

## Editorial

- **Theme issue**

Most of this issue of the *PLA Notes* explores the complementarity of participatory approaches with other, more conventional research and development methodologies. The theme section of the *Notes* explores what is driving the creative combination of methodologies and discusses why complementarity seems to be both essential and effective for research and development practice. However, it also highlights areas where compromise is likely.

- **In this issue**

First however, this issue opens with a collection of more general articles. In the first article Edward Breslin and Peter Delius describe the innovative use of participatory methodologies to understand the underlying causes of malnutrition and poverty at the village level in South Africa.

Participatory approaches to monitoring and evaluation are increasingly being used. In the second article in this issue, Seerp Wigboldus and Steve Knisely overview the experience of the Nepal Resource Management Project in its search for an evaluation methodology that is meaningful not just for project staff, but also for villagers.

On a similar theme, Amith Shah reflects on Process Documentation Research which is a dynamic approach to project monitoring. She describes the methodology used by the Gujarat Institute of Development Research in exploring the process of implementation of a social forestry project in Western India.

In a candid account of the challenges of undertaking participatory on-farm research, Alsen Oduwo describes the experiences of an

NGO, Community Mobilisation Against Desertification, in promoting the use of green manures in a lower potential district of Kenya.

From West Africa, Ichire Ojating and the students of the Federal University of Agriculture explore how PRA can help to reveal traditional folklore. A better understanding of the traditional knowledge could be used to conserve the natural resources of Nigeria.

In the last article in the general section, Tim Russell describes a simple and quick way of undertaking pair wise ranking. This technique is useful for prioritising or ranking lists of activities or problems.

The *Extracts* section in this issue contains two articles. The first from India (V A Bourai et al) describes the use of props which can facilitate the use of questionnaires within communities. The second article, by John Wilson, reflects on the need for participatory approaches to implementing projects and suggests that the methods of participation should not become an end in themselves.

In an article in the *Feedback* section, Kumaraswamynadar Arasu explores some of the challenges to maintaining the quality of PRA and constraints to institutionalising participatory approaches to development. In a considered response, Neela Mukherjee emphasises the importance of the personal behaviour and attitudes of PRA practitioners. She also highlights the 'time dimensions of participation and empowerment' which are not appreciated by many development agencies.

For trainers in participatory learning, the serialisation of the Trainers' Guide to Participatory Learning and Action focuses on training methods and approaches. The Tips for Trainers section has been prepared by Robert Chambers. It describes how and why card sorting should be undertaken on the ground.

As always, the *In Touch* pages (at the back of the issue) share experiences and publicise new and relevant materials and training events. We welcome your comments and contributions to this, and any other, section of the Notes. Happy reading!

**CALL FOR EXPERIENCES!**

Two new theme issues of *PLA Notes* are planned for 1997. In June, we will explore '*Performance and Participation*', the use of drama, theatre and video for promoting participation. The October issue will explore the use of *participatory approaches with fishing communities*. Please send us contributions on either of these themes. Articles should reach us at least two months before the publication date.

## 1

## A 'proper household' - exploring household and community dynamics in South Africa

Edward D. Breslin and Peter Delius

### • Introduction

Operation Hunger is a South African non-governmental organisation concerned with the problems of chronic and acute malnutrition and poverty. Participatory methodologies are used at the village level to help understand the underlying causes of malnutrition and poverty. They are also used to develop plans to overcome the identified development challenges and to monitor and evaluate the impact of the implemented programmes.

Operation Hunger recently contributed to the South African 'Participatory Poverty Assessment' (SA-PPA)<sup>1</sup>. The SA-PPA was commissioned by the South African Reconstruction and Development Office to give voice to vulnerable South Africans whose insights and perceptions were often lost or simplified in quantitative surveys. It was hoped that the SA-PPA would provide South African policy makers with a greater sense of local processes and perspectives. It also provided additional and alternative perspectives that enriched the statistics which are used for broader development policy and programming.

Operation Hunger's contribution to the SA-PPA explored local understandings of poverty and malnutrition at six development sites throughout South Africa.

<sup>1</sup> The SA-PPA was funded by the World Bank and the Overseas Development Administration and coordinated and compiled in South Africa by Data Research Africa.

### • Local perceptions of poverty

Operation Hunger's initial approach to the SA-PPA was to try and gain a better understanding of how local people are classified within villages. Operation Hunger was aware of numerous local social categories of people, such as 'commoners' or 'royalty'. These did not necessarily conform to the conventional economic classifications that are used by development practitioners, such as the 'poor' or 'ultra poor'.

Discussions with local people identified poverty as a key issue from the outset. Yet further and deeper discussion on poverty was limited. For example, a SA-PPA session was held in Riba, Northern Province in January 1996. A group of local women were asked to identify the different classifications of people in the village. The participants continuously responded that 'we are all poor', although they recognised that there were some 'wealthy people'. The women claimed that none of the participants present at this SA-PPA session were wealthy.

Similar exercises were initiated at the other SA-PPA sites but the process proved equally difficult. On reflection, there appear to be a number of reasons why this exercise was difficult to apply at the local level, including:

- fear on the part of participants that efforts to understand local categories were a targeting exercise;
- the nature of the PPA, as a poverty study participants may have believed that Operation Hunger was only looking for economic classifications, such as the 'poor'.

- **A proper household**

It was suggested that instead of using local classifications of poverty as the starting point for discussion, it might be more productive to explore the diverse nature of households within the village. Rather than beginning with questions about how to identify the poorest or most vulnerable households, we decided to explore what people considered to be a 'proper household'. We then moved on to explore the disjuncture between the ideal and local realities.

A challenge was to prevent the sessions from degenerating into a 'wish list'. Instead, we wanted to create a situation where people were comfortable expressing their perceptions of what is 'ideal' within their context.

One option was to see if we could get a sense of what local people thought a 'proper household' would look like. Who would be in this household? What would this household be doing and why was it 'ideal' according to participants? Were there some households in the village that resembled this proper household? If so, how did they reach this ideal condition? If not, what other types of households are apparent in the area?

The initiative developed a dynamic of its own when the questions were posed in the field. The participants at the SA-PPA session in Riba decided that they would draw a picture of a 'proper household'. After simple questions about the 'proper household' were posed by Operation Hunger staff, participants began drawing pictures that represented other households in the village. This allowed the group to explore a range of household dynamics. These provided important clues into local responses to deprivation, areas of cooperation and conflict between and within households, and a vision of participants' aspirations.

The session not only provided new insights into local dynamics but posed new questions

that could be explored at future sessions. Importantly, the process was driven by questions, not tools.

We realised that similar sessions could be conducted within, and across, development sites to highlight possible points of continuity and difference. Operation Hunger found that participants were comfortable depicting household-types in picture form and using these pictures to explore complex inter- and intra-household dynamics.

### **Facilitating a 'proper household'**

Operation Hunger staff conducted SA-PPA sessions with groups of between 20-30 people. Groups were often, but not always, divided in terms of age and gender.

Our experience suggests that mixed groups can be dominated by male participants, especially if they are community leaders. Moreover, the mixed group sessions tend not to be as rich as sessions run in groups divided by age and gender. It must be remembered, however, that groups divided by age and gender are by no means homogenous. Participants' positions within the broader community still effect their participation during smaller, less overtly threatening, group work. 'Proper household' sessions showed that even seemingly homogenous groups, such as female pensioners, had vastly different development opportunities and constraints.

Some of the more interesting sessions were held in villages where a 'proper household' exercise was facilitated more than once and with different groups of people. These sessions often clarified differing gender and generational perceptions of household and community dynamics. They also highlighted contrasting development priorities within villages.

## BOX 1

**FACILITATING A 'PROPER HOUSEHOLD', RIBA, JANUARY 1996**

23 women attended the session, ranging in age from their early twenties to mid-sixties. 11 of the women were currently utilising land. The other 12 did not have access to land and were, in some cases, employed as agricultural labourers by women present in the group with access to land.

42% of the women present depended on either their own pensions or the pension of a household member. All engaged in piece work and 20 % relied primarily on remittances from husbands or brother-in-laws.

53 % of the women were raised in Riba. The remaining women had arrived in the area since the mid-1970s. There appeared to be no correlation between time of residence in Riba and land ownership.

Facilitated by P.Talane, E.D.Breslin, P. Delius, S. Madrid, J. Mofe, R.Sekonya

- **Poverty and malnutrition in Riba**

Box 1 describes the characteristics of the 23 women who participated in one 'Proper Household' session in Riba in January 1996<sup>2</sup>. One of the defining features of the group was that 11 of the 23 women had access to (and were presently utilising) land for agricultural purposes. The remaining 12 did not have access to land and were, in many cases, working for some of the women within the group who did have access to land. Also notable was that, with one exception, the women without access to land were older but not near pensionable age.

The participants decided that a proper household in Riba would have the following characteristics:

- both parents are present and the household has children (number unspecified);
- the household always has a fire burning and food in the pot;
- the household has different buildings on the compound (This was not drawn but came out in the discussions. For example, there would be a structure that serves as a kitchen);

<sup>2</sup> Operation Hunger administers a short questionnaire after each PRA session. The questionnaires are used to clarify who is actually participating in the PRA sessions and how their life histories and position within the village could shape their responses during PRA sessions or influence the proceedings.

- the household has no in-laws or the brothers/sisters of either the husband or the wife present;
- the parents both have a regular job and consistent source of income; and,
- the household has a proper fence around the compound.

Seven different types of households were drawn by participants in Riba. These illustrate a range of different household situations in the village (Figure 1). It is probable that there are other types of households apparent in Riba not depicted in the pictures. However, the pictures highlight a range of different scenarios, each accompanied by a story of how that household survives.

Picture 1 in Figure 1 depicts the 'proper household'. Picture 2 is of a single female with children and no food in the pot. This household has a limited support network in the village and survives on piece jobs and begging from neighbours.

Picture 3 is of a household that was once doing well when the husband was working. They had nice furniture, a toilet and a proper fence. The husband has, however, been retrenched (lost his job) and returned home. The family cannot extend their house and the parents now engage in piece jobs in the area and beg from neighbours. There are times when there is no food in the pot.

Picture 4 is of a small, one room house with a poor fence that is occupied by a grandmother. The grandmother has been forced to leave her

home by her son who is now married. The grandmother survives on a pension.

Picture 5 is of a household with a large number of in-laws present. There are sharp conflicts between the household members. The in-laws stay in the adjoining house and the family often has no food.

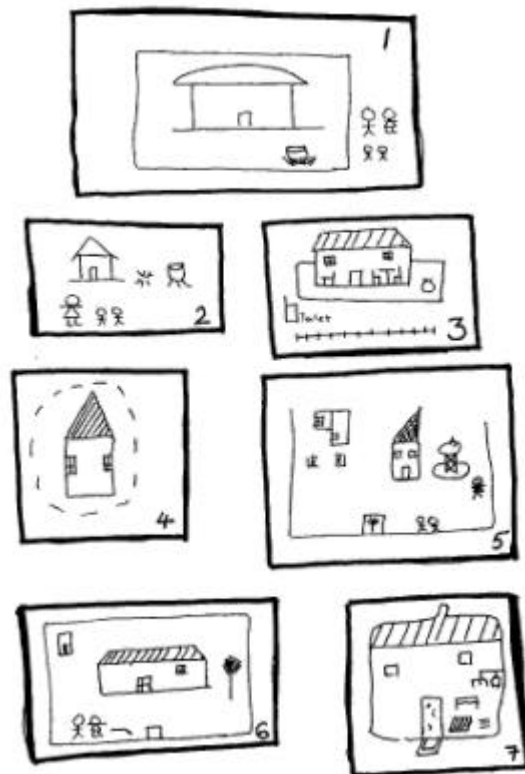
Picture 6 is of a household where the husband has a steady job but the salary is quite low. The family is unable to extend their house or maintain their fence properly. They have one house on the compound and they do eat regularly, but the food is not enough.

Picture 7 is of a poor house where the ceiling is leaking and the compound is small, so all of the washing has to be done indoors. The family survives on piece jobs.

The session revealed that the major conflicts within households appear to revolve around the control and allocation of money. Participants argued that families often split over the issue of money. The participants explained that the conflicts over money can be between:

- **mothers and sons**, who will fight over the remittances sent by the father. The sons will argue that this is their money and at times the conflicts become physically violent. One woman explained that a mother could go and buy her son some new 'takkies' (shoes), but he will be unhappy, saying he wants the more expensive 'takkies'.
- **wives and sister-in-laws**, because the wife has become more important to the brother than his sister. In the past, the brother would provide support to the sister, but now the resources go to his wife. Discussions during this session were heated and the life histories demonstrate that there were a number of women present who live with their brother's wife and children. Some participants argued that the in-laws are lazy, do not assist with household tasks, expect food to be prepared for them and expect their houses to be cleaned by the new wife.
- **pensioners and family members**, as the former have a steady source of income. Again, discussions on this subject were heated. One group of younger women argued that pensioners do not provide enough support to the household. But a pensioner responded that she provides resources but asks why she should be solely responsible for all the food and clothing in the household. At times, the situation becomes unmanageable and the family asks the pensioner to leave home (illustrated in Picture 4, Figure 1).

**Figure 1. Types of household drawn by women in Riba.** See text for a full interpretation of pictures 1 - 7.



There are also issues that cause conflict between households, including:

- **conflicts between neighbours over their children**, which were usually short-term problems that are easily resolved;
- **conflicts between households over resources**, where one household has more resources than another. This was often caused by jealousy. Participants explained that these conflicts are extremely difficult and can, at times, lead to witchcraft accusations; and,
- **conflicts because one household borrows all the time but does not reciprocate**. This issue proved to be very important, as some households are perpetually begging yet do not offer support to others during the times when they have resources that can be shared.

Participants argued that households cooperate when they have the same beliefs and opinions. They share with each other and reciprocate because they have broadly the same standard of living.

The 'proper household' session was also useful for exploring household coping strategies. A range of piece jobs were highlighted. It was clear from the participants (and largely confirmed in the life histories) that piece jobs play a critical role in the local economy. The wage rates for piece jobs are generally between South African Rand 5 - 10 (R7.95 : UK£1) per day.

An interesting finding from this session was the role of agriculture. The participants had been asked to come to the SA-PPA session on the previous day to discuss agricultural issues. Originally, the defining feature of the group was that some had access to land and were growing food and others did not, but were presently engaged in agricultural piece jobs. Despite this, there was no mention of agriculture except as an aside in Picture 6 (Figure 1).

The key issue which was constantly reinforced throughout the exercise was wage employment - employment being central to the 'proper household'. Moreover, the loss of employment

appeared to be a key factor in the undermining of the household.

## • Conclusion

The 'proper household' sessions were subsequently conducted in the six development sites that were part of the SA-PPA. This allowed for useful comparisons to be made across development sites.

Operation Hunger has found that 'proper household' sessions offer a sound starting point for further analysis of development challenges in a village. They highlight points of conflict that should be avoided and areas of cooperation that could be developed when implementing development projects. Additionally, the approach could prove useful as a monitoring and evaluation tool.

- **Edward D. Breslin**, Operation Hunger, P.O.Box 32257, Braamfontein 2017, South Africa and **Peter Delius**, Department of History, University of Witwatersrand, Private Bag 3, WITS 2050, South Africa.

## 2

# Towards a meaningful evaluation for project staff and villagers

Seerp Wigboldus and Steve Knisely

- **Objective of paper**

In this paper we give a brief overview of the experience of the Nepal Resource Management Project (NRMP) in its search for an evaluation methodology that is meaningful, not just for project and staff, but also for villagers. We describe how this experience of participatory and self-evaluation led to an improved design of NRMP's general approach to development intervention.

NRMP seeks to enhance the capacity of local community's to manage their resources, particularly in the forestry sector, by improving their problem-solving skills. Villagers build on this through designing, implementing and evaluating action plans relating to such activities as forestry, health, agriculture and drinking water systems. NRMP's process and approach to intervention evolved over time. For instance, our first experience with participatory evaluation (in 1995) revealed short-comings. The main deficiency was that we invited the villagers to participate in our designed evaluation, instead of involving them in the design and planning.

- **The design**

Early in 1996, we defined two objectives for the participatory evaluation. First, we wanted it to be profitable for the villagers. It should help them reflect on the process of village development and help them develop skills for evaluating their own work. The second objective was to collect qualitative and quantitative information to assess the impact of the project processes on capacity development.

We organised two workshops for staff to learn about participatory evaluation, self-evaluation and the facilitation of participatory tools. Based on these workshops, the staff adapted the preselected tools and devised a provisional methodology. We emphasised the idea of 'on the spot analysis' which meant that staff could and should adapt the methodology according to the situation. For this to happen, staff had to understand the principles of the evaluation process.

### Community representatives

We wanted to involve villagers throughout the process. Thus we invited villages to send two representatives (preferably a man and a woman) to participate in the two workshops. In the first workshop, we explained the concept of evaluation. Then, we discussed a methodology for participatory and self-evaluation and the role of the community representatives in this process.

In a second workshop, we discussed the first phase of the evaluation, which focuses on defining indicators and prepared for the second phase, when the assessment was undertaken. In a third workshop, after the assessment, we shared our experiences and the outcome of both the participatory and the self-evaluation. Project reports were produced in both Nepali and English, including the self evaluation process and its results.

- **The process**

The following provides a brief description of newly designed tools that we adapted for our evaluation. Table 1 shows the contribution of



each tool to achieving the evaluation objectives.

### Imaginary project

The imaginary project tool was used to reconstruct the indicators villagers would use for evaluating activities. We facilitated a role-play: we asked participants to imagine the evaluation team were from a village where no development work had been done. We then asked them to explain to the team the development work which had been undertaken in their village. We asked them to describe how they did it, why, and what would need to be done if it was repeated in a different village. We also discussed activities, objectives and indicators, which were described as 'how they should know if the work was successful'.

After this exercise, we asked the villagers to plan their own evaluation. The community representatives then took over. They facilitated a discussion of indicators to assess the results of their activities (Table 2)

Villagers would often not realise until after the exercises that they were actually making a plan for the evaluation in their own village. Thus the indicator definition was realistic, achievable and not imposed by the project.

### Drama

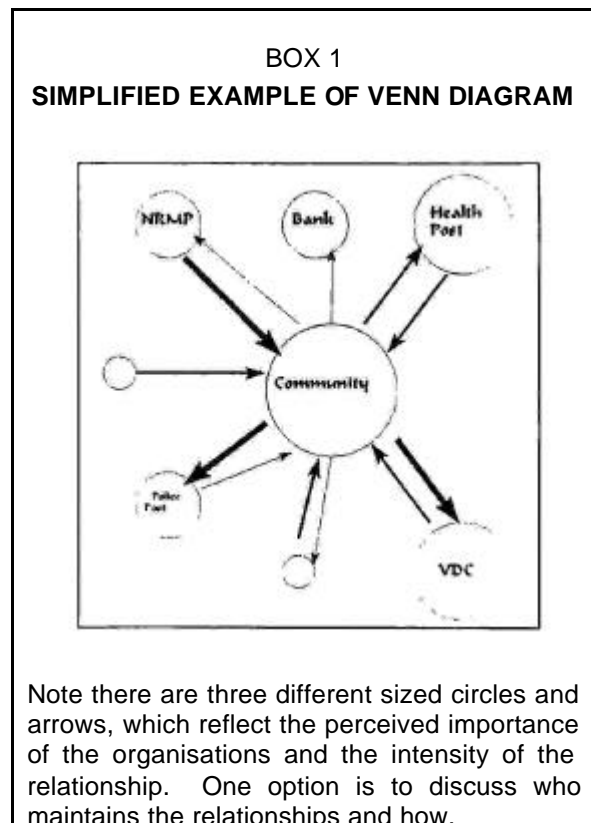
Dramas were used to learn how villagers dealt with conflict resolution and enforcement of rules. We provided a plot about a case of breaking the rules of the forest committee. We observed how villagers would decide and rule on the case.

### Historical map

First we asked the villagers to make a map on the ground showing the village five years ago. We then asked them to add new things, represented by coloured powders (including ash, chalk and red soil). Factual information about activities and improvements could be discussed using the map, including the forest plantation and processes that led to change.

### Venn diagram

We adapted this tool by placing one circle in the middle representing the community, and asked the villagers to put circles of three sizes around it. These represented the organisations with which they had a relation. The size of the circle denoted the importance the villagers gave to the particular organisation. Furthermore, we asked them to put arrows of three sizes in between the community and the outside organisation. The size of the arrow represented intensity of the relation. They could also decide whether a relationship was two-way or one-way (see Box 1). Initially we asked the villagers to construct the situation before NRMP started work in their village. Then they were asked what new relationships developed and how this process took place since the arrival of NRMP.



### Interactive questionnaire

The main objective of this tool was to initiate a discussion of how responsible people felt for the development of their own village. People were asked questions to which they could respond in three ways, represented by posters:

- one showing two inactive persons (a man and a woman);
- one showing two persons hesitant about joining some activity; and,
- one showing two actively working persons.

We asked villagers to go to the poster which expressed best the degree to which they felt responsible for a particular activity.

## SWOL analysis

SWOL stands for strength, weaknesses, opportunities and limitations. We asked the participants to share their ideas about what development activities they regarded as successful (strengths), unsuccessful (weaknesses), what had been rendered possible through this work (opportunities), and what they would have liked to do, but which was, at that moment, impossible (limitations). The strengths and weaknesses were then prioritised to find out what they regarded as the best achievements and the biggest failures and why.

**Table 1. Characterisation of participatory tools**

Tool	Facilitating reflection	Data collection	Effectiveness	Comments
<b>Imaginary project</b>	Yes	No	Very effective for constructing indicators for evaluation after an activity is completed	Indicator definition is best completed at the beginning of the project
<b>Life history</b>	Yes	Yes (qualitative)	Very good impact assessment	Essential part of evaluation
<b>Village history</b>	Yes	Yes (qualitative)	Very good impact assessment	Essential part of evaluation
<b>Historical map</b>	Yes (broad scope)	Yes (qualitative and quantitative)	Many issues can be addressed with this tool: social, economic and environmental	Don't let getting the map drawn make you forget the discussions!
<b>Transect walk</b>	Limited	Yes (qualitative and quantitative)	Very effective if discussions are established	Observation is an essential part of evaluation to cross-checking information provided by other tools
<b>Venn diagram</b>	Limited	Yes (qualitative)	Very effective for analysing linkages	This tool has a real potential
<b>Historical matrix</b>	Yes (broad scope)	Yes (qualitative and quantitative)	Effective for assessing both qualitative and quantitative changes	Takes quite some time. The bigger the matrix, the more people can participate.
<b>Drama</b>	Yes	No	It adds an entertaining aspect to the evaluation	Often we would say when villagers should stop, otherwise they could have gone on for hours.
<b>Songs</b>	Yes	No	Also entertainment value	It helps to 'break the ice' if the project team first sings a song
<b>SWOL analysis</b>	Yes (broad scope)	Limited (qualitative)	It is a whole evaluation in a nutshell	Take care that you use posters that convey the right message
<b>Interactive questionnaire</b>	Yes	No	Good discussions if facilitated in a flexible way	Sometimes a too straightforward tool

**Table 2. An example of the format that villagers used for the self-evaluation**

Activity	Objectives	Indicators	Result	Elaboration
<i>Information provided through imaginary project tool</i>			<i>Information provided through villagers' discussion, facilitated by the community representatives</i>	
<b>Literacy class</b>	Participants learn to read and write  Participants learn new skills	Ability to read simple text and write simple letter  Practice new skills that were learnt in class	10 participants could read and write, but 3 have lost the skill. 5 participants started cleaning their houses every day after they learnt about sanitation in class.	There are various other effects of the literacy class, such as women losing their shyness and some women being included on committees (e.g. the forest committee)
<b>Drinking water system</b>	Make clean water available  Water sources provided close to peoples' homes  Reduction of diseases  Provide water for vegetable gardens	Clean water available from taps  Water taps constructed in village  Fewer people will have diarrhoea  Water is used for vegetable gardens (indicates there is enough water)	Five taps have been constructed in the village. One of them is broken. There is enough good water available for vegetable gardens in the cold season only. It is clear that fewer people now suffer from diarrhoea than before.	Broken tap will be repaired within two weeks. There seems to be less water coming from the source (intake). Maybe it is drying up.

## • Discussion

We found that it was a good idea to present general concepts (with practical examples) to the field staff but leave the final design of the methodology up to them. It increased staff ownership of the evaluation process. Through feedback on their final plans and the implementation of it, it served as a very practical training.

## Tools

We used different types of tools. Some focused mainly on initiating meaningful discussions (e.g. interactive questionnaire), some provided quantitative data (e.g. historical matrix) while others provided a lively impact assessment (e.g. life histories). Semi-structured questionnaires and observations (through the transect walk) complemented this information. The combination of tools with different focuses appear to lead to a broad and balanced assessment. Our flexible approach was a key

to this: if one tool did not work well in a particular village, alternatives were used.

