.

Participatory research has found wide acceptance as a tool for needs assessment. It is often used before a sample survey to explore issues of particular interest. However this sequence of methods would have been illogical for the Beneficiary Adoption and Assessment Study. PAPPPA already knew which issues it wanted to investigate. It seemed sensible therefore to investigate these issues first, using questionnaires to obtain a measure of project performance. Since the project also wanted to know why farmers were or were not taking up its recommendations, it was important to follow up with a less structured discussion to understand farmers' opinions.

Study site selection and training

From the beginning it was considered advantageous to use a multidisciplinary team to benefit from professional interaction and triangulation² of results.

² The term triangulation refers to the process of cross checking information through using a multi disciplinary team for information gathering, a variety of sources, and a mix of techniques.

BOX 1 OVERVIEW OF STUDY METHODOLOGY

- Select sites for study;
- Train multidisciplinary teams in PRA and sample surveys and the interface between the two approaches. Pre-formulation of questionnaire and checklists;
- Teams complete random sample survey using predesigned questionnaires (Days 1 and 2);
- Teams analyse questionnaires for key issues and design checklists of issues for further investigation using PRA tools (Day 3);
- Teams conduct further investigations with beneficiaries using PRA (Days 4 and 5);
- Team leaders write up site findings;
- National summary report.

The restricted window of time available and the logistical complexity of involving staff drawn from three different Ministries who were widely dispersed around the country, meant that thirteen separate staff teams of five people each conducted their field work at the same time.

Each team was designed to have a professional mix, typically one Land Husbandry officer, one Economist, one Technical Evaluation staff member, one Water or Health officer, and one Food and Nutrition Officer. The shortage of professional women in the government system meant that only a limited number were available to participate in the study. Therefore during staff allocation at least one woman was put in each team to gain the benefit of both gender perspectives.

The attempt to combine the techniques complicated staff training. Some staff had encountered one or the other approaches, while others had never interviewed a farmer before. The wide professional mix and range of experience of staff in the two techniques meant that training had to be aimed at the lowest common denominator of knowledge. Thus, everyone received some PRA training, some formal sampling methods training and specific advice on combining the two approaches. The depth of training was not as comprehensive as the course organisers would have liked, but it gave all participants the basic tools for the work.

Many staff who were familiar with sample surveys were wary of trying out PRA, while those who had experience of PRA tended to downplay the benefits of sample surveys. Initially this led to a feeling of competition between the techniques, but by the end of the one week training, an atmosphere of anticipation had developed for trying out something new.

A draft of the survey questionnaire was discussed with participants during the training and appropriate alterations made. Skeletons of checklists that could be used in the PRA sessions were prepared. All interviews were role played to ensure that participants were comfortable with their material before they reached the field.

• Field work

Prior to the field work, site visits were made by Ministry of Agriculture local field staff. These staff were given a thorough briefing on the purpose and methodology of the study, so they were able to brief traditional leaders and project organising committees. They explained what the teams wanted to do and conducted a household listing of the site to use as a sampling frame.

Once the teams arrived in the field, they were expected to complete the work in five days as agreed with the teams during the training sessions. The strictness of the timing was introduced to encourage teams to focus on the key issues in the study. This did produce some problems, however, particularly where village members were absent because it was a market day or a funeral was in progress.

The timetable was arranged so that the questionnaire survey was conducted on Days 1 and 2. With a sample size of thirty households per site and a five person team, this was easily achieved.

Once the questionnaires were completed, teams gathered on Day 3 at suitable working places, such as a local school or government office to do some in-field data analysis. Using prepared tally and tabulation sheets they manually analysed the data on some of the most important indicators, producing proportions, means and cross tabulations.

The teams discussed the data and prepared additional areas of investigation to be carried out using PRA tools. Here they used issues raised by the questionnaires or from observations during the survey. For example, if only 15 per cent of households were using *Tephrosia vogelii* as their agroforestry species whereas 93 per cent had accepted *Gliricidia sepium*, it was important to find out why. The skeleton checklists introduced during the training courses were expanded and amended as necessary so that all the main issues were included.