## Impact assessment

We cannot give a full account of the evaluation results obtained in sixteen different villages. However, we obtained important data that enabled us to assess the project's impact in key areas. This included quantitative data (e.g. about drinking water systems and fruit tree cultivation), information about social processes and changes (e.g. equity and gender issues) and information about the capacity/potential for continued village development (e.g. planning for the future). We also got some fresh ideas for improving NRMP's approach to development work. Some villagers explained that they appreciated the process as it gave an opportunity for reflection on what had been achieved and what could still be achieved.

## Reflections

The participatory evaluation and self-evaluation that NRMP developed over the last two years are a step towards developing meaningful evaluation for the project, staff and villagers. This experience helped us to reassess and redefine NRMP's general process and approach.

- To avoid reconstructing baseline data, we now collect baseline data at an early stage e.g. when a community is selected through a participatory process to work with NRMP and its activities are planned.
- The village level action planning process, facilitated by NRMP, has been enriched by defining objectives for proposed activities and indicators upon which results will be evaluated. In this way, villagers can monitor and evaluate their work from the planning phase. This makes the evaluation experience more valuable to villagers and leads to increased planning capacity and control.
- Through establishing baseline data collection and a monitoring process, the final project evaluation will now be a shorter endeavour. In the future, information will be provided from on-going self-monitoring and evaluation reducing the need for a concentrated evaluation at the end of project involvement. The final evaluation will now focus on the evaluation of complex topics that cannot be monitored at an activity level, such as gender issues and self-reliance.

### • Some lessons learnt

- The project's predefined indicators should be assessed critically, and be complemented or even replaced by indicators defined by staff for a realistic evaluation.
- Indicator definition by field staff is a powerful tool for reflection on what the project is really aiming to do. Too often it is taken for granted that staff are familiar with the aims of the project.
- Facts are easier to collect than process information. Training needs to focus on changing the emphasis from collection of

only factual information towards more process oriented (how? why?) information.

- Indicator definition by villagers at the time of action planning will make monitoring and evaluation much easier, leading to the increased control of villagers over these processes. This will relieve the work of the final evaluation.
- Self-evaluation and participatory evaluation should be used together to complement each other and not instead of each other.
- In order to make an evaluation meaningful for project, staff and villagers, it should consist of two components. First it should comprise an assessment of project defined indicators. Second, it should include a qualitative assessment of villager defined indicators.

- **Seerp Wigboldus** and **Steve Knisely**  
c/o Nepal Resource Management  
Project, PO Box 126, Kathmandu,  
Nepal.

## 3

## Process documentation research

Amita Shah

### • Introduction

Process documentation research (PDR) is a tool to help development organisations learn from their experiences. It is an open-ended, inductive process that explores the interface between an organisation and the people it works with. PDR takes a dynamic view of project implementation and helps to make projects respond to context-specific requirements. It is especially relevant for those organisations that emphasise the importance of participatory processes.

This paper is based on the endeavours of the Gujarat Institute of Development Research in documenting the implementation of a social forestry project by a leading NGO, the Aga Khan Rural Support Programme (AKRSP). The purpose of writing this paper is to share our initial dilemmas, field experiences and some of the questions which emerged from the PDR process.

When AKRSP approached the Gujarat Institute to undertake the PDR, we were surprised. Why should they not undertake the process internally? Why should the AKRSP choose formally trained social science researchers in preference to those with experience in project implementation? However, we soon learned why:

- *selective access to information*, if undertaken internally, PDR would lack objectivity because the agency itself is one of the stakeholders in the process;
- *appropriate skills*, practitioners may not have the research skills necessary to identify, generate and analyse data on a large number of interrelated variables that may influence the process directly as well as indirectly; and,
- *inadequate time*, practitioners rarely have time to write about or reflect on their experiences. Without employing extra staff, the systematic recording that is required by PDR could be very time consuming for field staff.

### • Objectives

With this rationale, we undertook the PDR-exercise. We wanted to generate information on the socio-economic profile of the project villages and prepare a chronology of the critical events in the process of project implementation. Additionally, we needed to identify factors that enabled, as well as constrained, project implementation and assess whether the project was consistent with its basic objectives.

To achieve these objectives, we focused our investigation to the following questions:

- What is the rationale (or suitability) of the specific project in the target villages?
- How participatory is the process of implementation?
- What is the outcome at the end of critical stages of the project, and why?

The PDR exercise was initiated when the social forestry project was almost half way through its implementation. We captured the process for a one year period but tried to cover the entire period of project activities. To do this, we had to depend on recall and written documents to understand the initial phases. The seven-step process we used in the PDR exercise is outlined in Table 1 and each step is described in more detail below.

**Table 1: The seven stages used in process documentation research**

<b>Modus operandi</b>	<b>Central Themes</b>	<b>Lessons learnt</b>
<i>Step One: Understanding the project objectives and the participatory approach adopted by the NGO</i>		
Discussions with NGO staff at various levels	Understanding the varying perceptions about NGO's role for initiating activities in specific village context.	The need for greater clarity and continuity of dialogue at all levels within the NGO was realised. This might help then reach a more cohesive strategy.
<i>Step 2: Identifying a framework of the key factors and their influence on the participatory process</i>		
A review of the theoretical and empirical evidence	Placing inter personal conflicts into the conceptual framework	Systems approach to problem resolution
<i>Step 3: Recruiting and training the field observers who reflect the field realities</i>		
Observation of NGO staff both at the regional office as well in the village	Sensitising the field observers to: objectivity, triangulation, maintaining role as an independent observer and tracing logical links between discrete events.	Field observer has to continuously monitor various events that may directly or indirectly influence the project and people's participation within it.
<i>Step 4: Establishing close rapport and building confidence among the village community</i>		
Explaining the true identity of the PDR-researchers as an independent team trying to help the NGO attain a more participatory process	Enabling people to declare their true perceptions of the NGO's activities and their shortcomings in the implementation process.	PDR- researchers should aim at strengthening the ties between the NGO and the community rather than intervene in the process.
<i>Step 5: Village mapping and identification of the key factors influencing people's participation</i>		
Group meetings with different community groups. Structural data collection at the household level.	Collection of a wide range of information on different themes, including seasonality, resource use and local conflicts.	Should not rely on the data already collected by the NGO as this reflects their perceptions. Cross-checks and verification are important.
<i>Step 6: Preparing the chronology of the major events</i>		
Discussions and compilation of information from secondary sources. The key questions for ascertaining the information are: Who participated in the process? What was discussed? Who took the major decisions?	Compare individuals' perceptions at different points in time and explore their explanations for these changes. To prepare the chronology, identify people's expectations, explore group dynamics and measures to improve participation.	PDR should ideally commence at the stage of planning the project intervention. If the PDR starts later, preparation of a chronology of events and their implications becomes crucial.
<i>Step 7: Identification of major issues, discussion with the NGO and report writing</i>		
Identification of enabling and constraining factors in implementation process and compare with project's basic objectives.	Some of the issues raised appeared 'academic' to the NGO and without due consideration for the constraints faced in implementing field level projects.	Avoid the tone of 'sitting in final judgement' on the NGO's progress. But it is crucial to raise issues which initiate a process of self reflection within the NGO. The aim is to indicate potential problems, not evaluate project implementation. It is as important to understand 'what is feasible', as 'what is ideal'.

### • Step 1

Each person plays a significant role in shaping the implementation of a project. But gaining consensus on the process was difficult. NGO staff often had different understandings of the basic rationale for the project. For example, perspectives on the social forestry programme

varied widely. In its most comprehensive form, social forestry was seen as an integral part of the overall farming system, improving cultivation, land husbandry and tree and soil conservation simultaneously and in a mutually reinforcing manner. Other perspectives were more limited. Some staff viewed social forestry as yet another programme to intensify

AKRSP's activities. Others viewed it as a 'trees' for biomass programme, which would generally 'do good' for the environment. Evidently, for many staff, the project had special appeal because of its direct employment potential. Bridging the perception-gap was necessary as a first step towards setting the PDR agenda.

- **Step 2**

As a starting point, a project framework could be derived from existing theories. However, it is essential a framework is developed that fits the specific local context. For example, collective local action in the social forestry project could be analysed through economic livelihoods and social hierarchy among the different stakeholders. However, we found that the inter-personal dynamics were more important. We also found that our efforts to understand the history of scattered and apparently sporadic events helped unravel the complex local realities. This was possible because we were able to build our field observations into a broad conceptual framework that we had developed previously.

- **Step 3**

The field observers were given in-house orientation by the NGO. Actual training began with the process of project implementation. The main emphasis during the on-the-job training was: unbiased observation of different versions of the same reality, verification of information, and interaction with a large number of households from different sectors of the society.

- **Step 4**

It takes substantial time to establish the credibility of the PDR team among the village community. There is always a real risk that people might lose interest if they realise that the PDR team have only a facilitating and advisory role and do not control the implementation process. Thus, the PDR team should endeavour to strengthen ties between the NGO and the people, without intervening too heavily in the process.

- **Step 5**

The implementing agency may not always collect detailed information on project-specific variables. At times, lapses occur due to time constraints or 'excessive' familiarity with the situation which can lead to the omission of important variations between households. To overcome this, a range of different group meetings were organised for collecting household-based information.

- **Step 6**

Tracing the history of project implementation involved several rounds of discussions with various actors, including AKRSP staff, representatives from village institutions and members of different social groups. Since the social forestry project had started before we undertook the PDR exercise, it was difficult to trace the chronology of important events, particularly the role of people in each event.

Secondary sources of information became important, including the minutes of meetings, notes or diaries prepared by village staff, project files and records of financial transactions. However, secondary information was often lacking because of inadequate record keeping practices. In most cases, substantive information on the three questions outlined in Step 6, Table 1 was not available.

- **Step 7**

The PDR exercise highlighted some of the important factors that enabled or constrained project implementation. These were compared with the basic objectives of the project.

For instance, issues relating to the choice of technology, selective participation, narrow-base of village organisations, links to government organisations and replicability were raised and discussed with NGO staff. This did lead, at least in the initial stages, to some resistance. Many NGO staff felt the issues raised were too theoretical and devoid of a proper understanding of the hazards of 'doing' a project versus 'viewing' one. Some of their reactions may have been justified. However, raising these issues did establish a process of self-reflection which had significant

learning value. In that sense, our role was to highlight potential problem areas, rather than evaluate the outcome.

### • Consolidating our experiences

Our experiences in conducting PDR for the social forestry project may help develop further a PDR-methodology. We discovered that baseline information at the individual as well as community level is quite important. Ideally, data should be collected by combining both survey and participatory methodologies. What is more important, however, is an iterative process whereby researchers go 'back and forth' to validate and expand their data base. No one approach for data collection can be advocated.

Maintaining a subtle distance from NGO-staff is crucial while making critical observations and/or constructive suggestions. A careful balance should be established between not being influenced by the NGO's perception about the process but, at the same time, not being so harsh as to dampen the very spirit of 'doing' something positive.

Ideally, PDR should commence from the beginning of a project and should continue until all the potential linkages of the project are explored. This calls for sustained interests on the part of the researchers, particularly in field observations.

The researchers should take a pro-active role if required. This means that instead of merely observing and following the implementation as it takes place, PDR-researchers might have to facilitate the process. This could be through creating appropriate platforms for dialogue or disseminating relevant information among larger sections of the community. This kind of pro-active role (often described, as 'backstopping') might be necessary if the process has reached a deadlock due to communication gaps at various levels.

### • Methodological questions

The following questions emerged from the PDR process with AKRSP:

- Is it essential that the PDR-researchers should agree with the objective, content and approach of the implementing agency? This is pertinent because the goal of PDR is to strengthen the decision making processes which, at times might call for a pro-active role on the part of the PDR-team.
- Should the implementing agency play a more active role in PDR? Or, should it get involved only at the time of discussing the reports prepared by the PDR team?
- Generally, PDR is directly concerned with a specific micro-level initiative, such as the social forestry programme. Is it necessary or desirable to relate PDR to the developmental process within a region?
- Documenting the events as they happen may not lead to a comprehensive understanding of the situation unless information is linked to certain key external or historical factors. In this case, should PDR try to relate the process with the larger 'external' forces at work. If so, how can we maintain PDR as an exploratory process and avoid developing an evaluation methodology?

Reflections on the above issues would help NGOs to recognise the use and application of PDR. It would also help sharpen the methodology so that PDR can evolve to make a positive contribution towards an improved understanding of participatory processes.

- **Amita Shah**, Gujarat Institute of Development Research, Nr. Gota Char Rasta, Gota 382 481, Ahmedabad, India.



## 4

## Participatory farmer selection for green manure

Alsen Oduwo

### • Introduction

Community Mobilisation Against Desertification (C-MAD) is a non-governmental organisation which formed to support small scale farmers improve natural resource management and reduce rural poverty. The organisation works in lower potential South Nyanza, Kenya. This is a 2500 km. sq. stretch of land, characterised by low and unreliable rainfall. Soil infertility limits land productivity in this area, producing low crop yields. Thus, C-MAD has promoted the use of various natural methods of soil management including composting to increase soil fertility.

Beginning in 1994, C-MAD and the Kenya Agricultural Research Institute (KARI), Kisii Research Centre initiated a programme to promote the use of green manure legumes. These improve soil fertility and reduce *striga* weed infestation, a major contributor to low crop yields in most of South Nyanza.

The project was started on a pilot basis with five farmers in Kamingusa Village, Nyanza Province. Based on the favourable results from the initial trials, C-MAD and KARI decided to extend the use of green manure legumes in other areas within different agroecological zones of South Nyanza District.

### • The approach

To begin the project, PRA was carried out to understand the magnitude of the problem and to identify trial farmers in eight villages in four different agroecological zones. This paper discusses the participatory approach and recommends the institutional set up required for

participatory projects to be implemented in a sustained manner.

### Village selection

Projects clearly state their intentions to work with resource poor people. However, in practice they often work with farmers who are closer to the research station, farmers who are easily accessed by road, and those who have done well in agriculture. Little attention is paid to those in remote areas who cultivate under difficult physical and environmental conditions. In this project, villages were selected on the basis that either KARI or C-MAD had on-going activities with farmers in them. Thus, we accept a project bias towards accessible rather than resource poor villages.

Since PRA was conducted in villages where C-MAD and KARI already had activities, the field staff from the two organisations were used to mobilise the community. This was a good idea because the farmers with whom these organisations work are themselves respected community leaders. Few cases were noted where farmers' preferentially involved close relatives, thinking that there would be immediate material gain for people who participated in PRA.

Community mobilisation cannot be under-emphasised. Those who respond immediately to outsider initiated activities in the village are often the elite, including teachers, respectable farmers, and opinion leaders. Their expectations are for immediate and direct gains from their association with outsiders. We found that the people we are targeting, the poorest and lowly placed, rarely attend fora where the issue of poverty and how to mitigate it is discussed.

We are increasingly asking ourselves whether our programmes intended to reduce poverty are counterproductive, making the poor poorer. We are also asking ourselves how we achieve poverty alleviation objectives without the full participation of the poor themselves.

### Timing

PRA was conducted between January and February, a time we thought to be appropriate considering that it was the beginning of the planting season. However we realised that we had allocated too little time to undertake for one team to visit all eight villages. We also learned that the ideal time for undertaking PRA would have been in December, just before the planting season began.

### Methodology

The team spent two days in each village during which planning and implementation strategies were discussed. The sessions generally began by introducing the PRA team to the villagers. The purpose of the visit was described as a learning exercise, for both the outsiders and villagers alike.

The villagers were asked to draw maps of their village indicating the village boundaries, homesteads, hills, streams and any other feature of significance to them. Maps indicating soil types were then developed from the social maps. The farmers were asked to list the different crops grown in the various soil types. Information on cropping patterns and other time related events were presented on seasonal calendars. Trends were also presented for rainfall, soil fertility and food production over the past forty years.

The various working groups of farmers then presented their findings in a plenary session attended by many of the villagers. During the presentations, problems relating to soil utilisation in the village were identified and discussed. The problems were then listed on cards and the villagers asked to prioritise them. In some cases, men and women prioritised problems separately, followed by a joint prioritisation. This allowed priorities to be analysed by gender.

In all instances, declining crop yields was found to be a problem. Further discussions established a link between this problem and poor soil management practices, resulting in a relative decline in soil fertility over the years. This fact was not appreciated by all farmers (see Conclusion).

Farmers' existing local knowledge on soil management was discussed, followed by the potential for green manuring to improve soil fertility and household incomes. The different types of legumes to be used in green manuring were introduced. Farmers learned that apart from improving soil fertility, these legumes could also be used as food and fodder.

### Trial farmer selection

Farmers were asked if they were interested in using green manure. In all cases, they showed interest and were asked to define their criteria for nominating five farmers from each village who would set up a demonstration on their farms. The number of farmers was limited to five to enable simple monitoring of the demonstration. Criteria set by farmers themselves for demonstration/trial farmer selection were that the farmer should be:

- Able to prepare land for the trial;
- Dependent on agriculture as main occupation;
- Based within the village;
- Open and willing to share ideas with other people;
- Accessible to other villagers;
- Able to set aside and fence a ½ acre plot for the demonstration;
- Dedicated and hard working; and,
- Representing the different soil types in the village.

In addition to these criteria, the facilitators also asked farmers to consider other social and economic aspects, such as the resource base of the farmer, the gender and age of the farmer, so that the farmers selected would represent the various groups of interest in the village.

Until about five years ago, the common practice in farmer selection has been for the extensionist or researcher to choose the best farmer, who would then be supported to implement the desired demonstration or research activities on

their farms. The organisation usually rented the farmer's land and paid for all farm inputs including the labour utilised. The shortfall with this arrangement is that it denied the farmer the ownership or partnership in whatever activity took place on the research/demonstration plot. Subsequently low levels of technology adoption were realised.

The current practice, which was used in this exercise, is to empower farmers in a neighbourhood to choose the trial or demonstration farmers from among them, based on their own criteria. However, in some cases the participants tended to elect trial farmers from those attending the exercise, not considering that they whether they represented a wider community or the village. Other farmers were elected *in absentia* based on the villagers trust on their hard work.

In general, about 80 % of the farmers selected continued with the trial, providing their own labour and other resources required for the trials. A few farmers dropped out because their expectations could not be met by the project. Some selected farmers were expecting assistance with labour and farm tools, even though it was made clear that the work belongs to them and the project would only provide seeds which were not available in the locality.

### Women as trial farmers

There was a feeling among facilitators that socio-economic factors should have been given more emphasis in the farmer selection process. Only 21% of the trials were undertaken by women. This was in spite of the attempts made by facilitators to create awareness in the communities of the need to have gender balance in the farmers selected.

The few women elected may reflect the fact that few of them attended the PRAs to elect 'one of their own'. This situation could probably be remedied by mobilising as many women as possible to attend PRA meetings. The imbalance could also be rectified by giving women a quota, for example, that half the trial farmers should be women.

A difficulty with attaining gender balance is that in this predominantly Luo tribal land, women do not own land. In most cases they also do not

own oxen used for land preparation, and yet land and oxen formed the major resources that farmers needed to contribute to the trials. We learned later that some women farmers selected lagged behind with activities on their farms because they either had uncertain land tenure or did not have the animal draft needed to prepare the land. Others had fewer farm hands for manual labour and/or inadequate resources to hire labour for weeding and other farm operations

### Group labour

The selected farmers and other farmers in the village were expected to provide the labour required on the trial farms in a rotating manner. This should have eased the workload on individual trial farmers. In some cases the idea worked well, while in others it did not for various reasons. These include long distances between the trial farms within the villages, lack of information about the trials, and the labour that was required on the farms.

From these experiences, we recommend that working groups be formed based on a cluster of farmers surrounding the selected trial farmer, who should be at the nucleus of the group. This requires the existence of a community management structure/institution at the village level. None of these existed prior to our project, or if any existed, they were not identified and strengthened by the PRA team and the project staff.

In a few cases, farmers demanded payment for labour on the trial farms. This was probably due to research requirements that certain operations be completed within a short time for control purposes. This problem was minimised through open discussions between the project staff and farmers which yielded a deeper understanding of the trial process on the side of farmers. Farmers were also asked to mobilise their neighbours to give voluntary labour during the peak periods.

### Recommendations

From our trials, we recommend the following:

- Adequate time and resources should be allocated to facilitate workshops that promote interaction between the project

staff and community members and between community members themselves.

- The PRA team should comprise policy makers and field. While in the field, preferential treatment to senior staff should be avoided in order to create an enabling environment which is necessary for a PRA team that is strong, dynamic and effective.
- The research activities should be timed to fit into farmers' activity calendars. Required materials should be secured in time and provided to farmers at the right time.
- Existing farmer practices and resource management institutions should be identified and strengthened with the objective of activating local leadership and ownership of the activities implemented.

## • Conclusions

When we went for our first discussions with farmers, they observed that their soils are fertile. They stated that the only problem with the soil is water. This generated a discussion on the relationship between soil fertility and its water content. Farmers said that if they get adequate rainfall the yields are good. If rains fail, there is no harvest. We saw in this analysis a clear case of soil infertility because a fertile soil should have sufficient moisture, air, organic matter and mineral elements.

So, we then asked farmers to pick soil samples from under a thicket and others from an open place. The difference was that the soil under the thicket was moist and dark while that from an open place was dry and dusty. At this point farmers realised that we were talking of the same concept in different ways. Thus there was a clear justification for introducing some form of

soil cover. Green manure legumes, such as *Dolichos*, *Mucuna* and *Crotalaria* (Sunnhemp), fitted the description of what farmers needed to improve soil moisture content and fertility in general.

After the exercise, we asked farmers to tell us what they liked about the process of trial farmer selection. Here is what they said. 'We just learned from our own knowledge', meaning that bringing people together enabled them to learn from each other. 'We selected teachers, people we can learn from', meaning that the farmers selected are free and willing to share ideas with people of all classes. Their homesteads are also accessible to all. 'The difference between farmers we have selected and those selected by agriculture staff is that in our process, we all participate in the trials. We know it is for all of us and not for an individual farmer. We all stand to gain from seeing what happens to the new trial crops in the field'.

This is the advantage of participatory farmer selection. In addition, the extension staff were also happy with the process: 'the process makes it easy for us to get many farmers to participate and maintain their participation in trials!'

- **Alsen Oduwo** PRA Co-ordinator, C-MAD, PO Box 155, Rongo – Kenya.

## ACKNOWLEDGEMENTS

We are grateful to the Rockefeller Foundation for providing funding for the initiative.

## 5

## Folklore and conservation in Nigeria: using PRA to learn from the elders

### Ichire Ojating and the students of the Federal University of Agriculture (FUAU)

#### • Background

Before the advent of Western religion and education, local people spent much of their time learning traditional law enforcement from the elders. For example, in many communities, it was taboo to kill the elephant, python or land snails. Certain wild trees were traditionally never cut down (see Figure 1). But Western education and religion have often failed to understand that communities, through folklore and taboos, have the capacity to protect wildlife and the forests. Western culture has tended to separate the young from tradition. This project attempted to discover the elders' knowledge of traditional beliefs and taboos and their application to natural resources protection.

#### • Discovering tradition using PRA

Traditions can be rediscovered by re-establishing local peoples' link with elders. This project used students from the Federal University of Agriculture, Umudike (FUAU) to work with the elders of some Nigerian communities.

To prepare the students for traditional information gathering, a special briefing session was held before the start of the Easter holidays, with 32 second-year students. This focused on folklore and the use of traditional institutions and societies to protect the forest and wildlife. The students were asked to use the Easter holidays to interact more closely with the elders of their various communities.

It was suggested that they should initially make detailed enquiries from the elders of

their communities on various aspects of folklore. Semi-structured interviews were used to examine: historical laws and how they are maintained, traditional institutions that were responsible for maintenance of law and order, organisation of the institutions, how law-breakers were punished and how folklore and taboos were used to conserve natural resources. The students were asked to listen carefully to stories told by the elders and ask for their meaning .

Other PRA methodologies were used by the students. For example, transect walks with the elders revealed the use and significance of natural resources and objects which people regarded as deities. The students also used trend and change analysis to explore chronologies of how customs and practices have changed over time. In particular, the students explored the causes of such changes. At the end of their consultations with the elders, the students wrote their reports and presented them at a seminar the following term.

#### • Using taboos and folklore to manage natural resources

In many rural communities of Nigeria, some wild animals are believed to be emblems of clans or people. For example, the Crocodile (*Crocodilus* sp.), the West African Python (*Python regius*), and land snails (*Archachatina* spp.) are believed to have clan or human relations. These animals are tabooed and very rarely killed. Pregnant women are not allowed to eat the meat of wildlife species, such as the tortoise (*Kinixys belliana*), which have features and traits that the elders would not like transferred to offspring. Plants are often believed to have supernatural powers since the

gods and spirits of the land and communities are said to live in the trunks of large trees.

**Figure 1. The Iroko tree (*Milicia excelsa*) is a sacred tree among many communities of South-eastern Nigeria and traditionally is rarely felled**



### • Maintenance of taboos and folklore

In many of the villages that the students visited, taboos and folklore are maintained. The tree *Newbouldia laevis* is a permanent feature near village shrines. The Cocoyam species (*Colocasia esculenta* and *Xanthosoma mafaffa*), which are believed to have the power to ward off evil spirits, are common elements of compound/backyard farms. The cotton tree (*Ceiba pentandra*), a tree believed to harbour the gods of the community, is commonly seen in the village playgrounds. These taboos and folklore are maintained through sacred societies which are always headed by the chief of the village.

For example, in Orom and Owom villages, the Ebirambe society is a traditional institution which the elders use to give instructions about taboos and folklore to the younger generations. In these villages, it is normally obligatory for

the male children of every family to be members of the sacred societies.

### The change and understanding the cause

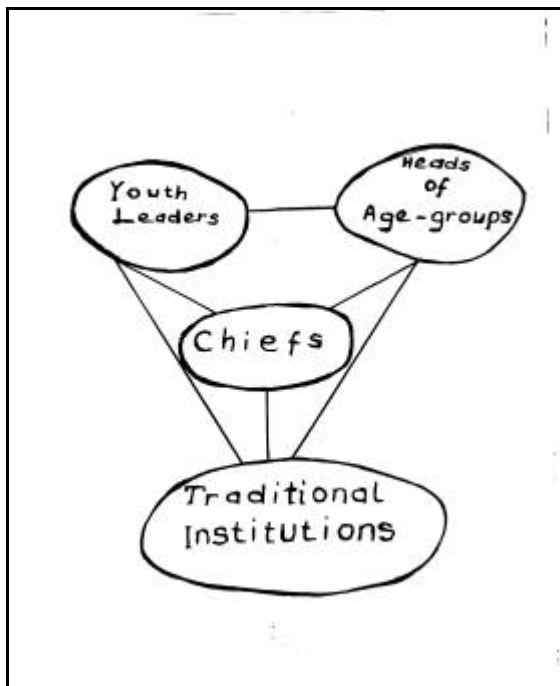
In 1914 Nigeria became one entity by the amalgamation act. In addition to new religions, formal legal systems were established and a formal police force put in place to enforce the new law. In 1960 Nigeria gained political independence from Britain, and in 1967-1970, there was a civil war. Soon after the war, the oil boom years (in the 1970s/80s) brought a lot of revenue to Nigeria. This meant mass migration of youths from rural areas to the big cities. This severed the links between the villages and urban centres, and between the elders and the youths. Both formal and traditional laws became difficult to enforce.

### Restoration of authority

Despite the influence of Western culture and religion on local people, some village chiefs still maintain the traditional law and order through folklore. In these villages, the paramount ruler (government chief) has no power over the villagers. This is because the elders of the villages, who are traditionally installed by the villagers themselves, restore their authority by enforcing law and order through traditional institutions (folklore). What is interesting here is that the traditional societies which village chiefs use to restore authority are those institutions which, to date, are very much respected and even dreaded by the people, including those who have been educated.

At the village level, the chiefs work closely with heads of age-groups and youth leaders (see Figure 2) to ensure that every male child is initiated into these societies that uphold folklore and traditional beliefs. During festive periods, the urban youths who occasionally join their rural counterparts do not like to be left out and simply join, at least for the time they are in the village.

**Figure 2. The role of traditional institutions in village life**



According to the Cross River Rural Participatory Forestry Project (1994), the village chiefs use youth organisations, age-groups, powerful traditional institutions and women's organisations to restore authority. These institutions protect their own forests and place sanctions on disturbed land. The youth organisations are dynamic and formulate policies for the village council (chiefs, elders, age-group leaders, women leaders and youth leaders). The key to this is that these youths act in accordance with the rules and dictates of folklore, which form the foundation upon which traditional societies were built.

### • Concluding remarks

A unique feature of folklore is its continued existence among people who have been exposed to Western education and religion. Folklore explains and brings out, in fine details, the traditions of a people that are unique and persistent.

Some folklore may be regarded as superstitious beliefs and situations associated with them mere coincidences. But beliefs can play a positive role in society since strict observance of the rules can bring about the orderly behaviour of people. Of immense potential benefit to society is the effective use

of these beliefs for the conservation of the forests, land and wildlife. The many wildlife species that are in existence today may provide evidence of the effectiveness of the taboos placed on them by our ancestors.

It is common knowledge in Nigeria that the post-colonial law enforcement is not working effectively in forest resource conservation. Thus it makes sense to review traditional values with an aim of incorporating them into the nation's education system. This can help the younger generation of Nigeria to maintain law and order in the society. One thing that must be stressed here is that although Nigerians may flout Western laws, they very much dread and respect traditional beliefs. Participatory research can help us understand these beliefs and apply them for the more effective management of natural resources.

- **Ichire Ojating** and the Students of the Department of Forestry, Wildlife and Environmental Management, Federal University of Agriculture, Umudike P.M.B. 7267, Umuahia, Abia State, Nigeria.

### REFERENCE

- Cross River Forestry Project (1994). Working paper no.9, Forestry Headquarters, Calabar, Nigeria.

## 6

## Pair wise ranking made easy

Tim Russell

- **Why pair wise ranking is used for prioritising**

Pair wise ranking is often used by social scientists, and increasingly by community development workers, as a means of prioritising or ranking lists prepared by communities. Common examples are lists of problems, projects or commodities, such as trees for planting in forestry programmes. Ranking these lists helps communities decide which are the most important things to do, for instance are drinking water supply problems more important than loans for oxen? What should be started first, a road to the chief's palace or a stream crossing to a school?

When valuable resources are involved, those with the loudest voices, who are often the most powerful, tend to be heard and get their way. Furthermore, each person has a natural bias toward their own concerns and areas of interest. It is therefore important that when communities are making important decisions about resource use, a method for making these

decisions is used that gives all involved a chance to have their views heard.

### The standard pair wise ranking method

Pair wise ranking in which each item on a list is compared in a systematic way with each other provides such a method. An example of this is given in Table 1. To construct this table, each problem was compared in turn with each of the other problems. Thus "Lack of fertiliser" was compared first with "Lack of transport". The community found that "Lack of fertiliser" was more important than "Lack of transport" and so a '1' was placed in the cell in the "Lack of fertiliser" row under problem number 2 ("Lack of transport"). This was repeated with the next problem "Poor roads and bridges". In this case "Poor roads and bridges" was a more important problem than "lack of fertiliser" and so a '3' (for "Poor roads and bridges") was placed in the "Lack of fertiliser" row under problem number 3 ("Poor roads and bridges"). This was repeated until all problems had been compared with problem number one, "Lack of fertiliser".

**Table 1. Pair wise ranking of development problems in Miputu, Ndola Rural District, Zambia**

Problem	Problem Number								Score	Rank
	1	2	3	4	5	6	7	8		
1. Lack of fertiliser and seed		1	3	1	1	6	7	1	4	4
2. Lack of transport			3	2	2	6	7	2	3	5
3. Poor roads and bridges				3	3	6	7	4	6	2
4. Lack of work oxen and implements.					4	6	7	4	2	6
5. No consumer shops.						6	7	5	1	7
6. Lack of clinic							6	7	7	1
7. Lack of classrooms and houses								5	5	3
8. Lack of market									0	8



**Table 2. Pair wise ranking exercise conducted by Kafulafuta Village, Zambia**

Problem	Score (As seeds or stones)	Score
Lack of wells		12
Broken bridges		9
Clinic not big enough		6
Hunger		13
No market for honey		1
Lack of transport		5
Theft		0
Dam broken		2
No hammer mill		6
Few oxen for ploughing		8
No timber for coffins		3
Poor cooperation between people		9
School not big enough		11
Roads need repairing		6

Problem number 2, “*Lack of transport*”, was then compared with the next problem, “*Poor roads and bridges*”. In this case “*Poor roads and bridges*” were a more important problem than “*Lack of transport*” and so a ‘3’ (for “*Poor roads and bridges*”) was placed in the “*Lack of transport*” row under problem number 2 (“*Lack of transport*”). Again all subsequent problems were compared with “*Lack of transport*”. This process was repeated for all problems until all possible comparisons had been made and the matrix was completed.

The number of times a problem had been found to be more important was measured by counting the number of times its problem number appeared in the matrix. Thus there are four number ‘1’s in the matrix. The problem number to appear most times is said to be the most important problem. In this example, problem number 6, the ‘*Lack of clinic*’ appears more times in the matrix than any other problem (seven times). It was therefore considered to be the most important problem. This was checked with the participating community who agreed that this was the case.

### **An alternative pair wise ranking method**

Although an unbiased comparison of all problems is made with this method, the construction of the matrix can become very tedious (as no doubt reading the above explanation became tedious to the reader). It is

also difficult for all, but the most numerate, to understand. Thus to make this technique quicker to execute and easier to understand, a modification of this method was developed during a PRA in Ndola Rural District, Copperbelt, Zambia. This uses stones instead of numbers. The results of this method are shown in Table 2.

Problems were compared in the same way as in the previous example, but with one difference: for each comparison, a seed was placed next to the more important problem. In this way a line of seeds grew next to each problem, the longer the line, the more severe the community considered the problem to be.

Even though fourteen problems are listed in this matrix, it was completed in half an hour. It was also possible for the participants to see the result of the exercise materialise as it was completed. This was done, not from reading a number, but from observing the comparative lengths of lines of stones or seeds.

A disadvantage with the system is that a record of the results of each comparison made is not kept. However, this seems to be a minor loss compared with gains in clarity and understanding.

- **Tim Russell**, Lakeland View, Galegreen, Westhouse, Via Carnforth, Lancs. LA6 3NJ, England, UK.

## 7

# Methodological complementarity

## Creativity and compromise

Jo Abbot and Irene Guijt

### • Introduction

Can participatory learning and action methodologies be combined with more formal, academic approaches and still be effective? This question is being faced head-on by the contributors to this issue of the *PLA Notes*. The continued spread and scaling-up of participatory research and planning methodologies has been accompanied by many questions related to their effectiveness and impact. Do they provide decision makers, local people and desk-bound professionals alike, with the right kinds of information to make sound decisions? What can they not provide or achieve? What do we need besides methodologies like PRA to make a difference?

In *PLA Notes* 24, 'Critical Reflections from Practice', practitioners and academics signalled growing problems with the use of PRA. One recurrent issue was the need to return to conventional social science approaches to elicit certain kinds of essential information which cannot be gathered using participatory appraisal. Mosse and Schreckenberg (see *PLA Notes* 24) wrote that in some settings and for some purposes, conventional research and planning methods may be more appropriate than PRA. Asking PRA to fulfil every information and development need is asking for disappointment, as no methodology is comprehensive.

A better understanding of the strengths and weaknesses of PRA is encouraging much-needed discussion about the need to broaden it by borrowing valuable principles and methods from other approaches. It has encouraged people like those contributing in this issue, to develop purpose-specific combinations and sequences of methods and methodologies. This issue of the *PLA Notes* discusses why complementarity seems to be both essential and effective, and offers a number of exciting examples from research and development practice. However, it also highlights areas where far-reaching and serious compromises seem likely.

### • Changing objectives and PRA

What is driving the creative combination of methodologies presented on these pages? They appear to come from researchers seeking a more people-centred research approach, as well as from community-focused professionals seeking information that carries more clout in policy and planning. And some exciting combinations come from the need for better community-level planning and action (Mangan, Sewagudde *et al* this issue). To meet such different objectives, these people are seeking to overcome current methodological weaknesses by building bridges between participatory and more formal, academically-

acceptable research and planning approaches<sup>1</sup>. No longer is it only a matter of community-level learning and planning processes.

PRA essentially grew with a community action objective in mind. Information was shared amongst community members and with development professionals, through discussions and an endless array of creative methods. This then led to local development activities (often with many limitations, as discussed in *PLA Notes 24*).

The methods, in particular, of PRA have proven so versatile that they are increasingly being adopted and adapted by those aiming to influence policy and rethink theories. For example, *PLA Notes 27* explored how experiential learning gained through PRA can provide policy makers with more accurate insights into local conditions. Articles in this issue highlight that researchers and academics require rigorous data, yet also value the perspective of local people (see Tacconi and Shanley *et al*). Decision makers need summarised data at the macro-level for evaluation or planning, but based on accurate insights about local diversity (see Carranza, Leach and Kamangira, Turton *et al*).

The information shared in community-based discussions is now being used for a range of different objectives and must therefore meet different standards. The changing objectives of participatory approaches means, in some cases, that the end-users of the information are no longer only local people. Other factors that have stimulated a methodological broadening include:

- different scales of information;
- changing research interests and ethics; and,
- limits to local knowledge.

- **Participation for policy**

A key contribution of participatory learning and action methodologies lies in revealing and bringing together a greater diversity of perspectives. Yet this often leads to complex, context-specific information. The detail of

---

<sup>1</sup> In so doing, the sharp divide between positivist scientific methodologies and constructivist perspectives is fading.

such findings can bewilder policy makers and hinder, rather than help, decision-making processes. How can they use effectively the diversity and micro-details of such information? Can they safely extrapolate from local level analysis to macro-level planning?

A common motivation for combining methodologies appears to be the need for data that show local concerns as well as a broad regional or national level perspective (see Leach and Kamangira, Turton *et al*).

Much PRA-type work is often undertaken in only a few locations within a region, perhaps based on a sampling frame that chooses 'representative communities'. The process of local analysis often follows a general structure but is strongly influenced by local people and therefore often changes during the course of the work. Without the clarity of a sampling frame, sampling strategy, and consistency of the approach across different communities, it is almost impossible to generalise such findings. Therefore, other research principles and methods are needed.

In *PLA Notes 27*, Schoonmaker Freudemberger recommends that PRA findings from a few communities should not be extrapolated directly to a larger population. It is not effective when used at a regional or national scale. Instead, she suggests that PRA stimulates a more accurate debate about a policy issue by identifying the diversity of local conditions. By combining PRA with questionnaires or remote sensing techniques, that capture broader spatial information, can provide 'an attractive combination of range and depth of information'.

Conventional methods are important for ensuring scientific rigour. Sample surveys have the advantage of providing data that can, with appropriate statistical caution, provide planners and policy makers with scaled up information that is easily interpreted.

By contrast, participatory learning approaches provide local level information with which to interpret quantitative data and explain differences between findings at different sites. However, Turton *et al* (this issue) note that they can also provide quantitative information, for example on the relative importance of

different land use practices. Additionally, participatory research enables local people to be involved in the analysis of data acquired through more conventional approaches. It provides an opportunity for researchers, development practitioners, and local people to give each other feedback and thus improve the findings.

- **Research and participation**

We were surprised by the number of articles submitted for this issue that had a research focus. It seems that a growing number of students wish to use more 'people-centred', less-extractive research methodologies. There is a growing appreciation of the value of local knowledge and the dangers of interpreting local realities as a researcher unfamiliar to the local situation. Such issues were highlighted at a recent one-day workshop held at the Institute of Development Studies (IDS, November 1996) that explored best practice for using participatory methodologies in postgraduate research<sup>2</sup>.

But combining a participation ethic in a research context requires careful thought. McGee (this issue) explores the ethics and practicalities of using rapid, people-based, appraisal for academic research. Recognising the extractive nature and lack of follow-up in academic research as compared to development-focused research, she stresses the importance of finding local collaborators and ensuring a good dissemination strategy for the research findings.

Nevertheless, Davis (this issue) notes that even where there is no explicit development planning component, local people may be able to use participatory research findings. His article describes how villagers initiated activities as a result of discussions they shared during the research process.

Another example showing how research findings can serve local needs is the

---

<sup>2</sup> An IDS Topic Pack (annotated bibliography) on 'PRA and Research' will be available from February 1997. This explores the challenges of using participatory methodologies for academic research. Contact IDS at the address given on the inside cover of this issue of *PLA Notes*.

environmental education booklet developed by local people in El Tamarindo (see Gammage, this issue). Using the research findings to create *Como es la vida en El Tamarindo* as a community education tool provided a focus for the community's interests and energies.

- **Different objectives, scales and methodologies**

Using participatory research to deliver local-level information to policy requires careful consideration about the appropriateness of specific methodologies. McGee (this issue) notes that each methodology is more effective in exploring some contexts with some people/groups at certain levels, than others. One challenge is to find methodological approaches that bridge the gap in policy-oriented research between those who make policy and those who are the 'object' of policy.

One possible solution is found in the article by Tacconi (this issue) which addresses the problem in reverse. It shows, not how to make policy based on people's needs but how participatory approaches can be used to adapt a macro-level policy to the specific local context and needs.

Linked to the importance of understanding at what level one is working, is the question of the unit of analysis. Davis (this issue) considers that the group-based methodologies, common to many participatory approaches, work well at the level of the community or sub-section of the community. However, he adds that conventional methodologies are important to focus more specifically, for example on households or individuals, and explore topics which may not be expressed freely in groups.

Do we therefore need methodologies for understanding the sub-community level as well as the macro-level, as suggested by Schoonmaker Freudemberger? Is PRA only, or most, effective in the community level discussions?

- **Limits to local knowledge**

The eagerness of researchers and policy makers for more local level information has

stimulated many methodological marriages. Exploring and valuing local people's understanding of their environment and conditions were central in that process, and are key principles of participatory learning and action. However, four articles in this issue discuss how the limits of local knowledge and skills spurred the search for complementary methodologies. Mangan (this issue) shows how little farmers may know about local pests. He describes the intensive long term training process that he uses to help farmers recognise crop pests and know when and how to apply integrated pest management.

The article by Shanley *et al* outlines the benefits and shortcomings of local knowledge to ecological research. General information on local resource use was readily available and provided the focus for the research project. 'Key informants', such as hunters, provided information about the species they pursue and use. But local people were often unable to provide reliable quantitative data on the production and yield of key forest products. Yet these data are essential to identify sustainable harvesting and management practices with local people.

Shanley *et al* suggest that the significant 'gaps' in local knowledge can be complemented by more conventional biophysical methods. In this case, long term ecological methods were used alongside participatory appraisals that were completed relatively quickly.

But what happens when such methodological combinations reveal differences between local knowledge and 'objectively' collected scientific data? Lindblade (this issue) describes an example from Uganda where long term ecological data show environmental improvement, while local people describe how yields are declining and fallow land is decreasing.

Lindblade discusses whether there is room for consensus when two data sets differ so sharply. Do researchers overestimate the ability of participatory research to enable effective communication between outsiders and local people? Have local people become attuned to saying what they believe outsiders want to hear, thinking that painting a worse picture of problems can increase the chances

of development projects? Do villagers believe the 'conventional wisdoms' of overpopulation, soil degradation and declining soil fertility because of the legacy of past development projects and an education system that perpetuates these beliefs?

While Lindblade's article does not provide all the answers, like Shanley *et al*, it urges us to take a more 'discriminating attitude towards information gathered from communities using rapid methods'. This highlights a point made by Tacconi (this issue), that the different ways in which people perceive their realities poses real challenges to any research process, not to mention a participatory process which aims to reconcile these views into a workable solution.

Another way to view the limits of local knowledge is by recognising that communities lack skills for their own planning. Sewagudde *et al* describe how Redd Barna Uganda (RBU) has slowly developed a tailor-made sequence of methodologies for their work in community-based planning. They recognise that 'PRA alone cannot stimulate all the desired changes in the community'.

For example, local communities have difficulties resolving gender- and age-based conflicts and are generally not skilled at planning large-scale activities. They lack ways to integrate children into community planning. Thus RBU staff are using other methodologies, not so much to overcome limited local knowledge, but to address gaps in local capabilities thus ensuring that the outcome is beneficial to all those involved.

## • Sequencing

Not only are the combinations of methodologies important, but so is the sequence in which they are used. Sewagudde *et al*'s article is a carefully thought out blend of child- and planning-related methodologies, where community participation remains central. Three other experiences describe combining questionnaire surveys with participatory research methods (see Davis, Leach and Kamangira, Turton *et al*). They show how the sequence of methodologies influence the degree to which local people contribute to, and benefit directly from, the findings.

Leach and Kamangira began their evaluations in Malawi using a pre-designed questionnaire. This addressed the issue of adoption of soil conservation methods, which was of importance to the project. This was followed by an innovative 'in-field' analysis of the questionnaire, which allowed the enumerators to be involved in the analysis of data they had collected. The analysis also provided the focus for the PRA work that followed, by identifying issues for further investigation and clarification.

In his Mauritania-based work, Davis adopted the reverse sequence. He began with open-ended, participatory methods to understand the local terms used for exchange practices in local communities (see also Turton *et al*). He then designed his questionnaire, more confident that the questions were relevant and could therefore provide an effective assessment of the extent of local exchange practices.

### • Timing and the use of PRA

Methodological complementarity has also arisen due to concerns about using PRA and other participatory approaches too early on in the planning or research process. McGee urges strongly that participatory approaches should not be used on first contact with communities. She suggests that a longer presence in the area can prevent ill-designed, ethically unsound research that creates local mistrust and spurious findings.

McGee undertook over five months of careful ethnographic research which revealed sensitive information that may not have surfaced using rapid appraisal techniques. But the time cost of this approach is a luxury that probably only a handful of doctoral researchers can afford.

But evidence from a development organisation supports McGee's suggestion. Sewagudde *et al* report on their experience that 'PRA is not a rapid affair' but one that can take up to 18 months in some communities. They also recommend that PRA is more effective when not used immediately, nor in isolation. It should at least be preceded by an understanding of basic communication skills, which they consider an essential complementary methodology. These enable

the grassroots organisations they work with to appreciate the importance of trust, respect and dialogue. Until good communication skills are established, it is difficult to develop solid and sustainable partnerships with local people.

### • Participation versus science?

Many of the articles in this issue suggest that quantification for scientifically-minded audiences and policy uses occurs at the expense of local people's participation.

We were struck by the fact that many of the articles we received referred to RRA or rapid appraisal, rather than PRA. This seems to reflect a shift in emphasis from participation to information. Several authors in this issue are clear that many of the methods they used did not necessarily have a planning component, due to research demands and the need to be both extensive and intensive in their research. Whiteside (this issue) explores the RRA-PRA dichotomy and discusses the value of each methodology. Like McGee, he stresses that circumstances will determine what is appropriate. He suggests that in certain situations, RRA is more appropriate than PRA and should not be 'left out in the cold'.

Nevertheless, several articles in this issue suggest that combining methods does not have to reduce the level of participation. Sewagudde *et al* demonstrate how a mixing of methodologies can instead reinforce participation, as long as the methodologies are adapted to serve primarily communities' needs rather than outside information needs. Similarly, Mangan (this issue) shows how multiple approaches help to build the skills of local people. His approach centres on a belief that the developing of local skills is central to developing effective and long term participation. Gammage (this issue) shows how extremely effective a combination of science plus PRA can be to stimulate local action in El Salvador, as is clear from Tacconi's work (this issue) in Vanuatu.

### • The compromises of complementarity

The articles in this issue suggest that the combining of methodologies can often

improve our understanding of local conditions. But they also throw up new challenges, particularly for those keen to enhance local participation throughout the research and planning process.

Without a commitment to local people's capacity-building, their participation can quickly revert to one of information sources for planners or decision makers. This form of participation clearly has its purpose, but if carried out under the banner of collective action, it is far from the truth. While the drive for more 'extensive' or 'rigorous' information is helpful for policy, what's in it for local people (other than, perhaps a less inappropriate policy)? Can they still help to drive the research, development or planning process? Perhaps one could maintain participatory principles alongside conventional techniques throughout the research and planning process. This would enable continuous feedback and clarification of issues raised but requires much time. And time constraints were the very reason for some of the innovative methodological combinations described here (see Leach and Kamangira, Tacconi this issue).

To ensure that rapidity is maintained, the philosophies underlying participatory learning and action approaches are neglected in favour of the innovation offered by the methods. Many of these methodological combinations arose to fulfil the objectives of other, non-local people's needs: policy makers, planners, donors, evaluation officers, project managers, PhD supervisors, etc.

The creative use of exciting mixtures of methods and principles are sincere attempts to enhance participation within conventional forms of research and planning. However, they can, if used carelessly, move the local people who are central to development out of reach of the analysis and planning process. Several authors make no attempt to hide the limited effectiveness of their work.

When exploring the complementarity of methodologies, we must keep our eyes open to the potential of these new 'hybrids' to strengthen local people's capacities and opportunities to mark out a better future for themselves. These articles provide new ideas,

initial lessons, and important guiding principles. They suggest that there are only inadequate substitutes for long term interaction with those people whose livelihoods are being researched and planned.

The simple acronyms of RRA, PRA, PALM, PTD, PAR, etc that have served us to date can no longer describe the context- and purpose-specific methodologies that are emerging. The blurring of methodological boundaries as described in these articles, calls for increasing clarity about the principles, methods, and above all, objectives that guide our work.

• **Jo Abbot and Irene Guijt**, Sustainable Agriculture Programme, IIED, 3 Endsleigh Street, London WC1H ODD, UK.

## 8

## Combining rapid appraisal with quantitative methods: an example from Mauritania

Robert Davis

### • Introduction

RRA and PRA developed, among other reasons, out of a frustration with traditional questionnaire surveys. However this paper illustrates that there are several ways in which these tools can improve the results, and the analysis of results, from such surveys. The example comes from a research project that contributed to my PhD. The research contained no development planning component and thus I am reluctant to call the research PRA because this implies the analysing of knowledge 'to plan and to act'.