On Days 4 and 5, the teams returned to the field and used appropriate PRA tools to explore the concerns identified on Day 3. All teams used village mapping and modelling to help explore the geographical relationship between adoption and topography, soil type and distance from the village centre.

Cross site transects were guided by small groups of informants to check the information gathered from the questionnaires and the map. This was a critical exercise for team members to gain a feel for what was happening on the ground. It also enabled more detailed discussions of the issues that arose from the Day 3 analysis.

Finally a series of focus group interviews were conducted with separate groups of female and male farmers and with the project committee. Semi structured interviewing techniques and ranking processes were used. Ranking was applied to explore farmers' responses to the advantages and disadvantages of the various technologies being introduced. For example, with the different food crop seeds supplied, the benefits realised from the different agroforestry species and the effectiveness of the project delivery system were ranked.

Teams were encouraged to make a final presentation of findings at a village meeting. This was to present the results and reiterate the purpose of the study to ensure that no false expectations were raised. Team leaders prepared reports on their study which were consolidated at a national level.

The final report was completed by the main technological divisions of the project. Under each division, analysis of the appropriate

statistics from the sample survey was presented, with discussion based both on the statistics and on the findings of the PRA sessions. No further formal feedback of results were made to communities, although the findings were used for planning further interventions at local and national level.

- **Happily ever after?**

Was the attempt to integrate the two approaches successful given the purpose and context of the study? Can this system realistically be used annually on a large scale project? Did the use of the two techniques together add significantly more information than could have been obtained by using only one method?

The combination of two techniques undoubtedly added to the complexity of organising the study. Five days were allocated to training staff in both techniques which was not sufficient, yet more time would not have been possible. If only one approach had been used, this would have greatly simplified the field work since it is relatively straightforward to ask individuals to do individual interviews or participate in a mapping exercise. The time demand made on villagers by the study was resented in some cases.

The strict limits placed on the time available to complete the field work clashes with the traditional PRA ethos of being 'relaxed' and having time to listen. However, within the confines of a government system where staff have numerous responsibilities, limitations on budgets and transport shortages this was the only practical approach.

The idea of in-field analysis of questionnaires was extremely successful. Many staff had previously participated as enumerators in surveys in which they simply returned the forms to 'head office' and had nothing else to do with the work. They found this approach particularly interesting. It gave them the immediate opportunity to process their own data, consider its implications, and have the chance to follow up on the implications of their findings. It also enabled them to take greater responsibility for the outcome of their work.

Traditional sample surveys have the drawback of needing the survey organiser to have thought through all the issues prior to the start of the survey. There can be no loose ends and few opportunities for flexibility. The data must be collected according to the questionnaire and if any issues come up in the field or from the analysis that need follow up, it is simply too late to take action. This integrated style of survey meant that the opportunity for asking 'why?' and 'how?' type questions was available and taken efficiently by staff.

A good example of this was that at one site the questionnaire suggested that the take-up rate appeared to be very poor. Using PRA, staff investigated the reason for the apparent failure of the project. It turned out in group discussions that the local Protestant minister had been dissuading his parishioners from having anything to do with the project because the name PAPPPA sounded like the local name for the Pope, and it was assumed that it was a Catholic agency.

The study generated a range of information that would not have been discovered if a combination of techniques had not been used. Accurate statistics on adoption, that could be extrapolated, were collected. These were important for monitoring project progress against targets and useful for presentation in reports and discussions. In addition the local and national project management received data not only on how many villagers had taken up recommendations but also on farmers' reasons for adopting or rejecting interventions. This information was helpful for adapting or changing intervention strategies in the next season.

Although the second part of the study used PRA tools, it was not a participatory exercise in the sense of aiming to empower the community. The purpose was largely extractive; the project was seeking information primarily for its own purposes. Nonetheless, the use of PRA tools gave farmers an input into the evaluation process which will be reflected in future implementation.

The process of consulting farmers about issues in which they had a continuing stake raised their level of involvement and interest in the project. If the project continues with this style

of adoption study which actively involves beneficiary communities, then it seems fair to call the approach genuinely participatory. This is a significant advance when viewed against the traditional top down approach to evaluation used for the previous 30 years in Malawi.

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