However, I believe it can be referred to as RRA because it utilised tools commonly used in RRA (and in PRA too - see below) and because it was carried out in the spirit of RRA, it was:

*'essentially a process of learning about rural conditions in an intensive iterative and expeditious manner, using a range of methods, tools and techniques specifically selected to enhance understanding of rural conditions, with particular emphasis on tapping the knowledge of local inhabitants and combining that knowledge with modern scientific expertise'*

(Khon Kaen University 1987).

This definition describes very well the basic objective of my research and the way in which it was carried out.

Each village was provided with a copy of the RRA report, in both French and Arabic, summarising the key research findings. Even

though there was no explicit planning component, several of the communities involved did use the results to present themselves and their priorities to a variety of government and non-government agencies in Mauritania.

For example, one community used the results in on-going planning discussions with an international NGO. The results enabled the outside agency to understand a key local conflict and assist the villagers to expand a village gardening project. In another case a village used the findings to submit a proposal to several government agencies to expand income-generating activities. A third village submitted a copy of their village report to the US Embassy 'Self-Help' programme to seek funding for a gardening project. These activities all occurred on the initiative of the villages concerned.

### Studying risk management strategies

My PhD research was carried out in the Assaba region of Mauritania and described the exchange strategies that villagers use when faced with uncertainty. It analysed how these strategies have changed over time and evaluated current family living arrangements to see how migration and diversification of productive activities are used as risk management strategies.

To achieve these aims, I carried out RRA in six villages in the Assaba region (Phase 1) followed by a standardised survey which was administered to 450 households in the same region (Phase 2).

RRA was used in Phase 1 to address changes over time (even over short periods of five to



ten years) which cannot be adequately addressed in a cross-sectional survey. In addition to describing historical changes, the development of the survey would have been difficult without a clear understanding of indigenous terms and concepts. Furthermore the idea of exchange and diversification strategies may have been an outsider's construct (despite a broad literature suggesting the contrary). Thus, RRA helped me to develop a deeper understanding of the categories of strategies and indigenous terms.

Phase 2, on the other hand, was used to examine how widespread exchange practices are and to test specific hypotheses about how migration can influence the use of these exchanges throughout the region.

Six villages were selected to capture key differences in the region, including proximity to markets, differing tribal entities, ethnic differences and size of village. After a series of preliminary visits to the villages to negotiate the terms of the research project, a multi-disciplinary team of five people spent five to six days in each village. They carried out a range of activities and interviews with various groups and individuals. The tools used included: village maps, historical profiles, transects, consumption and historical matrices, Venn diagrams, wealth classification activities and a series of semi-structured interviews on village crises, conflict, migration and the development of village infrastructure.

The result of these short studies was very satisfying. By emphasising historical change (over the past 30 to 35 years), we were able to obtain rich descriptions of how the villagers' lives had been altered by droughts, the coming of democratic reforms and various development efforts such as roads, dams and wells. We were also able to confirm the importance of various exchange relationships and what goods and services flowed between the actors in such exchanges. We were able to understand villagers' attempts to diversify their productive strategies. The RRA process enabled us to build taxonomies of exchange

and productive activities and develop our vocabulary of indigenous terms. Even though I was the only non-Mauritanian on the team, all team members learned a variety of new terms to describe exchange.

Two examples illustrate how the RRA methods enabled us to develop a more meaningful survey. The first is found in Figure 1 and represents the results of a Venn diagram drawn on the ground in one village. This teaches us about the village's relationships with the outside world. More interestingly, it tells us the terms used to describe various internal exchanges that were found in the Venn diagrams in other villages.

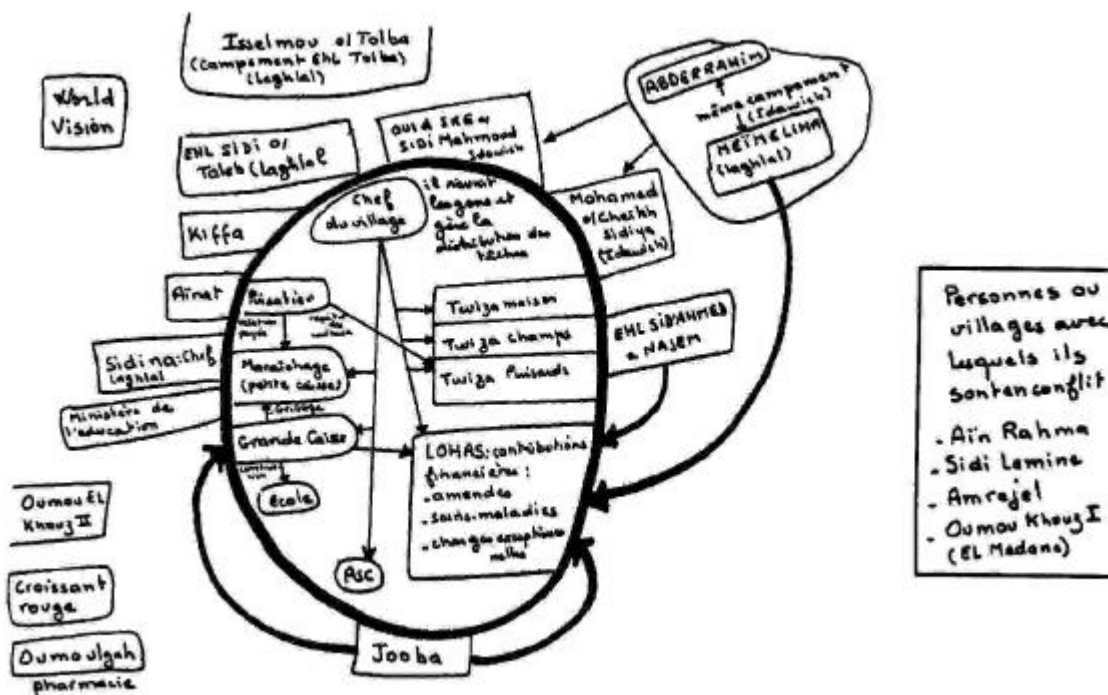
Even though most of the diagram has been translated into French for presentation purposes, the terms *loha* and *twiza* are found inside the circle. These terms represent key elements of a village's internal organisation. *Twiza* represents the physical labour that is provided by villagers to any household that requires much rapidly deployed labour to accomplish a task. We learned that a household's contribution to *twiza* assured it similar support if required in the future.

*Loha* is a similar concept in that a household's contribution to *loha* today allows it to benefit from *loha* in the future. *Loha* differs from *twiza* in that it concerns direct cash contributions instead of exchanged labour. *Loha* is central to the village health insurance coverage.

These two terms, and the variety of types of *twiza* and *loha*, enabled us to understand key elements of the exchange process. We were also able to use terms readily understood by the local population when we developed the survey.

A second example comes from an historical matrix which was carried out in one village. This was used to evaluate the relative importance and changes in the relative importance of the village's productive activities or "sources of life".

Figure 1. Venn diagram showing a village's relationships with the outside world. See text for a full explanation



The villagers defined key time periods in the life of the village and these were used in the matrix. We began by asking villagers to list their current sources of life. Using 100 counters, villagers placed them next to the 'sources', allocating more counters to those activities that were more important and less to those who were less important. After much discussion they agreed on a final tally.

We then asked them to think about the previous period and add any activities that existed previously but not in the present period. They then carried out the same tallying process until the activity was completed for each period. Besides generating much discussion and debate, an interesting profile of change in the village was developed.

The results were instrumental in developing the survey related to household activities. By carrying out this activity in all the villages we were able to develop a complete list of activities and have profiles on who would undertake specific activities in which seasons and the profitability of each.

The use of RRA enabled the team to develop a more adequate and context specific research

tool. The household-based survey, on the other hand, permitted us to 'get inside' households in a way that the RRA (as we used it) could not. Although we had attempted to describe household exchanges in the RRA techniques, we were unable to evaluate to what extent individual households engaged in these exchanges.

Our experience with RRA revealed that the unit of analysis is not the household but a kind of summary of 'typical' behaviour of different subsections of the community. As such, the village or village sub-group was the unit of analysis. This was not always a limitation because certain exchanges occur between villages and other outside entities.

However, preliminary evaluation of the survey results has shown that all of the exchanges that were evaluated at the community level are used in varying frequency by individual households. The survey thus provided more specific insights into household behaviour and, by extrapolation, the frequency of various exchanges in the community.

Taken together the two approaches complemented each other, with the results of

Phase 2 confirming that the categories identified in Phase 1 were representative of individual household behaviour. The great advantage of the RRA phase was its ability to deepen our description of risk management strategies and to evaluate change over time, things that no cross-sectional pre-coded survey can do.

## • Conclusion

This article demonstrates how rapid appraisal and more traditional survey methods can be used together. The tools of RRA can be used to inform and enhance the development of a standardised survey. They provide an opportunity to delve into much greater detail than any survey ever can. However, a survey provides greater detail on individual lives (or individual households) in a way that may not be possible in RRA methods as they are often carried out in larger groups.

Many surveys are bounded by time and are thus inadequate to explore the 'story' of a group as it has evolved over time. To evaluate how the current state of affairs has come to be, an RRA approach can be quite powerful. RRA can also improve the validity of information gained in standardised surveys by helping those formulating the questions to phrase them using locally meaningful terms and language. The advantage of a survey is that the results can be analysed statistically and, if sufficient caution is practised, scaled up.

RRA gives a voice to people, in a way that no survey can. By providing a forum in which time is not a constraint, many opinions can be heard and evaluated. RRA thus helps outsiders understand the language and terms of the

community. On the other hand a survey, if used correctly, can help a community to evaluate how it compares with others in similar circumstances as its results can be integrated with those of a larger sample. By combining the two approaches, there is thus an opportunity to explore the inside of a community and how its experience compares to the 'outside' world.

• **Robert Davis**, 328 East Ross Street, Lancaster, PA 17602, USA.

## ACKNOWLEDGEMENTS

I would like to thank the other members of the RRA research team: Ethmane Ba, Economist, Mohamed Camara, Community Development Worker, Khadijetou mint Kardidi, Geographer and Ebatnaould Arwata, English Professor/Literacy Worker. I would also like to acknowledge the logistical support provided by the World Vision People's Program team in the Assaba Region, the administrative support of the Assistant Governor for Administrative Affairs - Mr Mohamedould Sidaty and the General Secretary of the University of Nouakchott - Mr Mohamed Yehdihould Tolba.

## REFERENCE

Khon Kaen University (1987), Proceedings of the 1985 International Conference on Rapid Rural Appraisal. Khon Kaen, Thailand: Rural Systems Research and Farming Systems Research Projects.

## 9

## The use of complementary methods to understand the dimensions of soil fertility in the hills of Nepal

Cate Turton, Ashok Vaidya, Junoo Tuladhar and Krishna Joshi

### • Introduction

Soil fertility in the hills of Nepal has been high on the research and development agenda for many years. Yet quantitative data on the spatial and temporal dynamics of soil fertility are few, and repetitive reports of 'low and declining soil fertility' have little meaning without a reference point. Our study set out to develop a clear understanding of the magnitude and extent of the problem and the underlying reasons for changes in soil fertility.

This paper describes how a variety of research methods were used to explore the complex issue of soil fertility. It also illustrates some of the problems faced in applying PRA by government research institutions with mandates covering large areas. It suggests that the use of conventional surveys and participatory approaches in parallel is one solution to the challenge of achieving 'breadth of coverage' whilst maintaining 'depth and quality of information'.

It is important to distinguish between different levels of participation. In the context of this study, PRA is an appropriate term. In our research, farmers' participation was primarily in the definition and analysis of the 'soil fertility problem', which had been given a high priority by farmers in previous surveys and during extensive interactions with institute staff. It is envisaged that in the follow up to the study, farmers and researchers will work together in the design and implementation of the research.

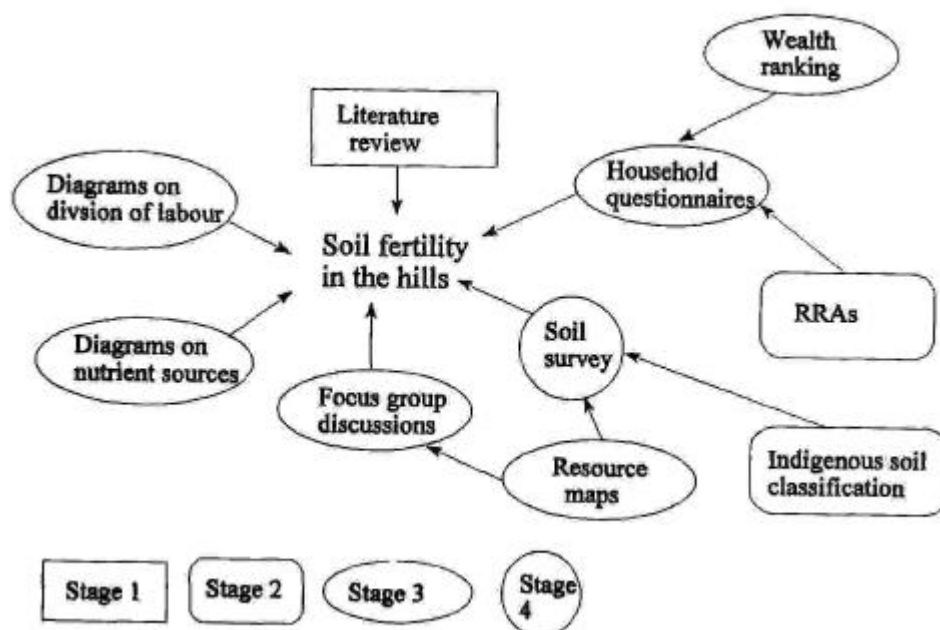
### • Participatory and formal approaches in parallel

The study covered 13 villages, characterised by a range of bio-physical and socio-economic conditions to which farming systems have adapted. Realising the need for a better quantitative and qualitative understanding of the problem, the multi-disciplinary team of researchers adopted an integrated approach, using a range of methods to build a picture of soil fertility in the hills. The sequencing of methods (see Figure 1) and their likely outcomes were carefully considered in the design of the study.

At the outset, a *Literature review* was carried out to establish the existing state of knowledge. The team then visited a large number of villages and had extensive discussions (guided by a checklist) with groups of farmers. Of particular interest during these initial visits was the type of soils found in each village. These were documented using indigenous classification schemes. On the basis of these initial surveys, 13 villages were selected for more detailed investigation.

*Informal group discussions* guided by a checklist were held in each of the 13 villages. Farmers began by drawing *maps* to illustrate patterns of resource use and features, such as land type, forest and grazing areas, landslides, gullies, water courses and soil types. Groups which included retired soldiers produced highly detailed and technically sophisticated maps. These maps acted as a focal point for discussions on community forestry and its effect on soil fertility, erosion and changes in the resource base during the past 20 years.

Figure 1. The sequence of methods adopted in the study



Hill farmers have their own detailed soil classification systems, differentiating soils on the basis of texture and colour. These were used to locate sites for *soil sample collection*.

Many valuable studies on indigenous management practices have been carried out in Nepal, but they have tended to ignore the integrated nature of farmers' management strategies. In any one field, and at any one time, a range of different practices are used together to maintain and improve soil fertility. Farmers were therefore asked to construct *soil fertility management diagrams*. Practices were then listed and one farmer was asked to distribute 20 maize grits amongst them according to their relative importance on *khet* (irrigated) and *bari* (non-irrigated) land. The grits were adjusted until a general consensus was reached. The exercise was repeated to show the importance of different practices 10-15 years previously (see Box 1). In a similar fashion, diagrams showing the relative workloads of men, women and children in different soil management activities were constructed (see Box 2).

**BOX 1**  
**SOIL FERTILITY MANAGEMENT IN TALBARI**

Seven different practices are used to maintain and improve soil fertility, including:

- Farm Yard Manure (FYM)/compost;
- Terrace slicing;
- Chemical fertiliser;
- Mulches;
- Flood water;
- In-situ manuring; and
- Trash burning.

In Talbari, as in other villages, the importance of different practices has changed over time. There has been a decline in the importance of in-situ manuring and traditional practices (such as green manuring and mulching) and an increase in the use of chemical fertilisers. There is also much variation in management strategies across the hills. In low altitudes, a decline in FYM availability has been compensated for by an increase in the use of chemical fertiliser. In higher altitudes, farmers continue to rely on the traditional practices of in-situ manuring, trash burning and FYM/compost application

Whilst recognising the value of PRA, many have noted the difficulties of providing the representative quantitative data that are needed for planning purposes using participatory approaches. Such data is essential in the context of a research station such as Lumle Agricultural Research Centre (where this study was based), with a mandate for agricultural research in a wide area, stretching across the eight hill districts that comprise the Western Development Region of Nepal.

Thus, a short questionnaire was designed to collect information on farmers' perceptions of fertility status, the reasons for change and the factors associated with any change in soil fertility. The questionnaire was designed to enable easy statistical analysis. *Wealth ranking* was carried out to ensure that a representative sample of households was selected for survey (see Box 3).

**BOX 2  
DIVISION OF LABOUR**

Soil fertility management practices include:

- Cutting/carrying grass and bedding material
- Cleaning shed
- Carrying and spreading FYM
- Staying/moving goth<sup>1</sup>
- Slicing terrace risers
- Trapping flood water
- Burning trash in field
- Carrying chemical fertiliser
- Applying chemical fertiliser

The majority of tasks are shared between men, women and children, but the degree of involvement varies according to the nature of the work. If the relative importance of management practices is taken into account, women play the primary role as they contribute most of the labour to the most important activity of FYM preparation and application. Consideration of women's knowledge of FYM/compost preparation may improve the relevance and impact of this widely researched topic.

<sup>1</sup> Tethered animals in temporary sheds which remain in the field depending on feed availability and manuring requirement

**BOX 3  
A VALID APPROACH TO WEALTH  
RANKING?**

One limitation of conventional wealth ranking is the relative nature of the grouping process. This leads to problems when it becomes necessary (as in our case) to compare information from different villages. A household placed in the wealthiest category in one village may be placed in the lowest category in another, due to differences in village economic profiles.

To overcome this problem, this study adopted a standardised set of categories. Previous wealth ranking experiences in the hills showed that food sufficiency and pensions paid by British and Indian armies to ex-service men are the most common criteria used to rank households. Key informants were therefore asked to place households into 1 of 3 groups:

- food and/or cash surplus for 12 months or more
- home grown food lasts between 6-12 months
- home grown food sufficient for less than 6 months

The feasibility of adopting a fixed number of pre-defined groups was tested in 3 villages by comparing the results with those from a conventional wealth ranking approach carried out simultaneously by a separate group of informants. A Spearman Rank Correlation was used to test the association between the composition of the 2 groups. High levels of statistical association between these groups were found, indicating that this approach may be a rapid and effective way of classifying households which allows comparisons of households beyond the village level.

• **A complex problem**

There is a strong and widespread belief among farmers that soil fertility is declining: 61% and 67% of farmers reported a decline on *khet* and *bari* land respectively. Somewhat surprisingly, responses of unchanged or increasing soil fertility were significantly higher from the poorest households. This may be explained by the fact that they have smaller areas of land and thus fertilising resources are spread less thinly. As expected, fewer poorer households apply chemical fertilisers.

The scale and extent of the problem, the nature of soil fertility decline and the underlying reasons for change differed significantly across the surveyed area. Three broad pictures emerged:

*Case 1:* In a few villages in low altitude accessible areas, the majority of farmers reported unchanged or increasing soil fertility. However, soil analysis in these villages highlighted critically low levels of organic matter, as well as nitrogen and acidification problems. Management of soil fertility increasingly relies on chemical fertilisers and many traditional practices have disappeared. (see Box 4)

*Case 2:* In higher altitude/inaccessible areas, the dominant opinion was that soil fertility is declining. Yet, measured soil nutrient levels are higher than for villages in Case 1. From group discussions, several key factors were identified that may account for the perceived decline in soil fertility. These include the deterioration in forest resources and a decline in livestock numbers. These villages do not have access to alternative nutrient sources.

**BOX 4**  
**SOIL FERTILITY IN HYANJA**

Hyanja is a low altitude village located close to the large town of Pokhara, which provides a market for its agricultural produce. The soils in Hyanja are highly acidic and have lower levels of organic matter than other surveyed villages. This has been related to high crop intensities, low FYM/compost applications and a decline in in-situ manuring. It was somewhat surprising, therefore, to find that 45% and 62% of farmers reported that soil fertility was unchanged or increasing on *khet* and *bari* land respectively. Several reasons may account for the apparent contradiction, the most likely being that the use of chemical fertilisers, which has resulted in increased yields, has disguised an underlying deterioration in soil physical and chemical properties. This was understood by farmers who commented that soils have become hard and dry, and yields fall dramatically without the use of fertiliser.

*Case 3:* In between these two extremes, the picture from other villages was mixed, although there was a general pattern of low nutrient status and declining soil fertility.

This brief summary of our findings illustrates the complexity of the problem of soil fertility. It is characterised by considerable differences in the nutrient status of soil, perceived changes in soil fertility and variations in the management practices and strategies adopted by farmers in response to increasing pressures.

• **Reflections on our approach**

The approach adopted by the team ensured that different aspects of soil fertility were systematically explored and enabled direct comparisons of results from different villages. This was an important consideration for Lumle Agricultural Research Centre with a research mandate that covers 8 hill districts. The use of complementary approaches combined the qualitative strengths of PRA with the quantitative benefits of conventional surveys.

Information from the questionnaires on farmers' perceptions of fertility change can be easily incorporated into research planning processes. Although we anticipated at the outset that PRA would contribute qualitative strengths, this was not exclusively the case. For example, the management diagrams constructed by farmers provided quantitative information on the relative importance of different practices.

A key challenge for the future lies in identifying and developing complementary methods and approaches, that enable an optimum balance between qualitative considerations (the extent, depth and nature of farmer participation) and quantitative concerns (breadth of coverage) to be achieved. For example, wealth ranking helped to improve the degree of representation of quantitative information.

An important benefit of the diagrams was that farmers participated in the analysis process. The diagrams showing soil fertility management now and in the past, enabled farmers to identify their constraints and opportunities and revealed the strategies they have adopted as a result of changes in the external environment. The nature of farmers' responses varies widely, from the use of chemical fertilisers to increasing the proportion of leaf litter in FYM. The key point is that responses are highly location specific.

The diagrams also enabled researchers to appreciate soil fertility management from the farmers' perspective i.e. a continuously evolving system, which is the outcome of a complex decision making process dictated by wider socio-economic and bio-physical circumstances.

The use of local soil classification systems proved to be an effective and rapid way of planning the soil survey. It helped distinguish soils that are important to the farmer and the use of local terms enabled us to communicate clearly and easily with rural people. The major limitation of the indigenous systems is that they are location specific. Soils are classified on the basis of farmers' experiences and consequently, a *chimtay raato maato* (red clay soil) in one village may have quite different properties to that in another. Soil analysis results were valuable in enabling a more objective understanding of different soil types.

This study represented the first phase of a project to improve the prospects for sustained agricultural productivity in the hills. As such, PRA approaches were used in conjunction with other tools in a mainly diagnostic fashion, to enable researchers to gain a clearer understanding of the issue. Lumle Agricultural Research Centre is currently in the process of preparing a research strategy based around integrated nutrient management. This aims to support farmers in their constant efforts to adjust to changes in the resource base. The maps and diagrams form an output which, in conjunction with other tools, such as resource flow models, can be used in the next phase to assist farmers to further analyse their practices, plan improvements and identify opportunities for research.

- **Cate Turton**, Overseas Development Institute (ODI), UK, **Ashok Vaidya**, **Junoo Tuladhar** and **Krishna Joshi**: Lumle Agricultural Research Centre, PO Box 1, Pokhara, Kaski District, Nepal.



## 10

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

Martin Leach and Johns Kamangira

### • 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 sites<sup>1</sup> 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

<sup>1</sup> 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 triangulation<sup>2</sup> of results.

<sup>2</sup> 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 volgelii* 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.

- **Martin Leach**, (Formerly Monitoring and Evaluation Adviser to PAPPPA, Malawi), ITAD Ltd., Lion House, Ditchling Common Industrial Estate, Hassocks, BN6 8SL, UK, and **Johns Kamangira**, PAPPPA Monitoring and Evaluation Officer, PO Box 1481, Lilongwe, Malawi.

## 11

## PRA and its complementarities with household survey methodologies

Sarah Gammage

### • Introduction

We undertook research in El Salvador to estimate the returns to different mangrove management scenarios. We wanted to compare the sustainable management of the mangroves to their conversion to shrimp and salt ponds. The research was highly participatory with the community measuring and articulating the value of the mangroves and the consequences of their deforestation. PRA was a component of the valuation exercise that incorporated a community definition of sustainable management. This reflected the 'revealed preference'<sup>1</sup> valuations of the community and was in harmony with their management concerns.

The participatory appraisal of the mangroves in El Tamarindo in the Gulf of Fonseca was a precursor to a rural household survey that aimed to describe human-environment interactions and the local importance of the mangrove system. Initially, we had hoped to use PRA to describe the individuals' and households' relationship to resources and help develop a survey that could assess environmental inputs into the rural household economy. However, as the PRA work evolved, it became apparent that it could contribute more than a just description of the ecosystem and the use of environmental goods and services.

---

<sup>1</sup> Revealed preference describes a theoretical approach in micro-economics that is used to predict consumer behaviour and derive the 'demand' for goods and services.

PRA provided an opportunity for local residents to express their environmental preferences and describe the social and economic institutions that determined resource use. Furthermore, the PRA process helped disseminate many local resource management practices. It became apparent that the collapse of entitlement to the mangroves had provoked unsustainable resource use. As community rights to use and cultivate the mangroves were ceded to shrimp farmers, salt producers and loggers, pressure on the existing system had forced the community to abandon previously viable management strategies. It had increased the unsustainable dependency on mangrove timber and fuelwood, and shrimp and mollusc harvests in the estuary.

### • The role of PRA

During the course of the data collection, PRA methods moved from being an additional tool that would furnish information about the community use of environmental resources, to providing the essential building blocks for the development of a community management strategy. What began as focus group discussions, mapping and simulation exercises, gained momentum and integrated itself into the design and application of the rural household survey and ultimately informed a sustainable mangrove management strategy.

The initial participatory work used several methods designed to encourage local residents to describe their relationship with the natural resources.

- Separate focus groups and key informant interviews were held with men and women, to explore gender specific use of

environmental inputs. The men defined their activities as being primarily fishing, although many farmed or are wage labourers on nearby farms and small public infrastructure projects. Most of the women defined their occupation as 'housewife' and not economically productive. Yet further discussion revealed that women were economically active and used environmental goods and services as inputs to generate income.

These discussions helped us redesign the time allocation aspect of the survey. Thus we were able to elicit better information on the individual and household relationships to the resource base, develop indices of resource utilisation by gender and age, and relate household income constraints to the allocation of household labour and the use of environmental inputs, most notably fuelwood, timber, molluscs and crustaceans.

- The Ecological Committee of El Tamarindo<sup>2</sup> developed a map to define the boundaries of the village and identify the resources on which the village depended. Transects were drawn of the estuary detailing depth at high and low tide, siltation areas, concentrations of fish and shrimp throughout the year and boundaries of artificial shrimp and salt ponds. The maps were also used to identify areas of mangrove deforestation by land use and summarise environmental degradation throughout the estuary.
- Calendars and timelines were developed that described local agricultural, fishing and logging activities, external pressures on

<sup>2</sup> The Ecological Committee of El Tamarindo is a grass roots group of fisher-persons and community inhabitants who are concerned about environmental degradation and have come together to promote change and raise consciousness about conservation. The committee has been in existence since 1990, although it has changed its name and increased in membership since it was legally recognised by the local authorities in 1995. The newly named Committee for Community Development has defined its twin goals as community development and environmental sustainability, linking their economic needs to their preference for sustainable resource management.

the local resource base and the loss of biodiversity over time.

Various visual techniques and graphs were used to generate information on the distribution of rainfall, water table fluctuations, and annual changes fisheries resources. Histograms and relative proportions proved useful to express changes in fish stocks and rainfall throughout the year. Non-literate individuals demonstrated a strong understanding of relational volumes, densities and proportions that allowed for the collection of surprisingly accurate rainfall and mangrove density data. This information was later compared to Ministry of Agriculture rainfall estimates and a forestry study revealing broadly similar trend lines.

### Clear quality and rich quantity

These methods highlighted the limitations of research that uses only quantitative methods. Quantitative instruments can produce survey data and observations on variables that can be expressed numerically, are statistically representative and can be easily extrapolated, although not always correctly. Qualitative data produce extremely detailed, acutely site-specific, socio-cultural information that may not be representative, may be subject to significant selectivity bias and cannot be extrapolated, although not always correctly. However, in tandem these methods yield a rich picture of human activity. Furthermore, the strategic use of qualitative and quantitative methods can reduce the overall project cost and time-burden of cumbersome and extensive quantitative instruments.

One example shows these methodological complementarities. A survey, was applied to 110 mangrove households and 489 individuals in El Tamarindo in 1993 and 1994. The purpose of the survey was to document the nature and extent of the relationship men and women had with the resource base. The survey took place in the wet and dry seasons to assess seasonal variation in fishing and agricultural activities. The survey revealed that 50 percent of men in El Tamarindo fished as their primary occupation. A further 3 percent were involved in fish processing and marketing.

However, only one woman declared herself to be a fisherperson and only 6 percent stated that

they were actively involved in fish processing and marketing. Had we used only the information derived from the initial household survey, we would be forgiven for concluding that women did not fish or gather estuarine resources.

The focus group discussions and key informant interviews, however, revealed a more complex picture. The qualitative data demonstrated that women do fish. While men fish in the open seas, the majority of female fishers confine their activities to the estuaries and shoreline. Some women also fish in the open sea, accompanying other members of their families to catch shrimp in the coastal waters.

Although most women perceive their tasks as purely domestic, it was obvious from the focus group discussions that women are heavily involved in processing the catches. They prepare and dry fish for sale in local and regional markets; they, dehead and pack the shrimp in ice; and they gather shellfish and crab, providing essential nutrients and proteins to supplement the family diet of maize and beans.

The time allocation component of the survey facilitated the collection of data that would not have been gathered otherwise. It consisted of detailed questions about how all members of the household spent their days, breaking down different household and market activities into specific tasks. Using these data, we were able to determine that: 29 percent of women regularly earn income from fishing and fish-processing activities, approximately 60 percent of all women clean fish and process the catch, 42 percent clean boats and help their husbands moor and haul the catch in from the beach, and 17 percent sell produce in local markets, restaurants or bars.

For those members of the community who had become involved in the PRA process, it provided a forum for discussion, negotiation and demonstration of the roles, responsibilities and relationships of men, women and children to the mangroves. It helped define what the community considered to be their inalienable rights to participate in the management of these resources.

The community defined its environmental concerns and preferences, and provided

examples of how to manage the mangroves sustainably. Having outlined the potential management system, the community analysed the main impediments that prevented its implementation at the international, state and village level. The people described the incentives to deforest, to over-fish and to harvest the resources unsustainably. They analysed the existing state institutions that were responsible for the allocation of use rights to the mangroves for conversion to shrimp and salt ponds and to loggers and commercial fuelwood vendors. They discussed the failure of these institutions to enforce existing legislation and to curb illegal deforestation, and identified how poverty prevents some people from harvesting resources sustainably.

### ● Application of the research

As the research project progressed, it became clear that the informal group, that had formed around the participatory appraisal and had reactivated the pre-existing Ecological Committee of El Tamarindo, had expectations of the research. One of the pressing needs was for local education initiatives and materials, especially as 46 percent of the community did not know how to read and write, and another 18 percent who claimed they could read, did so with extreme difficulty. Since the local school had virtually no books or materials for either children or adults to learn from, they suggested that we produce an educational tool that was relevant to their lives ourselves.

Everyone decided to use the PRA and household survey information to develop an educational document. It would describe the community of El Tamarindo and its history; document the lifestyles of the inhabitants, their households and their livelihoods; list the tasks that men, women and children perform; and demonstrate the value that they place on their environment.

Certain criteria were set. It would have pictures so that anyone who could barely read would be able to make sense of the story. It should have numbers so that it could be used to teach Mathematics, Spanish, and Social Studies. It would talk about environmental degradation, due to the loss of mangrove extension through conversion to shrimp ponds and as a result of logging activities. It would talk about the loss of



biodiversity in the estuary and the sea. It would have information about the growth cycles of fish, molluscs and crustaceans from which the community made a living. It would talk about poverty and its effect on the community, individuals' decisions to stay by the coast or migrate to the city, to send their children to school or to have them work alongside their parents.

The objectives of the document were clear: to provide a history of the community of El Tamarindo that would not only pay testament to their lives, but would inform others about the environmental and economic concerns faced by that community; and to furnish the local school with a valuable educational tool. It was an ambitious project with a small budget but we managed. The information to be included was identified by the members of the PRA team and a popular education group was invited to draw the cartoons.

We drew heavily upon peoples' goodwill and unpaid contributions in producing the booklet. Two hundred copies of the document were given to the local school and others were circulated among the community. What follows are a few abstracts from the booklet '*Como es la vida en El Tamarindo*', which is currently being used in the school in El Tamarindo to teach everything from mathematics to biology.

- **Sarah Gammage**, International Center for Research on Women, 1717 Massachusetts Ave. NW, Suite 302, Washington DC 20036, USA.

#### NOTES

PRA methods were initially used in a rather unstructured way, largely as we were learning about participatory approaches as we undertook the study. Each method was adapted to project to explore evolving questions. We learned, as the project progressed, that the explanatory and descriptive power of PRA techniques can be greatly enhanced if they are used in a systematic and sequential manner.

Photocopies of '*Como es la vida en El Tamarindo*' (in Spanish) can be obtained from Sarah Gammage at the address listed above.

#### ACKNOWLEDGEMENTS

We would like to thank the following individuals for their support, their artistic and professional talents, their time and financial contributions: Manuel Benítez and Melany Machado of the IUCN; José Luís Ventura and Ana Ventura of the Comité Ecológico de El Tamarindo; Ann Butwell; Alfredo Burgos and Alfredo Vicente of the Equipo Maíz; and Francisco Rivas Mendez of Amigos de los Arboles.

• **Como es la vida en El Tamarindo<sup>3</sup>**

El Tamarindo is a coastal community in La Unión in the west of El Salvador. It is a beautiful village situated at the mouth of an estuary near a mangrove forest.



The majority of the people live from artisanal fishing. Although there are people who don't work directly in fishing, everyone depends on the fortunes of the catch: the men, women, girls and boys. Thus, the entire economy of El Tamarindo depends on fishing in the same way as the fisher-people depend on the tides.

If the fishing is good, there is money in the village, but if the fishing is poor and the catch is not plentiful everyone has to resort to whatever small savings they have. For those who have no savings, the only option is to wait for a new cycle and a better catch.



<sup>3</sup> 'What is life like in El Tamarindo'. These pages are taken from 'Como es la vida en El Tamarindo' an educational booklet for the people of El Tamarindo in El Salvador. See the preceding pages for an explanation of how this educational booklet came to be.

• **How many people have had access to education?**

Almost half of the inhabitants who were interviewed never had the possibility of attending school. Those who had received education, didn't manage to finish their studies. The majority only managed to finish 2 years of primary school.



Almost half of the boys went to school, whereas only a quarter of the girls went to school. This is because, if people want to educate their children, they have to go hungry.



Or spend more time in the open sea to see if they can catch more fish.



*Como es la vida en El Tamarindo Como es la vida en El Tamarindo Como es la vida en El Tamarindo*

• **How many hours each week do people work in El Tamarindo?**

The investigation showed that the people of El Tamarindo are very hard-working, but that the catch is very variable: sometimes there is plenty of fish, sometimes there isn't. For this reason, in many periods, the men don't have work, but when there are fish, they work very long days without rest. The majority are watching their nets during the night, they

barely sleep for 24 or 42 hours because they must keep fishing.

Our sample showed that 18 percent of the young men hadn't worked the previous week. The majority who worked, only did so for 40 hours. This meant that the fisherpersons of El Tamarindo were experiencing a bad spell and that the catch was poor. Meanwhile the majority of the women worked between 0 and 90 hours, and only 4 percent said they had done no work last week.

**Members of the family who earned money last week**



### What are the wages and incomes?



### • And what is it like for women?



### What is the future of the fishing?

As a fishing village, the population of El Tamarindo know very well that the abundance of the catch depends upon the care and management of the resources. The community also know the importance of the mangroves, and

that they guarantee the survival of the fish and shrimps.

The catch depends intimately on the existence of the mangroves, which form part of a unique and fertile ecosystem. The leaves of the mangrove fall, producing matter that decomposes to form a rich mud. There are

*Como es la vida en El Tamarindo Como es la vida en El Tamarindo Como es la vida en El Tamarindo*

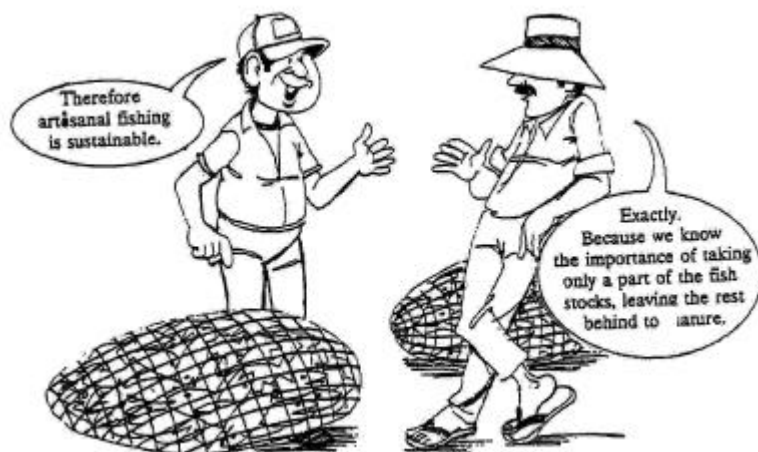
numerous animals, bacteria and simple organisms in this mud which become food for the shrimp larvae in the estuary. Beneath the roots of the mangrove in the thick mud, live crustaceans, mussels, crabs and shellfish. The shrimp larvae grow in the estuary in the roots of the mangrove. Fish also enter the estuary seeking food. As a result, all the species of fish and shrimp depend directly or indirectly on the good health of the mangroves.



Because of this, the community has organised a reforestation project through the Ecological Committee with the help of the Canadian Government and the Maquilishuat foundation.

The industrial shrimp boats threaten the survival of the fish population because they use large densely woven nets. This means that they capture many sea-creatures including the fish and shrimp that have just been born and are not yet mature.

The artisanal fisherpersons always adjust the size of their nets and the density of the weave to whatever fish type they wish to catch. The artisanal fisherperson fishes for a fully grown catch, leaving the younger littler fish and shrimp behind, so that they might mature, ensuring that there will be fish for the future.



### What is sustainable fishing?

Fish and shrimps are assets, like money in a bank account. To maintain people's livelihoods, one should only live on the interest generated by the money, leaving the capital behind so that it continues to generate more interest.

The same principle applies to fish. If they are all fished at one time, none are left behind to mature. With no fish left to reproduce, there would be no fish, and no fishing industry, left in the future.

Como es la vida en El Tamarindo Como es la vida en El Tamarindo Como es la vida en El Tamarindo



## 12

## Ethnography and rapid appraisal in doctoral research on poverty

Rosemary McGee

### • Background

Written from the field, this article presents problems, progress and early observations from doctoral fieldwork on poverty and anti-poverty policy which combines ethnographic, Rapid Appraisal (RA) and other techniques. It discusses some of the practical and ethical dilemmas facing researchers aiming to use RA for doctoral fieldwork and offers some reflections on the basis of my own trial and error.

A central question in this article is methodological complementarity: Can ethnographic research on poverty offer policy-makers any policy-relevant information, which quicker, cheaper methods cannot? Additionally, it addresses whether it is practically feasible and ethically sound to conduct RA in the context of doctoral or other academic fieldwork, which tends to be extractive rather than participatory in nature.

### The research problem

A problem in all policy formation is the 'perception gap' which tends to separate the viewpoints of those who make policy from those of people who are 'objects' of policy. In development policy, the perception gap is wide: the social structures of many countries permit only the élite to reach policy-making positions and guarantee great differences in life experiences between them and the poor majority. It is particularly problematic in the case of poverty reduction policy because policy-makers are government officers and the

'objects' are the poorest people in the population. The challenge for poverty research in the 1990s is to bring the realities of the poor into focus, so that they count to the socially distant policy-makers.

### The methods

My doctoral fieldwork in a poor community in rural Colombia seeks to explore the 'perception gap', uncovering poor people's perspectives on their condition and to compare this 'bottom view' with the 'top view' embodied in policy responses. To explore methodological approaches for bridging the gap in policy-oriented research, my research spans all levels of the policy process. Different methods lend themselves to different research contacts and actors, so I am using a combination of research techniques (see Table 1). Of particular concern are gender and power dimensions of poverty, rarely perceived from the top level.

RA is a key tool for bringing local perceptions with the policy making arena (see *PLA Notes* 27). However, in the light of recent criticisms of 'extractive' and 'data-mining' use of RA techniques, I had doubts about using a method generally associated with participatory development planning for Ph.D. research which is essentially extractive in nature. The worry about creating false expectations which I could not fulfil, seemed as intractable as the related practical problem of accessing suitable communities when I had no development projects to offer in return.

**Table 1. Levels of the policy process and corresponding research approaches**

LEVEL	SCALE	RESEARCH APPROACH
TOP <i>macro</i>	GLOBAL	<b>Literature search</b> on poverty and poverty reduction policy
	NATIONAL	<b>Secondary data-gathering</b> - poverty studies, government documents and statistics, international NGO reports, 'grey literature' of international financial institutions, press articles, <b>Formal interviews</b> - national government staff of social safety-net programme, international aid agency staff, Colombian development researchers
MIDDLE <i>meso</i>	REGION	<b>Secondary data gathering</b> - poverty indicators for region and municipalities documentation on social safety-net programme in region literature on and results of municipal survey for identifying beneficiaries of government subsidies Municipal Development Plan, anthropological literature on region <b>Semi-structured interviews</b> - regional safety-net officers, municipal planners, mayor
BOTTOM <i>micro</i>	VILLAGE	<b>ETHNOGRAPHIC RESEARCH:</b> <b>Basic census</b> to meet people and collect demographic and livelihood data <b>Direct observation</b> - community meetings, market, school, health, post etc. <b>Participant observation</b> - farming, in school, coffee harvest, etc. <b>Life histories</b> - of local people (male and female) <b>Thematic semi-structured interviews</b> - teachers on educational and social development status of population, health promoter on social development status of population, Community Action Committee members on their activities, traders on local economy and livelihoods, farmers (male and female) on agricultural year and livelihoods, school children (male and female) on their ambitions and expectations, agricultural wage labourers (male and female) on livelihoods, key informant couples on household economy <b>Seasonal calendars and crop ranking</b> with farmers. <b>RAPID APPRAISAL:</b> RA sessions in two nearby communities on theme of poverty/well-being, social mapping of community, well-being ranking of community members, generating local criteria for poverty assessment, analysis of difference, Chapati diagrams, identifying institutional and individual agents and linkages

### Early observations

An ethnographic prelude has contributed substantially to the design and setting up of RA. Responding to my doubts about the practical feasibility of conducting RA as a lone Ph.D. researcher, several important insights gained so far have altered drastically the way I am undertaking RA. Although I have already completed much of the top-level research, it is my ethnographic work in the same area as the proposed RA sites which has offered these insights.

Table 2 summarises the realisations which have overturned some of my prior assumptions or plans, and the implications for designing

my RA sessions. It has taken five months of ethnographic work to find ways round these dilemmas.

I approached local NGOs and research bodies with an outline of my research. I hoped to collaborate with them by using RA in programme planning, rather than working alone and leaving little trace once I had taken my findings away. Far from presenting myself as experienced in RA, I aspired only to publicise the philosophy of the approach and raise some challenges to traditional, top-down, inflexible, burdensome research and planning methods, which seem to dominate in Colombian development circles.



The search for collaborators proved fruitless. No organisation seemed to use RA-type techniques regularly because of various time and work pressures. Neither were any able or interested enough to devote the necessary time or effort to trying out this new approach with me. Yet these very same work pressures made me feel that organisations could better focus their work by adopting RA methods.

Faced with the prospect of having to undertake RA alone, I identified strategic channels for

disseminating my findings in-country. For local NGOs, municipal planners and village committees, whose responsibility for local development planning and co-financing is increasing faster than their capacity to fulfil it, a brief, factual report seems appropriate. After extensive enquiries, I have discovered a regional NGOs network which channels information to and between such entities and is willing to disseminate such a report.

**Table 2. Insights gained through ethnographic work and their implications for design of Rapid Appraisal sessions**

Insights gained through ethnographic work	Implications for design of RA
Foreign researcher arriving in small community arouses even more stir and suspicion than I'd thought	Conduct RA in communities near my ethnographic site, where I'm known at least by sight and hearsay
Using local administration as a way in has strong political connotations, not necessarily desirable	Use health promoter instead. Not liked by all, but an acceptable contact in everyone's eyes
Some insight into local knowledge and experiences enables me to explain my presence in a way people understand and can relate to and also to appreciate significance of locals of giving full explanation	Give full, tangible and honest explanations when inviting participants and again when commencing RA sessions, encouraging people to ask any questions they have
'Community Space' in which to announce my intentions, request collaboration and invite participation doesn't exist as such - village committee meets frequently and is unrepresentative	Conduct house-to-house visits in RA communities to explain and invite people individually
Some insight into gender relations, roles and interests locally; and main forms of gender bias	Programme visits in evenings or weekends and RA sessions at weekends, to be acceptable to women and men. Extend invitation clearly to both sexes avoiding alienating either, by stressing the role of both. In process and content of RA sessions, look out for clues for gender biases to be identified
Local evangelical church members constitute clique, more organised and vocal than most	Consciously counter their tendency to dominate in attendance and participation in RA sessions
Verbal, written and diagrammatic feedback after RA sessions isn't a substantial or interesting enough incentive to make people attend them	Provide lunch for all, or give each participant a chicken to raise, or a local daily wage, as well as feedback

## Reflections on methodological complementarity

Despite its name, I believe that RA for research or development purposes cannot be done rapidly and well in totally unfamiliar territory. I feel I should advise doctoral fieldworkers: don't even think you can walk in alone and conduct RA. Without familiarity with the local context, it is likely to be ill-designed, ethically unsound and will generate local mistrust and spurious findings.

The ideal antidote to such practical and ethical blunders is a sustained presence in the area before commencing RA. If this familiarisation period is unfeasible, as the term RA suggests, other people's familiarity is a second-best option. This may be accessible through development practitioners in the area, published ethnographies available in home or host countries, or through local universities' anthropology or sociology theses. Attempts to enlist local collaborators may fail because their priorities differ from visiting researchers', but it is worth exploring the possibility and devising a good research dissemination strategy in any case.

Mid-way through my research, I am still in the process of addressing my central question: is the additional information generated through time consuming ethnographic research relevant to poverty reduction policy? Several insights gained in my ethnographic work would surely have surfaced in RA. Others would not.

Recent confidences from key informants suggest that more sensitive aspects of gender subordination and political oppression - key factors in the poverty of most people here - do not surface readily or publicly. These confidences reveal women's and children's vulnerability to beating, rape or material deprivation by male partners or relatives; and a poor community's total defencelessness in the face of human rights abuses by guerrilla and state forces. Although representing a small proportion of all I have learnt, shared confidences are highly relevant to policy formation. To succeed, poverty reduction programmes must confront such realities.

In summary, after five months of ethnographic research, I believe I have a better basis for conducting methodologically and ethically sound RA than I had at the outset. This is partly because the ethnographic work has directly oriented the design of the RA and partly because being present for a protracted period has allowed me to explore ways to make the research work. The questions being answered in the remaining months of fieldwork are whether the added complications implicit in complementing policy-oriented poverty research with ethnography are justified, and if so, how to make this proposition acceptable to policy-makers.

- **Rosemary McGee**, School of Economic Studies, University of Manchester, Manchester M13 9PL, UK.

### ACKNOWLEDGEMENTS

This doctoral research was funded by the UK Economic and Social Research Council (ESRC).

### REFERENCES

*PLA Notes 27* (Oct 1996) Participation, Policy and Institutionalisation.

## 13

# Discrepancies in understanding historical land use changes in Uganda

Kim Lindblade

### • Introduction

One of the many strengths of participatory learning is its emphasis of the importance of rural people's knowledge and perceptions. When quantitative, objective data contradict qualitative, subjective knowledge, we are presented with an opportunity: first, to use the discrepancy to learn more about project participants, and second, to learn more about the participatory process itself.

This discussion presents a case where a development narrative commonly recounted in southwestern Uganda was found to counter objective, quantitative information. The question is not which is more valid, the objective data or subjective viewpoints, but how this conflict can be used to improve our understanding of the people who perpetuate the narrative and the participatory process through which it was elicited.

I worked for CARE-Uganda from 1993-1996 and assisted in developing a participatory community development project. The process typically proceeded from community sensitisation to problem identification, problem analysis, action planning, activities and periodic evaluation. PRA revealed a widespread narrative among project participants that overpopulation was forcing households onto smaller and smaller pieces of land. This compelled people to farm their land continuously without fallowing, resulting in soil fertility declines to the point that some crops, such as millet and peas, were no longer grown.

This basic account of overpopulation leading to soil fertility decline through continuous cultivation was reported in some form in every community in which we worked. This narrative has been accepted as 'conventional wisdom' by researchers and NGOs working in the region, possibly because of its compatibility with global level assumptions regarding the relationship between population growth and environmental degradation.

In late 1995, we were funded by the Rockefeller Foundation to conduct a quantitative, longitudinal study on environmental changes in the area. We had been fortunate to gain access to a detailed land use survey conducted in 1945 by a colonial agricultural officer. This database included information from 14 transects conducted around Kabale District, recording land use practices along the 32 miles the study covered. The report included sufficient detail of the locations of the 14 transects that we were able to repeat the survey in exactly the same areas precisely 51 years later.

We felt that this study provided a unique opportunity to calibrate the participatory methods we used to understand local perceptions of environmental change with quantitative, longitudinal data. This would allow us a better understanding of how well subjective community knowledge tallied with objective sources of information.

We conducted six RRAs<sup>1</sup> in the areas crossed by the 1945 transects to gather the perceptions of local people as to the environmental changes which had occurred in their region over the last 51 years. We arranged for small groups of elderly men and women (the *wazee*) who had lived in the area all of their lives to meet with us.

We utilised a number of rapid appraisal techniques to probe for changes in environmental and agricultural characteristics of the region, including semi-structured interviews, historical timelines and transect diagrams. This last technique involved diagramming a hillside as it would have looked in the early 1940s, using local plant material to indicate where crops had been planted during a typical second season of that time period. After the diagram was complete, we used it as the basis from which to discuss changes in land use which had occurred over the past half century. To gather the *wazee's* perceptions of the transformations of land use in the district, we asked questions such as, “*Do you still grow peas today? How has the amount of land covered by millet changed from the 1940s to today? Do you plant maize with other crops more frequently today or in the past?*”

## • Results

The results from these RRAs were essentially identical to those from the more extensive PRA carried out in neighbouring areas. The information relating to changing land use is summarised in Table 1. The recurrent narrative about the lack of fallow land due to overpopulation was recounted in all communities.

One month after the RRAs were conducted, we repeated the 1945 land use survey during the same month as it was originally conducted and utilizing the same transects (for a detailed methodology see Lindblade *et al.* 1996). Information on current land use was collected

and we estimated the length which fields had been left to rest, using a system compatible with that of the original investigator.

---

<sup>1</sup> I am distinguishing the PRA as used by CARE to facilitate community development action planning from the extractive RRA, which we conducted for the purposes of comparing information from participatory methods with transect data as part of the study on land use changes.

**Table 1. Summary of RRA: perceived changes in land use over the past 51 years, Kabale District, Uganda 1996<sup>1</sup>**

Land use	Community					
	1	2	3	4	5	6
Bananas		+	+	+	+	+
Beans		+	+	+	+	+
Fallow land	-	-	-	-	-	-
Grazing land	-	-	+/-	-	-	-
Irish potatoes			+	+		
Maize		+	-	+	-	+
Millet		-		-	-	-
Peas		-	+	-	-	-
Sorghum		+/-	+	+	+/-	+
Sweet potatoes		+	+	+	+	+
Tomatoes/cabbages			+		+	+
Trees	+	+	+	+	+	-

<sup>1</sup> A '+' signifies a perceived increase over the last 50 years in the total land area under the particular land use. A '-' signifies a decrease in the same period. A '+/-' indicates a difference of opinion within the group. Blank spaces in Community 1 are due to changes in methodology which were not implemented until after the first community had been completed. Lack of response for certain crops in other communities is likely because they did not grow the crop in 1945.

A comparison of the summarised results from the community RRAs and the transect survey are presented in Table 2. There was a fair amount of agreement on most of the individual crops. But we were very surprised to find that the quantitative data conflicted with the regional narrative describing the effect of overpopulation on continuous cultivation of the soil. Instead of fallow land decreasing as a proportion of the land surface area, as reported during the RRA and by project participants, it had actually increased from 19.4 percent in 1945 to 31.6 percent in 1996. The average resting period had also increased from an average of nine months in 1945 to over 14 months in 1996.

**Table 2. Comparison of RRA findings and objective data relating to changing land use, Kabale District, Uganda 1996<sup>1</sup>**

Land use	Community consensus	Transect survey
Bananas	+	+
Beans	+	+
Area of fallow land	None	+
Fallow land resting period	-	+
Grazing land	None	-
Irish potatoes	+	+
Maize	+/-	+
Millet	None	None
Peas	None	+/-
Sorghum	+	-
Sweet potatoes	+	+
Tomatoes/cabbages	+	+
Trees	+	+

<sup>1</sup> I have used NONE to indicate where communities insisted that not only had there been a decrease in the amount of land in a particular land use category, but that it no longer existed at all.

## • Discussion

Our immediate concern was to try and understand how this discrepancy could have arisen. We discussed these surprising results with community members and local experts to try and understand why fallow was perceived to have disappeared when our study found it to be more common now than in the past. I would like to discuss a few hypotheses we have developed which may help to explain this discrepancy.

### **Historical events and propaganda have shaped perceptions**

The British colonial agricultural officers who started working in the area in the late 1930s were concerned with what they perceived to be an overpopulation problem in the area. They feared it would cause severe environmental degradation. To encourage people to follow the agricultural measures they recommended, the colonialists mounted an intense campaign of education and propaganda. This included: agricultural courses (which emphasised the problems of soil erosion caused by over-cultivation), and a touring group which showed films and gave displays about agricultural improvement and methods of soil conservation.

All of these efforts emphasised the role which local people were playing in degrading their environment. Such messages are still being spread today through government departments, schools and NGOs. This pervasive view is likely to greatly affect perceptions of past conditions. The power of suggestion is certainly a strong one, and may partially explain why the participatory methods elicited concerns about population growth and over-cultivation.

### **Have we understood farmers when they say there is no more fallow land?**

It is quite possible that an outsider's concept of fallow is very different from that of local people. For example, farmers might call resting land 'fallow' only if it has been left to rest for longer than one season. It is also possible that land which has been abandoned because it is no longer productive will not be

called 'fallow' at all. We investigated the different local words for fallow and how they are applied to various kinds of resting land to ensure that we were not missing some subtle difference in meaning.

Our results suggest that fallow was simply considered to be agricultural land without any current crops. However, I believe that there may be a difference between what I will call 'surplus' and 'necessary' fallowing. The first type was more common years ago when land was plentiful and was left to rest because it was in excess. The latter type of fallowing has become necessary as household land holdings decrease and frequent cultivation threatens soil productivity.

It is possible that when people are asked about fallow they are referring to the surplus fallowing, which is not common except among wealthy farmers. Therefore, while farmers are still fallowing, most of them are doing so out of necessity. If this is the case, then the problem lies in our misunderstanding of what farmers mean when they say there is no more fallow.

In a similar vein, many farmers stated that peas were no longer planted because the soil has become infertile. This is clearly not the case because peas covered more than 19 percent of cultivated land in 1996. However, peas were never intercropped in 1945, whereas now they are almost always found in fields in which other crops are growing. While peas may no longer be planted alone, they are still an important crop and part of a rotation with beans, maize and sorghum. When it is reported that peas are no longer grown, it may be that farmers are referring to the historical situation when peas were planted on their own rather than intercropped. This is an important distinction which was not recognized during the participatory research process.

### **Are people telling us what they think we want to hear?**

Despite the participatory focus of community development efforts, a power differential exists between development workers and community members and this must impact on the process. First, communities are well aware that NGOs and government agencies intervene

only if the situation in an area is poor and getting worse. In fact, by structuring our community development planning exercises towards community 'problems', we are already setting the agenda for our interactions. Communities in this climate are unlikely to express optimism or contentment with the *status quo*. In fact, they are much more likely to develop a litany of problems for fear that they will risk losing the attention of development organisations.

Second, communities are well aware of the objectives of most organisations. They know that CARE is very active in the area of environmental conservation, agricultural interventions and family planning. In this case, they are likely to emphasize the importance of these issues as fundamental causes of community problems over other causes which might actually be more pertinent.

### • Conclusion

It is rare to find an opportunity to compare community knowledge and perceptions elaborated in participatory appraisal processes with longitudinal, objective data. In the few cases where this has been possible, we have learned a great deal both about the local system and the difficulties inherent in participatory methodologies.

This example demonstrates that a discriminating attitude must be displayed towards information gathered from communities using participatory methods. In many cases a critical attitude must also be displayed towards objective data. However, as recognition of the magnitude and complexity of local knowledge has grown, there has been a tendency to accept it at face value and to explore its depths without comparing its reality to another.

Because of the possibility that the perceptions of local people do not match the understanding of development workers, information should be triangulated with other data sources wherever possible. Triangulation of data sources is a key, but often forgotten, element of participatory methods. The purpose of triangulation is not to determine whether local knowledge and perceptions are more or less accurate than other sources of data. Instead the

aim is to reconcile these different realities. And in the process, gain insight into the participatory process, highlight misunderstandings and identify external forces, which may influence the discourse or interactions between participants. Without triangulation of data from various sources, it is very possible that community development programs will be built on invalid fundamental assumptions and shallow understanding, potentially leading to a lack of interest or commitment on the part of local people.

- **Kim Lindblade**, School of Public Health, University of Michigan, 1420 Washington Hts. Ann Arbor, MI 48109-2029, USA.

### NOTES AND ACKNOWLEDGEMENTS

Although many people contributed to the work described in this article, the opinions expressed are those of the author alone and do not necessarily reflect those of CARE or any other individual or organisation providing assistance or support.

I would like to thank my colleagues on this project: Joy Tumuhairwe, David Bwamiki and Charles Nkwiine from Makerere University Department of Soil Science and Grace Carswell from SOAS and the University of Sussex Institute of Development Studies. Philip Franks, Beda Mwebesa and Vanessa Bainbridge of CARE-Kabale made important contributions to the study which greatly improved its quality.

I also sincerely appreciate the efforts of CARE-Uganda to facilitate the research involved in this project. The Rockefeller Foundation and the University of Michigan's Population-Environment Fellows Program generously provided support for this study. I would particularly like to thank the people of Kabale who were remarkable for their patience and generosity during our collaboration on this project.

### REFERENCES

- Lindblade K, Tumuhairwe J K, Carswell G, Nkwiine C, Bwamiki D. (1996). *More People, More Fallow: Environmentally Favorable Land Use Changes in Southwestern Uganda*. Kabale, Uganda. A report prepared for the Rockefeller Foundation. Available from the author on request.

## 14

## Limits and strengths of local participation: a case study in Eastern Amazonia

Patricia Shanley, Jurandir Galvão and Leda Luz

### • Introduction

Local knowledge of natural resources is now recognised for its ecological value and is subject to close scientific attention. Inclusion of local communities in natural resource based research and development projects is now considered essential. Much attention has focused on promoting participation through approaches such as RRA and PRA, which integrate local people into development efforts. However, in this article we describe the strengths of local participation and the limits to local knowledge in a five year research and development project conducted in eastern Amazonia.

This project has focused on the subsistence and economic value of non-timber forest products (NTFPs) for rural communities. NTFPs are natural resources harvested from forests by local people for subsistence or economic purposes. They include fuelwood, fruits, fibres and bushmeat which are used as foods, medicines and for construction purposes.

### • Community collaboration

At the outset of the collaboration our team of researchers had not undergone PRA training. However, activities such as resource mapping, oral histories, ranking of preferred species, and transect walks were utilised to gain an overview of resource availability, utilisation, and changes through time. For our purposes, PRA was a respectful approach that valued local knowledge, and made practical sense.

### Species selection

Local participation was essential to the project. First, we needed to determine which NTFPs were the most promising as options for developing income generating activities. The study aimed to provide environmental and economic information on NTFPs for which markets could be developed.

The community aided us by reorienting our vision and thinking. While we approached the forest with a botanical focus, assuming that flora would be of greatest import to villagers, it quickly became apparent that our priorities differed from theirs. Medicinal plants with the potential to cure cancer were not of pressing interest to a population more likely to suffer from malaria, malnutrition or diarrhoea. Instead game species, including large rodents, agouti, paca, armadillo and deer, and game-attracting fruit trees were the NTFPs of prime interest to local people.

Second, the game-attracting, edible fruit that the community recommended we study, were deemed unpromising by urban colleagues. They considered them distasteful, oily, grainy, and lacking in sweetness. These fruits had no national market, export statistics, or international acclaim and regional economists considered them to be insignificant. In spite of these warnings from the 'experts', we decided to study four fatty fruits which were selected by villagers. They are in need of calories, fats and protein and thus appreciated the oily fruits.

To corroborate our species selection, we conducted a conventional one hectare, labour intensive, ethno-botanical forest inventory. This inventory yielded the same list of species given to us by the villagers. It affirmed the



results we had gathered with PRA but offered quantitative and botanical accuracy, which we were unable to achieve with PRA.

### **Where mapping and measurement pay off**

Although each component of our work (population ecology, game and NTFP consumption studies) was informed by members of the community, substantial support from conventional scientific methods was also needed. For example, to determine whether the fruits had market potential, we needed to know how many fruit trees grew in the forests (density) and how many fruit they produced (yield).

We first sought these answers through discussions, ranking and transect walks. Such methods often yielded exaggerated notions of resource availability and composition, indicating that PRA was not a reliable method for obtaining critical information relating to population ecology. In one instance, an extremely knowledgeable hunter estimated that 1000 mature trees of piquiá (*Caryocar villosum*) occurred in their 1500 ha forest, with concentrations of up to 20 trees per 5 ha. Two years later, after mapping much of the 1500 ha area with over a dozen hunters we discovered a total of 149 mature piquiá trees.

Although hunters were the best informants regarding fruiting species and they had extensive site specific expertise, their knowledge of densities and fruiting patterns was restricted to their hunting range. In these high biodiversity forests, where less than one species of tree per hectare is common, knowledge from a particular area is not readily communicated to a wider geographic area.

To obtain basic yield data, we collected estimates of average annual fruit production per tree from scores of villagers, all of whose families had lived for in the forest for generations. These estimates varied over ten-fold. Such variation is understandable because when collecting for direct consumption, families typically collect only one or two dozen fruit at a time. Whether 200 or 2000 are lying beneath the tree is irrelevant: a big pile of fruit is a big pile of fruit. Thus estimating

the economic value of the forest using PRA, we discovered that few residents had even a vague notion of the quantities of products they harvested freely from the forest. When a plentiful product is not paid for, there is little reason to remember if two or ten kilograms are harvested.

Forest residents who market these fruit and who live closer to cities generally had a more accurate gauge of production. Like apple and orange growers, their livelihoods depend on knowing how much income their forest will produce per hectare. Similarly in the case of valuable, less abundant commodities, such as meat, we found that hunters retained a clear notion of the weights of their recent game captures.

To gain a rigorous measurement of quantities of forest products used, we designed a research plan in conjunction with the community, and trained families to weigh and record forest products used daily. To discover whether 200 or 2000 fruit lay beneath a tree, a long-term research project was needed. The research design was based on information from local people but was constructed by the research team to obtain necessary scientific and statistical rigour. The project was carried out principally by researchers during the first year. However the researcher team's influence diminished, over the years of study until in the fourth and fifth years, the full-time team consisted solely of villagers.

### **Learning from mistakes**

A range of development activities emerged from the research including: the processing and marketing of key fruit species, creation of forest reserves, and the undertaking of outreach workshops. While informed by research results, this component was driven by the community with minimal assistance from the team's scientists except in catalysing events and documenting results as needed.

Keeping a low profile as villagers experimented with who marketed fruits and how and when, was essential to allow local ownership of the development effort. It took village assessment of the gains and losses of early approaches to decide on eventual

marketing methods. For instance, the initial group of men who carried fruit to market hastily drowned the profit in drink. The second attempt was initiated and carried out by women who, in spite of being unfamiliar with markets or travel, returned with goods and profit for the entire community.

Because our results had relevance throughout the region, data needed to be disseminated to other communities where land and forest resources have come under increasing pressure. Graphs of economic value and lengthy Latin names, however, were unimpressive to local people. 'Translating' our results with and for community residents challenged us to analyse our data from a local perspective, and in so doing, to make relevant information accessible to local people. Otherwise, the research may have been lost in inaccessible journals.

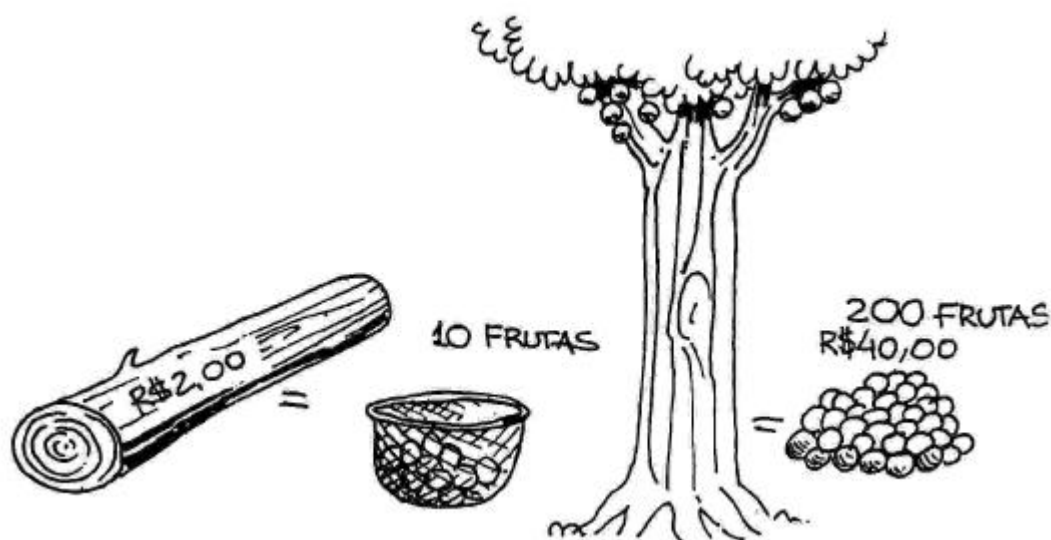
Moreover, since outsiders could match neither the language nor site-specific knowledge of local people, village presentation of the results was critical. To disseminate ecological and economic information to neighbouring communities, we developed a village outreach team whose work was informed by technical findings but grounded in practical, site-specific knowledge.

## Long time frame

Our study was not rapid. The fruit species of most interest to locals and which bore the greatest economic potential had received scant prior study. Understanding even the basic ecology of the fruit trees and game species required a long term time frame. The study continued for four years with the local community, with frequent visiting to both the trees and the people who use them. While PRA activities gave us an overview of natural resource use, close observation and measurement over a long time generated data quantifying the value of primary forests for local communities.

The long time needed to understand the ecology, complemented the long time needed for local people to know us. As our knowledge of the ecology of the forest and the villagers increased, so did our competence as catalysts of development activities. In spite of our planning, we often found development opportunities arose unexpectedly, washing pots with women at the rivers edge, lingering after a church service, encountering disgruntled hunters on a forest trail.

**Figure 1. The economic value of timber versus NTFPs, such as fruit**



Could development activities have proceeded more rapidly? Year after year, as we counted fruit during the rainy season, intruded on village homes to measure NTFP consumption, and inventoried game during the dead of night, we frequently asked this question. When an opportunity arose to be formally trained in PRA for the purpose of measuring the economic value of NTFPs, we jumped at the chance (see Figure 1). We thought we would learn to accomplish in two weeks what we had laboured on for three years!

Practising PRA methods with excellent trainers in a neighbouring region definitely improved our skills and added to the tools we had in our original kit. In a short time, an impressive amount of information on natural resource use was gathered and a good working relationship created with the community. Formal training improved the range and scope with which we could employ PRA activities. However, the significant gaps in information that we encountered - fruit tree and game densities, fruit and medicinal oil production and estimates of NTFP consumption- were exactly those which we had devoted our last few years to discovering.

But our recent community development work has confirmed the utility of PRA, especially when used in conjunction with other more quantitative methods. Currently, we are in the process of disseminating the ecological and economic information generated to neighbouring communities and are surprised at its capacity to catalyse positive change. The outreach team uses PRA to understand the needs of a community and natural resource pressures it faces. PRA has helped communities increase the use and sale of NTFPs, to negotiate with loggers to conserve particular trees and to create community forest reserves.

### **Measures of success: more forests or more paper**

What indicators of success would villagers use to measure such a long-term project? Money is a key indicator for many people. In spite of results demonstrating that the subsistence value of NTFPs is substantial and that these values can outweigh sums offered by loggers

for timber, most hungry people prefer cash income. The monetary gains accruing to the community, through the sale of NTFPs were minimal, although the sale of forest fruits, mainly by women, did offer petty cash and goods to some families. As the prices of forest fruits increase, however, the market and population ecology information gathered during the project has increasing potential to pay off economically.

As villagers sought cash and game from their forests, the scientists longed for numeric results and 'rigorous' data for publication in leading journals. The team felt pulled in two directions and numerous conversations revolved around the divergent needs of the scientific/ development communities and local ones. Although our research agenda had been constructed for scientific needs, once finished, our team prioritised returning results to rural communities. This route was chosen in spite of institutional pressure to publish results for the benefit of funding agencies. We found that the process of returning the data to communities prior to publishing, offered comparative information which sharpened our discussion, and widened the use of our study for both local and international audiences.

Immediate needs on the part of local communities and the desire for rapid, quantifiable change by many funding agencies tends to prioritise farming, not forestry activities. Long term, unquantifiable gains - a community's heightened ability to negotiate, subtle variations in forest management, increased opportunities for women, and modifications in plant utilisation - are easily overlooked. To achieve lasting forest conservation that truly benefits local people, academic, development, and funding communities must consider assessing projects not by their speed or the weight of paper they generate, but by their commitment to long term work on the ground.

- **Patricia Shanley, Jurandir Galvão and Leda Luz.** Address for correspondence: Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, Kent CT2 7NJ, UK.

## 15

## Methodological proposal for farmer-scientist land use planning

MAC. Tzinnia Carranza L.

### • Background

Since the beginning of the decade, the federal government of Mexico has planned to create an ecological reserve in the communal land of the Chimalapas Forest. This is situated in the heart of Tehuantepec Isthmus, in the state of Oaxaca, Mexico. However, the *campesino* farmers are also aware of the ecological importance of their region. They consider it to be the most important reserve for plant, animal and genetic resources in Meso America.

The *campesinos* have taken the initiative in deciding what, where, and how to conserve, regenerate and utilise their forest resources. They recognise the potential for improving their quality of life through the appropriate use and sustainable exploitation of natural resources. Thus, the communities have drawn up land use plans in order to create a *campesino*-managed ecological reserve.

The municipal authorities were appointed as an advisory group responsible for the preparation of a study on the Forests of the People of the South East, A.C. With the help of the ODA, they began working in the region to design a methodology that facilitated local participation by *campesino* communities in ecological land use planning. The process aimed to make the *campesinos* directly responsible for managing their own resources.

The method adopted uses and integrates both technical expertise and local experience and knowledge. The process was difficult for there are few similar examples from which to draw experiences.

Initially, the work progressed satisfactorily but became more complicated when the *campesinos* were required to maintain the technical rigour that land use planning demands. Thus, it was very important to maintain a close relationship between the diverse groups which took part in the study. This was assisted by the use of participatory methods and the input from technical experts. We now have a methodological proposal but there is still a long way to go. We know that it is only through hard work and by learning from our experiences, that it will be possible to improve the approach.

### • Conceptual framework

Ecological land use planning is an approach which attempts to assess both the social and natural characteristics of the resource base. It proposes that land use plans should integrate the human and natural features of a landscape in order to achieve balanced development, that is in keeping with the region and conserves and improves its environment.

To be successful, land use planning must be a self-managing instrument. It must emerge from the community and have full participation and support of men and women. Central to the approach, is an awareness of the local culture.

Within this community approach, it is necessary to include scientists from a range of disciplines. These must have the capacity to work in an interdisciplinary fashion and so better understand the dynamics of the system under study. However, throughout the land use planning process, we must remember that

natural systems are complex and dynamic. They are shaped by a variety of factors that are continually changing.

## • Methodology

A systematic approach was developed to promoting participatory approaches to community assessment. This aimed to help understand and organise the community's knowledge of their relationship with the environment and their own cultural processes. The approach emphasised the importance of local knowledge as the key to developing projects that reflected local perspectives.

The method is outlined in a 'Manual of Ecological Land Use Planning'. It draws on several approaches, including 'Evaluacion Rural Participativa' (ERP or PRA) and Cultural Dialogue, which consider that knowledge is developed, from the outset, by practical experience and that theory evolves through an analysis of practical reality.

The work was developed with an advisory group called the 'planning team'. This consisted of a co-ordinator, scientists from various disciplines and campesinos from the target villages who were involved in the work on a full-time basis. Their function was to co-ordinate the community teams and key informants and train them in the land use planning approach. This focused on developing self-help approaches to understanding the technical aspects of the planning process and gathering and analysing information.

At the community level two groups were formed: an advisory team made up of people who attended meetings, assemblies and workshops and a voluntary support team, which as well as participating in the above activities, helped the scientists in their fieldwork.

The technical work required specialists in diverse disciplines, including botany, soil science, cartography, geology, zoology, hydrology and anthropology. The anthropologists were responsible for studying social, cultural, economic and political factors. Throughout the process, the different groups worked together in teams to attend meetings

and workshops and undertake research in the field. Multidisciplinary teams were formed with representatives from each of the main disciplines participating in the study.

The planning stage consisted of four phases, which are described below.

### Descriptive phase

The aim at this stage was to understand the social and natural characteristics of the target area. Two workshops were held in each community. The first explained the concept of land use planning to the community. This was done by defining community land use planning in terms of a model of development that the community aspires to. The approach explained how land use planning helps to bring about the community's desired development.

The second workshop used ERP to explore the community's history, priorities and plans for the future. Problems are analysed in all sectors, including environment, health, services and infrastructure, agriculture, livestock and politics. Discussion centres on the causes of these problems, possible solutions and the advantages and disadvantages of each.

Problems and their causes are then prioritised. Seasonal calendars are drawn. Village maps are created and these are annotated to provide information on soil quality, vegetation, animals and natural resources.

Also in this stage, fieldwork was carried out by the scientists to examine the natural resources in more detail. However, they worked with the campesinos and taught them how to use Geographical Positioning Systems (GPS), compasses and altimeters and also how to read the detailed maps and charts they produced at a scale of 1:20 000. They also showed the campesinos how to survey the soil and plant and animal populations and analyse and interpret the data.

At the end of this phase, both the community and the scientists had developed a clear understanding of the status of their natural resource base and possible ways of exploiting it sustainably.

## Diagnostic/analytical phase

During this second phase, the community draws on its understanding of the resource base, gained in the first phase, to develop a campesino model of ecological land use planning. This analyses different land uses and defines the most appropriate forms of utilisation and conservation that are consistent with models of sustainable development.

Using their own land classification, the community defines the socio-political factors that affect the management and conservation of each type of resources. They reflect both on the ecological importance of land use planning and sustainable resource-management. This requires the prioritisation of different resources and the definition of the criteria by which they rank the importance of resources.

## Prognosis

In this stage, a model for land use planning over time is constructed which integrates the information gathered by the scientists and campesinos. This is undertaken through a workshop designed to develop a campesino ecological reserve that has the full support of local people. At this stage, the scientists present their information which complements the campesino knowledge and helps build up the land use planning proposal. It is only in this phase that the maps drawn by the scientists and campesinos are brought together. This enables everyone to reflect on the process and analyse potential areas of conflict.

Ecological criteria for the land use planning are developed, as are time-lines to establish the scheduling of the work.

## Proposals

Finally, proposals are developed that integrate both the natural and human priorities. This creates the potential for balanced development which is in keeping with the needs of the region and improves and conserves the environment.

At this stage the community designates a committee responsible for the long term implementation of the land use planning. This can include, for example, a calendar of game

hunting and fishing seasons, establishing local rules, and prioritising their projects into short, medium and long term goals.

## • Challenging inequalities

Through ecological land use planning, communities have the opportunity to manage their resources in a sustainable way which is consistent with their own culture. They decide how best to utilise resources in a way that also conserves them. Land use planning trains campesinos to survey their resource base and manage and implement their own projects using locally available skills and resources.

The approach seeks to adapt an academic methodology into one that can be managed by the community. It gives a voice to all those who have been kept in silence for more than five hundred years. It also offers a practical example of how the utopia of sustainable development can be turned into a reality.

<ul style="list-style-type: none"><li>• <b>M. C. Tzinnia Carranza L.</b> Co-ordinadora del area de Ordenamiento Ecologico. Maderas del Pueblo del Sureste, A. C. Email: lsc@hp9000a1.uam.mx</li></ul>
---

## 16

## Two cheers for RRA

Martin Whiteside

- **Introduction**

During recent years there has been ever increasing emphasis on Participatory Rural Appraisal (PRA) rather than Rapid Rural Appraisal (RRA). The change in name of IIED's journal from '*RRA Notes*' to '*PLA Notes - Notes on Participatory Learning and Action*' is just one example of this change in emphasis. While this recognition of the importance of participation in development is to be welcomed, it sometimes feels as if RRA has been left out in the cold and is no longer sufficiently 'politically correct'.

There has also been concern among PRA practitioners over the misuse of the PRA label and techniques. This concern has been expressed in 'Sharing our Concerns' (see *PLA Notes* 22) and a variety of articles in *PLA Notes* 24. Some of the issues include:

- the use of the term PRA for processes that are not participatory or empowering;
- the use of PRA by organisations that are not in themselves participatory and/or prepared to hand over power and decision making to local communities; and,
- attempting to use PRA to produce rapid and/or extractive results.

Some of these concerns can at least be partly addressed by recognising that there are circumstances in the real world where RRA is more appropriate than PRA (see Table 1). This means identifying circumstances in which RRA is the correct option and not letting fashion condemn RRA automatically as second best. It is also often appropriate to use approaches that combine aspects of PRA and RRA according to the local circumstances.

I have facilitated both training and field appraisals in which the most appropriate approach was towards the RRA end of the spectrum, but which, for funding and Public Relations purposes was called PRA. This is crazy and unhelpful to everyone.

- **When is RRA best?**

So what then are the circumstances when it is better to use RRA? Here are some examples from my experience, perhaps other readers can add theirs.

#### **In transient situations**

During and after war or disaster, relief and rehabilitation programmes often need to be set up relatively quickly. Information about local conditions and the priorities and viewpoints of the people affected are crucial to the effectiveness of these programmes. In these circumstances results are often needed quickly. The situation is changing too rapidly and communities are forming and dispersing too often for the trust and time needed for effective PRA to yield results.

RRA can provide both accurate local data and an opportunity for the views of those involved to be fed into planning. In these circumstances, it maybe the most participatory approach possible.

**Table 1: Comparing PRA and RRA<sup>1</sup>**

Criteria	PRA	RRA
<b>Objective</b>	For the community to decide development priorities and plans (which may subsequently be presented to government or agency for support)	For the agency to decide relief or development priorities and plans
<b>Timescale</b>	The appraisal can be short or prolonged but it is part of a longer term process in the community	The appraisal is normally relatively rapid - but is part of a longer term data gathering and planning process within the agency. (The appraisal is also part of the events affecting the community and has an impact, whether or not this is planned by the agency)
<b>Key actors</b>	Community members, often facilitated by outsiders	Outsiders, often facilitated by community members
<b>Interpretation of results</b>	By the community	By outsiders
<b>Techniques used</b>	Wide variety - can be the same as RRA	Wide variety - can be the same as PRA
<b>Political correctness</b>	High (no funding without it)	Moderate/low (seen as passé)
<b>Usefulness</b>	Depends on context	Depends on context

<sup>1</sup> in reality most appraisals combine elements of both.

An example of this occurred recently in Sierra Leone. When peace suddenly seemed likely, some large donors gave NGOs just a few weeks to submit rehabilitation proposals for funding. One can perhaps criticise the donors for their short timescale, but for the NGOs involved, RRA was probably the best way to produce proposals that reflected the needs of the communities involved.

### **In extensive situations**

A by-product of PRA is that some NGOs end up working intensively over a longer time in a smaller number of communities. This should result in both increased participation and quality of the programmes in the villages involved. But what about the communities that are not included in the programmes? This is particularly serious when there are limited numbers of NGOs, people with community development skills and funds to go around. Islands of excellence can be created which do not always 'trickle outwards'.

In the context of post-war rehabilitation in Mozambique, international NGOs have moved from extensive 'relief programmes' to intensive 'development programmes', often

involving only a small fraction of the people previously covered by relief. At the same time funding 'now that the emergency is over' has been shrinking. Yet the Government and local NGOs have not got the capacity to work with those who are excluded by development programmes.

I have worked facilitating both RRA and PRA in Mozambique. Often, I feel that the approach of RRA is more appropriate in the current context of trying to develop rehabilitation programmes that reach a significant number of people with very limited human and financial resources<sup>1</sup>.

Robert Chambers in a pertinent article on 'Making the Best of Going to Scale' (*PLA Notes* 24) gives a good overview of the opportunities and risks of using PRA at a wider level. Perhaps some emphasis should be given to adapting PRA for extensive use - I suspect this might mean bringing it closer to RRA as participation takes time. And this is not always available or fundable.

<sup>1</sup> For further discussion on rehabilitation in Mozambique see M. Whiteside 1996 - *Realistic Rehabilitation - linking relief and development in Mozambique*; Development in Practice 6:2.



## **When the institutional context is not participatory**

At the community level, PRA is facilitated by organisations (whether Government, multilateral or NGO) which have differing commitments to empowerment and participation. Often outside organisations are only willing to support ideas coming out of PRA if they are consistent with their original intentions (see *Feedback*, this issue). But local priorities tend not to be supported if they are contrary to the ethos or too challenging for the organisation. This establishes a kind of participation or empowerment within limits set by the agency!

Sometimes it is argued that within a non-participatory environment, PRA creates grassroots pressure for greater participation and is therefore justified as a way of changing the institutional context. In other cases PRA can raise expectations that will not be fulfilled and people end up frustrated. Judgement is needed on whether PRA or RRA is most appropriate in each circumstance. However there are certainly circumstances where RRA is the more appropriate and honest approach.

### **• Conclusion**

The purpose of this article is not to argue that either RRA or PRA is better. Each is appropriate to different circumstances, along with many variants that combine elements of both. The purpose is to challenge the current orthodoxy that PRA is always 'best' and that more participation is always 'better' (there are costs as well as benefits inherent in increased participation). Instead we need to discuss which approaches are most appropriate for which context. Therefore *Two Cheers for RRA*.

<ul style="list-style-type: none"><li>• <b>Martin Whiteside</b>, Environment and Development Consultancy Ltd. Hillside, Claypits, Lypiatt, Stroud, Gloucestershire. GL6 7LU, UK.</li></ul>
--

## 17

## Participatory research and ecological economics for biodiversity conservation in Vanuatu

Luca Tacconi, based on research with Livo Mele

### • Introduction

In Vanuatu, an island rich nation in the Pacific Ocean, the Department of Forestry of Vanuatu (DOFV) has been working to conserve biodiversity through the establishment of protected areas. We contributed to this by conducting research on local forestry use and willingness to conserve resources on two islands, Malekula and Erromango.

Our findings needed to be relevant to the policy makers in the government of Vanuatu for the conservation of forests. At the same time, we were under pressure to produce good quality academic research<sup>1</sup>. As research and development activities went hand in hand, we searched for an appropriate methodological mix. Due to key differences in the situations on the two islands, the methodologies we used differed. This article describes our combination of RRA tools, participatory decision-making processes and ecological economics. It focuses on the research in Erromango where a greater diversity of methodologies was used.

### • Putting conservation on the national and local agenda

Our basic challenge was matching the national conservation agenda with local people's needs. The concept of 'people's participation in conservation activities' has been widely

applauded but, generally, poorly implemented. Yet it is not only due to a lack of will that the practical application of participatory principles is rare. Sometimes practical difficulties must be overcome.

To be effective, biodiversity conservation usually demands the establishment of protected areas (PAs). But PAs may not match local people's current development needs. How can we deal with this issue? In the National Conservation Strategy of Vanuatu, developed through a process of community consultation, the government recognised the need to establish PAs for the benefit of current and future generations. It also recognised land owners' rights to maintain control of their own resources.

Yet this national approach is inevitably driven at the macro level. Thus, in both Erromango and Malekula we had to integrate a national interest in ecological conservation with local people's priorities (some but not all of whom showed a strong wish to conserve resources through establishing PAs).

### Making research relevant

Much rigorous social science has little policy relevance. Due to the great uncertainty of many environmental problems, attempts to carry out detailed quantitative research often show ill-placed rigour. Instead, ecological economists have suggested undertaking environmental research, acknowledging that facts are uncertain, values are in dispute, the stakes are high, and decisions urgent.

To be meaningful for policy and development, such 'post-normal' research must replace peer review with a debate involving the wider

<sup>1</sup> This was due to the conditions of the funding by the Australian Centre for International Agricultural Research and the University of New South Wales where I completed my Ph.D.

community and include stakeholders in the research process. Furthermore, while there may be some absolute biophysical constraints, it is essential to see that each person interprets the world in their own way. Any methodology must be able to deal with this 'constructivist' approach, recognising that there are multiple socially constructed physical realities.

To meet the challenge of these research principles and to fulfil the different expectations of the government and academia, we chose to integrate conventional research methods with RRA methods in a participatory decision making processes. It is important to stress that in the case of Erromango, the analysis is described as RRA, rather than PRA. We were operating as the 'researchers' and the local people provided us with information. We carried out the analysis, rather than the people themselves, as is implied in PRA process. However, PRA was used in Malekula.

### • Integrating methodologies

In Erromango, we started by meeting with landowners and discussing their interest in establishing a PA. Although, they were interested, it was also clear that they expected some form of compensation from the Government. Payment of a lease on the land had been promised by Forestry Officers working there previously. The lease would guarantee the conservation of the land but preclude logging. It recognises the benefits to Vanuatu that accrue through biodiversity protection and enables local people to benefit from the income on the lease and their continued use of non-timber forest products.

Thus our research focused on assessing whether the landowners would conserve the forest without external incentives, or whether they would sell off logging rights instead. Given that they had already been offered a land lease agreement, it seemed unlikely that they would reveal to us any intention they might have to allow commercial logging. Thus, we felt a PRA process would be inappropriate. This would only work if it was in the interest of the local people to fully participate in the process. In this case, because landowners had previously been offered a lease agreement, they may have perceived it to be against their interest to take part in a

participatory process and reveal their conservation and development needs at that stage of the research process.

Instead, we decided upon a methodological mix that included the use of cost-benefit analysis, questionnaire surveys, standing timber volume surveys, RRA tools, and participatory decision-making processes.

Our aim was to assess the economic incentives and disincentives to protect the forest faced by the landowners. This was done by considering the benefits that they would derive from selling the rights to timber versus their traditional subsistence uses of the forest. We assumed that a significant subsistence use of the forest would be an incentive to conserve the forest and a relatively high value of returns from logging activities would be a disincentive for conservation.

The first two weeks of fieldwork involved:

- individual discussions with the landowners of the proposed PA and group meetings with the village community near the PA (Happy Land village) to understand their views concerning logging, subsistence forest use, and the establishment of a PA; and,
- quantitative assessment of timber volumes located in the proposed PA through transect measurement. This was used in a cost-benefit analysis described below.

### Using RRA and questionnaires

During a later two-week visit, RRA tools were used to assess the subsistence uses of the forest. These included: village and group meetings, individual open-ended interviews, analysis of aerial photographs and transect walks through fields, the forest near the village, and the forest included in the proposed PA.

This assessment considered the use of the forest for firewood, building materials, medicinal plants and food. It was found that the villagers make very limited subsistence use of the forest located in the proposed PA. Most subsistence products were collected in the forest near the village and in the cultivated fields.

In a further two-week period, a questionnaire survey was carried out in villages other than Happy Land. This survey aimed to assess the views and interests of the wider Erromangan community in relation to logging, conservation and non-timber forest uses. The survey revealed that Erromangan people are interested in conserving their forests for current uses and for the benefit of their children. But it also showed that people are keen to sell timber rights on part of their forests to gain cash income. The survey results confirmed the findings from the RRA in Happy Land village showing that Erromangans make very limited subsistence use of the forest areas that are further away from their villages.

### **Using economics to calculate future income**

We wanted to know how much logging income the forests represented for the communities. We undertook a survey of the forest and estimated the potential future economic benefits of logging, expressed in terms of today's values<sup>2</sup>. Before starting the timber survey, we explained to the landowners that we intended to calculate the value of the timber found in the PA.

The RRA research and the economic calculations revealed two important issues:

- landowners were making relatively little subsistence use of more distant forests with relatively greater ecological and commercial importance, relying instead on forests closer to the villages; and,
- by not allowing logging to take place, landowners would forego a significant source of income. Therefore we assumed that it would not, in general, be in the interest of landowners to prevent commercial logging in ecologically important forests.

---

<sup>2</sup> Converting a future stream of economic benefits into today's values is achieved through the use of an assumed discount rate which reflect people's preference for benefits today relative to benefits in the future (time preference) and/or annual interest costs associated with investment (capital productivity).

### **Using participatory decision-making to negotiate conservation**

Once the need for compensation was established, we developed the compensation package through a process of participatory decision-making. We held several meetings, with the male landowners, the village chief, and youth and women's representatives.

The first meeting started by comparing the present value of timber found in the PA and present value of a seventy five year land-lease agreement. We explained that while the value of the timber and the land-lease were approximately equal (at a 4% discount rate and the proposed rent of the land), most of the benefits for timber exploitation are realised in the first two or three years, but the benefits of the land-lease agreement are more evenly distributed through time. The landowners decided that the land-lease agreement satisfied their expectations for financial returns.

This process resulted in the establishment of the PA based on a land-lease agreement between the government and the landowners. The financial value of the lease corresponds to the value of the foregone benefits from commercial logging. The lease agreement clearly states that the land owners can make subsistence use of forest resources and still exercise their traditional control over the land. The use of RRA tools and participatory decision-making was particularly useful in facilitating a better understanding of local resource management arrangements and in having them recognised in the formal land lease agreement.

### **Dealing with community 'disharmony'**

Besides the clear complementary value of these methodologies, we also found that RRA was particularly useful in exposing community conflicts which helped to make our research more comprehensive. For example, in Erromango, the use of RRA highlighted the division of the community into two groups. The division emerged in the drafting of a village map. The landowners and their 'allies' were grouped on one side of the village, with the other people on the other side.

In Malekula, PRA revealed a land dispute. One villager sought our assistance in establishing a small PA. Together, we carried out transect walks and boundary mapping to survey his area and make a resource use plan. But our activity was interrupted by other villagers, claiming that the villager we were working with was not the rightful landowner. Further PRA work with the group of people claiming rights to the area revealed that there was no shared purpose of resource management. Defining the use of the area, for conservation or any other purpose, was not a viable option until the issue of land ownership was settled.

Had we prepared a standard economic assessment of the proposed protected areas, focusing on the economic value of the resources, the complexities arising from the local land tenure system would have been missed. This would have seriously limited the viability of any proposed conservation initiatives.

### Micro-macro relations

Although the conservation agenda is, in part, driven at a macro level, local communities can still play a significant role in defining the agenda. RRA and PRA are important for this process.

In Malekula island, some landowners approached the local government seeking support for the establishment of a PA. The local government had also identified some areas with potential value as protected areas. The Department of Forestry undertook an RRA process with all the interested landowners, focusing on people's economic and ecosystem conservation needs. Group and individual meetings, walks through the forest and cultivated areas, and mapping were used to address appropriate types of PA, logging, subsistence use of natural resources and the sustainability of resource harvesting.

The PRA process had three outputs:

- identifying detailed areas to be defined as PAs (all including multiple resource use);
- defining resource use rules; and,
- identifying the length of time that the PAs would be enforced.

Furthermore, the process provided information for the drafting of provincial legislation. The legislation aimed to strengthen customary control of resources and facilitate the establishment of PAs based on full participation. Local decision-making processes are recognised in the conservation legislation, thus avoiding the establishment of resource management structures alien to the local context.

Finally, we suggested to the Government that participatory approaches should be adopted to help identify rural people's conservation needs. This could lead to the establishment of a first set of PAs that match local needs. A second stage would be required to establish an ecologically representative and comprehensive national PA system. Other ecosystems could be included by adopting the approach outlined for the case of Erromango, in situations where the conservation in PAs of ecologically important ecosystems may not be in the interest (from a financial point of view) of the landowners. In those cases, RRA tools, combined with economic tools and participatory decision-making processes may be used to devise an appropriate compensation package and the required institutional arrangements.

### • Conclusions

Academia and governments alike expect the delivery of rigorous research. Government staff also focus on the timely delivery of highly relevant findings. Multidisciplinary, participatory research can help generate rich findings that are not just 'numbers'. Nevertheless, quantitative information should not be undervalued, as it can help local people and governments in the decision-making process.

Conservation activities need to be planned at the national level. But this research suggests that this does not mean that it becomes impossible for participatory processes to create a national system of protected areas that reflect, as closely as possible, current people's needs. On the contrary, participatory approaches may be particularly useful in linking the micro and macro levels. It can help generate legislation that is consistent with, and

supports, local institutions. Using a combination of RRA tools, economic valuation techniques, and participatory planning and decision-making processes can produce qualitative and quantitative information that greatly facilitates effective solutions. Finding an appropriate methodological combination, however, will be determined by historical precedents of research and development carried out in the area of interest, existing local conflicts and conflicts of interest, such as between local people and government.

- **Luca Tacconi** and **Livo Mele**, Address for correspondence: Department of Forestry, The Australian National University, Canberra ACT 0200, Australia.

#### NOTES

For more information on this study, see Tacconi, L.. and J. Bennett (1995). Biodiversity Conservation: The Process of Economic Assessment and Establishment of a Protected Area in Vanuatu. *Development and Change* 26 (1) 89 - 110.

## Mixing and matching methodologies in Redd Barna Uganda

Joanita Sewagudde, Geoffrey Mugisha, Richard Ochen and Grace Mukasa

### • Introduction

Redd Barna Uganda is a child-centred organisation which is moving away from being an implementing organisation, to one which does all its work through partner organisations. Rather than having a direct link with communities and community groups, we work with local NGOs and CBOs, and build their capacity to act as the link. All our activities and methodologies focus on enhancing the development, survival, protection and participation rights of the children of Uganda, without whom there would be no sustainable future. Central to this is the importance of participatory approaches to development, which stimulate communities to want to learn more and increase their unity of purpose.

We started using PRA in February 1994<sup>1</sup>, after recruiting a large number of new, District-based staff members to act as capacity-builders. Upon recruitment, all staff were, and continue to be, trained in several development-related methodologies besides PRA. These include: Basic Communication Skills, Mediated Learning Experience for improved interaction with children, and Logical Framework Approach (see Table 1).

Any methodology we learn, we pass on to our partners in training workshops. Initially, we thought that each methodology could be applied independently. However, two years of slow but

steady learning through experience have revealed that they are best used if consciously interlinked. At each stage we asked ourselves: 'What went wrong? Could we have done it better? Which other avenues exist?'. This article shares how we see the complementarity of six different methodologies, as PRA alone cannot stimulate all the desired changes in the community for more child-centred development.

### RBU's approach to PRA

For us, PRA is not a rapid affair. Instead it is one which takes up to 18 months with some communities. Our approach is based on working with five groups in each community: younger women, younger men, older women, older men, and, of course, children. We aim to guide these groups, via local organisations that act as facilitators, to develop community action plans (CAPs) for those problems that must and can be resolved at the community level, and group action plans (GAPs) for more group-specific problems about which there is less need for or agreement on collective action.

It has taken us two years to develop an approach to PRA that recognises five crucial stages of the journey of child-centred community development which recognises intra-communal differences. These stages are essential to understanding the methodological complementarity that we have developed. Each stage has specific aims which requires specific skills or analytical tools that PRA cannot provide<sup>2</sup>.

<sup>1</sup> Through a three year collaboration with IIED to institutionalise child-centred participatory planning.

<sup>2</sup> More details can be found in Guijt, forthcoming.

- Stage 1 Preparation: laying the groundwork, identifying and negotiating roles of stakeholders;
- Stage 2 Field Immersion: situation analysis that ensures multiple perspectives are equally represented;
- Stage 3 Analysis of Inter- and Intra-communal Difference: group-based analysis to identify shared/group-specific concerns and possible solutions;
- Stage 4 Planning of Community or Group Action Plan: final decision about community/group priority requires careful negotiation about group responsibilities and consensus on timing/inputs; and,
- Stage 5 Implementation: implementing community/group plans requires continual monitoring of progress and adjustment to sustain improvements, plus efforts to decrease dependency on external support.

### PRA and BCS are inextricable

PRA concerns itself with facilitating the community to define its needs, prioritise its problems, probe for underlying social and economic causes, and develop strategies and action plans together. However, this process depends on how outsiders interact with the community, and build trust and respect. It is not easy for villagers to talk about their

situation, which can be sensitive or controversial to share with outsiders: “*Ebyomunju tebito Tolwa*” (Luganda proverb: Don’t wash your dirty linen in public.)

How we respond verbally or non-verbally determines whether the community will want to continue talking to us or not. The PRA process itself can scare the community. For example a transect walk is regularly mistaken as a survey of the village land for external confiscation by government. This calls for effective communication between the community and the outsiders, otherwise axes and machetes will be brought out by the people in protection of their precious asset - land.

Our partnerships hinge on mutual trust, respect and dialogue, all of which are good communication concepts. We have to enter the community as partners with the organisations we are trying to support. However, we need support from each other and to trust one another. So Basic Communication Skills (BCS) provides an opportunity for developing solid and sustainable partnerships, and achieving a good local PRA process.

**Table 1. Fusing our many acronyms in the PRA process**

Methodologies used	PRA stages in which methodology is used	Issues dealt with
Basic Communication Skills MLE Giving voice to children PRA	Stage 1: preparation Stage 2: community immersion	*The importance of communication in PRA *Accurate and widespread information dissemination
Conflict resolution and management PRA	Stage 2: community immersion Stage 3: analysis of intra-communal difference	*Information dissemination *The role of the outsider in PRA *Group dynamics
LFA	Stage 4: planning CAP/GAP	*Identification of different alternatives *Identification of partners *The need for a working document
Child-to-Child	Stage 3: analysis of intra-communal difference Stage 5: implementation of CAP/GAP	Support children’s participation in the PRA process
Mediated Learning Experience	Stages 2, 3 and 4: community immersion analysis of intra communal differences planning of GAP/CAP	Advocacy for children’s rights/capacities and values to be included in community development
Others	Stage 5: Implementation	Promotion of the family and community cohesion



We realised the need for BCS during the initial training of the PRA process in one village. Where there was no deliberate effort to impart communication skills to our partner organisations, we found it hard to communicate effectively about PRA. After we organised a follow-up workshop on communication skills, the process became much easier. Now we would recommend that before any form of serious commitment is made with a new organisation, a BCS training is arranged for the would-be partner. BCS should always proceed or be integrated into a PRA training.

### **PRA and mediated learning experience**

Child-adult interaction generally creates an uneasy feeling amongst communities in Uganda. Mediated Learning Experience (MLE) is an approach, which aims to promote better interaction between the adult (mainly the caregiver) and the child. MLE teaches the adult how to mediate a learning experience between the child and its environment.

We use MLE training in the community in Stage 1 of our PRA approach to promote child participation and advocate for their issues. It helps the rest of the community understand the value and potential of children, thus prioritising children's issues in community action plans and group action plans (CAP and GAP respectively).

### **Giving voice to children: a child focused PRA approach**

We have adapted PRA to work better with children. Creating a suitable model of PRA for children has several advantages for our work: it increases children's awareness about their world/surroundings; allows us a better understanding of children's everyday life; increases their participation in the PRA process.

We use the conventional methods of PRA in a simplified way and have added others, like 'Body Image' (which brings out how the child perceives itself) and use proverbs, poems and stories/folktales. All these are geared towards understanding how the child perceives the world, the positive and the negative in his/her life. This has helped us reach out to the worse-

off children in the community, for example the out-of-school children, those with disabilities, and orphans who would otherwise be ignored in most PRA work.

### **PRA and conflict resolution**

When outsiders come to a community with participatory forms of planning, many conflicts can emerge due to the new interactions and issues being discussed. Some PRA methods can create tension or fear, for example, if wealth ranking is conceived as 'analysis for eventual taxation on the well-off households'.

Therefore, it is important to equip local leaders and the other PRA team members with skills in conflict resolution and management. At RBU, we have been discussing the nature of conflicts, their extent, and possible strategies to deal with them from the first review meetings of our PRA work. Recently we have started training each other in conflict resolution and we have plans to obtain more skills. However, we have not yet started training our partner organisations in conflict resolution as we first need to strengthen our own experiences, skills, and insights.

### **PRA and child-to-child**

One of the fundamental principles of child rights is participation of children in matters affecting them. Redd Barna is keen to fully use any opportunity to achieve this, and Child-to-Child is another methodology we are integrating into our approach and what we offer our partners. Child to Child follows six steps to stimulate children to grow into active and responsible adults. These are as follows:

Step 1: choosing the right health idea and understanding it well; Step 2: finding out more about the chosen idea; Step 3: discussing what has been found out; Step 4: planning action; Step 5: taking action; and Step 6: discussion results.

By integrating these steps in PRA, the children are helped to address the issues affecting them, and help each other to grow, while contributing to community welfare. We are encouraging partner organisations to explore the rights of children and also the

responsibilities towards parents, elders, other children the community and the nation that go with them.

### The merging of PRA and IFA

While BCS, MLE, conflict management, give a voice to children, and child-to-child is being merged fairly smoothly with PRA, integrating Logical Framework Approach (LFA) has challenged us most. The remainder of this article discusses our experiences to date.

In a PRA process, much emphasis is placed on developing a local situation analysis. But then the question arises, "You are in that situation, so what next?". To answer that, we have found that parts of LFA can complement PRA, particularly in the development of community and group action plans. PRA needs LFA to push forward the process of community discovery and innovation in stages 4 and 5. But LFA only becomes meaningful after the first three stages of PRA, which includes much local analysis of intra-communal differences of the issues raised in the immersion stage.

We use LFA, and its principle of participatory analysis, to impart planning skills to a broad spectrum of parties: community members, government field extension workers, and partner organisation staff. The results of a PRA process, especially the many issues raised and prioritised, would be less useful and perhaps confusing to the community if there was no analysis to help create a logical sequence and give a practical meaning to these issues. LFA can help lead to a CAP/GAP document that defines the direction of the communities development energies, at least for the period of the community action plan.

*"Now it is for the village management committee to either uphold or frustrate the development process in our village. We should all work together ... and need to be patient because the task ahead is big. We need to be determined to be able to accomplish all the steps."* (Mr. Kalende, Village Elder in Bulende Bugosere, course leader, at a recent training workshop on how to develop a CAP and GAPs).

When we use LFA to develop a community action plan, we follow several steps:

- Review and update the issues matrix<sup>3</sup> developed during the immersion stage, monitoring its progress. This updating process gives the participants of the PRA planning workshop in stage 4, a good basis for using LFA.
- The relevant issues are then used to develop a problem tree, and to analyse the cause-effect links. As people build the tree, there is a great deal of explanation between the 5 interest groups to explain why they are perceived as issues. After this, creating the objectives tree is simple but realistic since its developed clearly from existing problems<sup>4</sup>.

### Please explain what I am seeing

Visualising the problem and objective trees as part of the LFA approach rests comfortably with PRA's diagramming approach. The issues become more meaningful to everyone. Coming after the immersion stage of PRA, the participants are already very comfortable with the use of visualisation for analysis. Representatives of the five groups feel strongly about 'their' issues, leading to a spirited defence of what it represents to them.

### Are we able to do all that?

The CAP development process makes participants reflect on the resources they had identified during PRA immersion by discussing: "What do we have locally? Who can we approach for assistance? But if nobody responds shall we remain with just a document - what alternatives are available for us?"

By trying to see the logic between planning and resources, participants are better able to identify and appreciate the locally available resources. By identifying and tagging a price to the most minimal item of their plan, they realise their potential. There is the pleasing but surprising revelation that actually they have all

<sup>3</sup> The issues matrix is a way of collating all the issues raised by the five groups in one format, for all to discuss and use for planning (see Guijt, forthcoming for more details).

<sup>4</sup> The quality of facilitation at this stage in the planning workshop can lead to realistic/unrealistic plans.

along been contributing greatly to their own development. Community labour, time and land then starts playing its true role in the community. This will eventually inspire them to utilise better all potential resources.

After passing through the different analytical stages of LFA, the CAP/GAP document has many advantages: it is realistic, acceptable and affordable, it increases accountability and offers sustained planning (not a one-off event as is often the case with PRA-based CAPs).

### Inspiring challenges

Despite all its benefits to PRA, LFA has some limitations which need to be handled well if the PRA process is to make a difference.

- How do we sustain participation? Due to the long PRA process, by the time we start using LFA, the community wants to see some tangible benefits from all their efforts. However, this cannot be guaranteed by RBU.
- Who is chosen to learn planning skills? When the community tries to grapple with the different interest groups, balancing the different interests becomes a real nightmare which may deeply shake the PRA process.  
By the time LFA is used, several PRA-provoked activities have usually started, either at a community level or within interest groups. Big questions start being asked: Were they the best priorities, or simply action which may now need to be changed as other priorities are agreed?
- Using LFA to develop a CAP takes time and calls for concentration, so we have opted for residential workshops. People must leave aside their daily chores/worries but they cannot stay away from home for too much time. We still face problems with encouraging parents of the chosen children's representatives to allow their children to participate, especially the girls.
- A good LFA outcome depends on consensus building. The facilitator must ensure an open, accepting and light atmosphere during the workshop. As issues are discussed, areas of conflict will arise. The facilitator needs to exercise much patience, have excellent moderation and conflict management skills.

Besides our current 'basket of methodologies', we are continually seeking other skills that can form an integral part of the PRA process, such as basic education life skills, preventative health, group dynamics, and family life education. We in Redd Barna will continue to find different approaches which are suitable to use alongside PRA to improve the lives of Uganda's children. Ours is a long term perspective to development planning so the few set-backs we meet are welcome and essential lessons that continue to help us consolidate the benefits of our integrated methodologies.

- **Joanita Sewagudde, Geoffrey Mugisha, Richard Ochen and Grace Mukasa,** Redd Barna Uganda, PO Box 12018, Kampala, Uganda.

## 19

## Participatory pest analysis

James Mangan

### • Introduction

Making the principles of Integrated Pest Management (IPM) a reality in farmers' fields requires a methodology that enables farmers to decide whether or not to apply pesticides. Farmers must be able to assess the condition of an ecosystem; in order to make this decision. This requires more than just 'scouting', or assessing pest levels. Ecosystems are complex, and even very experienced local people or pest experts do not know everything.

Participation is required but so are skills and knowledge which are not necessarily available locally. This article describes how we are working with farmers, combining some of the principles of agroecosystem analysis with transects, ecosystem drawing, and group analysis, to enable farmers to make on-field decisions about applying pesticides.

### The task of IPM

Our task is to train farmers to apply IPM in their own rice fields, thus minimising the use of pesticides (see Box 1). Following simplified instructions from a crop protection agency would not work. Pest levels vary greatly over small distances. Each farmer must know which beneficial insects and pests exist in her or his own field, and to decide themselves whether or not to apply pesticides.

But what do farmers need to be able to accomplish this? First, farmers need knowledge about the state of their field ecosystems. However, most farmers can identify no more than about ten pests and two or three beneficial insects in their rice fields.

I have spoken with Indian farmers who sprayed pesticides to eliminate ladybird beetles, and Chinese farmers who sprayed because they thought there were too many spiders. They did not know that the more of these insects the better. Therefore, often outside skills and knowledge are necessary.

#### BOX 1

Good reasons to avoid using pesticides:

- pesticides kill beneficial predator and parasite insects which hold pest levels down naturally, pesticides induce pest outbreaks and thereby reduce crop yields.
- pesticides cost the farmer money which can be saved. Applying pesticides is heavy, time-consuming work, which can be avoided.
- pesticides are a health hazard, pollute the environment and destroy biodiversity.

Learning about the ecosystem of their fields means that farmers must improve:

- identification skills by careful observation and drawing;
- analytical skills by considering and discussing the complexity of ecosystem interactions;
- their judgement, by responding to questions after presenting findings and critically assessing other farmers' analysis; and,
- their understanding of pest-natural enemy relationships by asking and answering questions in peer groups.

### Our methodology

In the FAO Inter-Country Programme for IPM in Rice in South and Southeast Asia, we set about developing a methodology that would allow farmers to gather information about

what kinds of animals are present in their fields. They would learn to analyse that information to decide whether or not to apply pesticides, not with the objective of killing pests, but conserving beneficial insects. We usually work with a Farmer Field School of about 25 farmers and carry out the following steps. It should be noted that all farmers must participate in observing, drawing and reporting.

- Assemble farmers into groups of 4 or 5 (6 is too many, 3 too few);
- Have each group walk on a transect across a field (rice, cotton, soybean, it doesn't matter which kind) and ask each group to stop at a total of ten places, spaced so that they represent a transect across the entire field;
- At each stop, all group members should carefully look at one or a few plants (the number of plants at each stop depends on the size of the plants, which in turn, depends on the time of the crop/season) and observe the following aspects of the plant or plants:

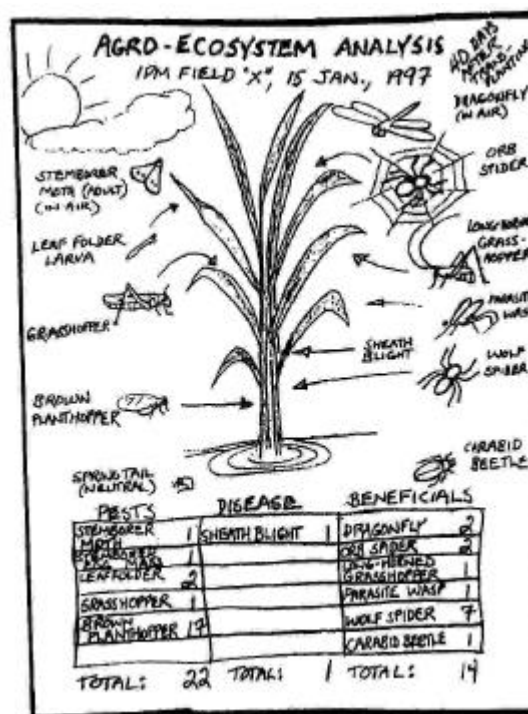
- All insects and other animals on the ground or on the plant (by part, such as stem, leaf, flower or panicle), and what the insects are doing (e.g., chewing leaves, jumping around, chasing other insects, flying past, crawling on the ground, eating tiny eggs etc.);
- All disease on stems, leaves and fruiting parts;
- Moisture in the soil or, if a rice paddy, level of water in the field;
- Weeds; and,
- Weather should also be noted: Sunny, partly cloudy, cloudy? Dry or humid? Hot or cool? ;

- Each group should draw a picture of the plant(s) (see Figure 1) using a large sheet of newsprint and colour crayons (this is usually done using a plywood board in the field for support). The drawing should display the following:

- The plant (e.g., a rice plant);

- All beneficial insects (predators, parasites) are drawn on the right hand side close to where they appear on the plant (e.g., dragonfly in the air above the plant, a wolf spider at mid level on the stem, etc.);
- All pests are drawn on the left hand side, close to where they appear on the plant (e.g., Brown planthoppers on the rice stem, leaf folders on the upper leaves, etc.);
- All neutral insects which are neither pests nor beneficials in the ecosystem (e.g., mosquitoes, springtails) are drawn in the lower middle of the picture;
- Diseases should be drawn on the plant itself, where they appear (e.g., sheath blight on the base edges of the leaves, etc.); and,
- Each group should prepare a table at the bottom of the drawing showing the number of beneficiary insects by type, the number of pests by type, the number of neutral insects (those which are neither pests nor beneficial) by type and the number of diseased plants for each known disease.

Figure 1. Sample drawing from a rice field



## • Reflections from experience

In the Farmer Field School, we have used the principles of agroecosystem analysis, with the specific methods of peer group interaction and assessment, transects, observation, drawing and quantification of insect incidence, to train farmers as autonomous IPM practitioners. This specific combination of methods has enabled farmers to look sharply, analyse critically, and decide appropriately and timely. This minimises the inputs of harmful pesticides into the environment and food sources.

To conclude, there are several observations about the process we have developed. It is essential for the process to work successfully that some participants know something about the local ecosystem. The group should have access to *accurate* information about the area, either through a knowledgeable farmer, a biology teacher, local hunters, forest-product gatherers or crop protection agents.

It is also essential that people draw everything they can see. However, we have found that farmers may not see what they do not recognise, even though insect numbers may be quite high. Some farmers may even need spectacles to spot the tiny creatures! To encourage sharp observation, we sometimes offer small prizes for the group which records the highest number of observed insect types. We do not encourage using pictures from books to guide the drawing as they hinder the development of observational skills.

Active use of the drawings is central to success. The sub-group of four or five farmers presents its drawing and analysis to the others, explaining why it would (or would not) spray at that particular moment. This can be a slow process on the first occasion, but drawings will become increasingly accurate and discussion animated as time goes on. This process often produces many questions and leads people to challenge each other's analysis.

For example, the farmer trainees may ask: "Of the insects you drew, which are the natural enemies of stemborers, of the stemborer moth, or egg mass?", "What does a dragonfly eat? and how does it catch its prey?", "Why do you

think it is unnecessary to control Brown Planthopper at the levels you found?". The discussion represents perhaps the most important opportunity for learning and critical thinking.

IPM is most effective if crops are observed weekly, as insect numbers change quickly. In a Farmers' Field School, we repeat this process of drawing and presentation weekly. This allows farmers to create a regular habit of field observation and demonstrates the evolution of the ecosystem over the cropping season.

This approach to examining an agroecosystem can be adapted to any crop or part of an ecosystem. The information collected through this process can be useful for ecosystem trend analysis and making decisions about resource conservation and land use. For example, local residents can undertake a study of their local forested area by carefully recording and drawing the ecology of that forest. Analysis of the ecosystem, focusing on those aspects that are critical to sustainability, can take place during the reporting back.

Other PRA methods could support this approach of analysing local resources and interactions, including: cropping calendars (to systematise cropping schedules and patterns), transect walks (focusing on land use planning or economic analysis) and trends analysis (to analyse changes in local environments).

• **James Mangan**, FAO TA, Jl. Taman Margasatwa No.60, Jati Padang, Pasar Minggu, Jakarta 12540 Indonesia.

## Towards full participation in development

by Kumaraswamynadar T Arasu

with a response from Neela Mukherjee

### • Introduction

In India, PRA is a prestigious term, not only with NGOs, but also with many government departments. This article examines recent experiences of using PRA in planning, monitoring and evaluating different projects. It is based on personal observations and informal interviews with PRA trainers, facilitators and participants.

'Alternative for India Development' (AID) is an NGO working in Bihar, Orissa and Tamil Nadu districts of India. AID is a partner in three official aid programmes of the Indian Government. One is the Bihar Education Project (a UNICEF supported local government programme), the second is an Integrated Watershed Development Programme of the federal government, and the third is an IFAD-supported Women in Development Programme, implemented through the Tamil Nadu Government.

### Emerging problems

Macro and micro-level operational and institutional constraints affect the level of participation of local people in the development process. These include: the priorities of donors, the shortcomings of facilitators, the lack of proper consultation, time constraints imposed by implementing agencies and the amount of time that local people have available to contribute to PRA.

The following points summarise methodological problems that have been

encountered while practising PRA in different development projects in India. Many of these observations are not new and will be familiar to PRA practitioners. The aim of this paper is to stimulate debate on how the potential of PRA can be reached more fully in the future.

- As official development projects, the three projects listed above were neither identified by local people nor developed by them. The agenda was pre-determined by the implementing agencies. This led to differences in understanding between local people and development practitioners. Where people did identify their needs through PRA, expectations were raised. But resources were rarely available to meet local needs, except where they coincided with immediate project objectives. Local people learned to find out the 'real' agenda and interest of the PRA facilitators (e.g. in watershed management) and to define their needs accordingly, based on their past experience. In these cases, the donors' priorities and objectives determined the views that were experienced locally.
- Where local people express their needs, a key issue is how to integrate these into the specific project framework, procedures and formats demanded by each donor. Is it possible for local people to evolve a project that can be fitted into a logical framework? How can local people and facilitators jointly set goals, purposes, activities and indicators? How can project and development cycles be synchronised?
- Training in PRA is frequently given by government staff. The methodology and techniques suggested in the trainings are

## ***Feedback.... Feedback.... Feedback....***

followed in the field. Few efforts are made to evolve or adapt the approaches. PRA seems to be undertaken with greater attention to procedures and formats than to enabling real local participation. For example, standard questions given in the form of a checklist for trainee PRA facilitators were invariably followed in the field, rather than evolving something specific to the local context.

- Many facilitators are not clear about using PRA to build a participatory environment for effective local decision making. They view PRA as a set of visualisation techniques rather than as an empowering process that enables poor people to have greater control over their own development. Emphasis is frequently placed on the product (e.g. creating maps, matrices and calendars). Yet decisions on the tools, symbols, materials and design are made more by the facilitators than local people.
- PRA has been carried out with little attention to the availability of different sectors of the community, such as women, migrant workers, bonded labourers, child labourers and children, for consultation in the participatory planning process. Without careful scheduling of PRA sessions, the voices of these vulnerable sectors of society are easily missed. This requires facilitators to address their own assumptions, prejudices and stereotypes about the contribution that the poorest sectors of the community have to contribute to a development debate.
- In a government watershed programme, the policy was to evolve grassroots plans using PRA. However, little time was given for the preparation of plans with local people. The District Officials set deadlines for the submission of plans for financial approval. Their concern was dispersing money within a given timeframe. As a consequence, the real purpose of the participatory planning was lost. Although local people and the government were described as partners in the project, those who held the purse strings were the dominant actors.

### ● **Reflections from practice**

There is great potential for PRA to contribute to a process of participatory development.

However, these observations suggest that local people may not always be free to share their information and participate fully in PRA. This article has highlighted some of the many barriers to participation in a planning process.

Full and long term participation is crucial for developing a real sense of local ownership of project activities. This requires continuous feedback and information exchange between facilitators and local people. This should not only occur during initial project assessments, but should continue throughout the project cycle to ensure that those at the grassroots have complete information about the status and progress of project activities.

There are many other issues about PRA on which I could comment. What is presented here illustrates some of the limitations to using participatory approaches to development and is based on recent field experiences. There have been, and continue to be, many innovations in the use of PRA. Yet by presenting this paper, I hope it will help in the search for best practice. We need to reflect on our progress to utilise the full potential of PRA in the future. Thus, it is in a spirit of optimism and a drive for continual improvement, that this paper is presented.

● **K T Arasu**, Alternative for India Development, 1, V.G.N. Nagar, Iyyapanthangal, Kattupakkam Post, Madras-600 056, India.

### ● **Towards full participation: a response from Neela Mukherjee**

Arasu provides an invaluable set of 'learnings from the field' on different aspects of PRA. Many of us are concerned about the quality of PRA and may share similar experiences. As a PRA practitioner, I discuss frequently the practice of PRA. Some of the points emerging from discussions with fellow practitioners are included below and may help in further analysis of the issues raised by this article.

If we consider that PRA's goal is to bring about people's empowerment, the question is 'how can empowerment be achieved with PRA?'. Many practitioners get frustrated when PRA appears not to bring about the



---

## **Feedback.... Feedback.... Feedback....**

empowerment of resource-poor sectors of society. Yet it is unrealistic to believe that a few PRA sessions can change power relations in any society (involving numerous different groups) and lead to a rapid process of change.

In a short period of time, a participatory process can, at best, only be initiated through PRA. The process must be ongoing and necessarily time consuming because it requires the more equitable sharing of societal power by empowering people who are weak, deprived and marginalised. Unfortunately, the time dimensions of participation and empowerment are not appreciated by many development agencies. Too often, expectations of what PRA can deliver are too high and anticipate 'results' too soon.

Multiple forces determine people's participation or non-participation. PRA is a powerful approach at the micro-level but cannot work in isolation. In any society, sociological, economic, political, legal and environmental factors each influence people's participation in different ways.

It is not easy to isolate PRA from the influence of other factors. While PRA can attempt to influence some of these factors over time, other factors are best influenced at a meso- or macro-level, through policy-making and the development of appropriate institutions. This does not undermine the developmental change which PRA can bring about at the grassroots. Instead, it reminds us that a supportive policy and institutional framework helps sustain people's participation over time.

### **Attitudes and behaviour**

Our conventional attitudes and behaviour can constrain our understanding of the local environment. In this context, PRA findings can provide powerful information, feedback and recommendations to experts and policy-makers at the macro-level. These findings can be used for advocacy purposes by different institutions. The 1996 Human Development Report of UNDP, Bangladesh, based on PRA and containing poor people's recommendations, is a pointer in this direction.

People's empowerment is a gradual process along a continuum. Moving from one end of the continuum to the other, in terms of participation, breaking free of the dependency syndrome and cumulative learning, is a time consuming process. Yet we must reflect on the quality of participation during this process, using multiple indicators, at all times.

We tend to get impatient because our attitudes focus on developing and achieving physical targets. We are used to measuring development through the number of water tanks, dams, watersheds and school buildings. But rarely do we use indicators of human development and empowerment. These cannot be easily measured through simple, quantitative indicators.

### **Whose priorities count?**

Ideally, development activities should be based on the priorities of local people. But different agencies have different agendas and so tend to pursue their own priorities. This can be problematic as a pre-determined development agenda, such as a strategy of watershed development, limits the role of PRA. PRA becomes a *means* to ensure people's acceptability of a top-down agenda.

But, even with a pre-determined agenda, there is considerable scope for local participation. This requires fieldworkers to interact with local communities and explain honestly the purpose of the project, their expectations and modalities. This is usually done to create rapport with local communities, whose cooperation is required, but can be a more empowering process.

### **Labelling**

The term PRA is used loosely by different agencies to describe development interventions at the grassroots. To maintain the quality of participation, it is important for us to distinguish between different types of development interventions and seek clarification of the role of different actors in the process.

Observations from field experience suggest that it is possible to combine participatory

---

***Feedback.... Feedback.... Feedback....***

approaches with different techniques that are better suited to generating data. However, it is crucial to distinguish between RRA, essentially a joint data collection exercise, and a truly participatory approach. In the former, people's participation and empowerment are limited by an extractive approach which may be labelled participatory but is merely a method for eliciting information.

• **Conclusions**

This discussion may suggest that PRA practitioners are looking for excuses for why PRA does not always work well or fails to reach its goals. This is not the case. Rather, we are reflecting on our experiences, embracing our errors, searching for ways to improve our quality of learning and understanding better the multiple forces operating at the grassroots, which facilitate or constrain local participation.

Now that participatory development projects and activities initiated in the first-half of the 1990s have started yielding results, we need to take a close look at the processes of participation. Arasu has raised many important issues. We require further debate and discussions on them for they help enrich our learning, clarify our thoughts and contribute towards improving the quality of PRA.

• **Neela Mukherjee**, 52 Pocket, 29 Chittaranjan Park, New Delhi-110019, India.

This *Feedback* has raised many important issues, such as the need for continual improvement in sustaining participatory approaches to development. As noted by both authors, many practitioners will share similar experiences. If you have any comments on the issues raised by KT Arasu or Neela Mukherjee, please send them into us for publication in the next issue of PLA Notes.

***Feedback*** is a forum for discussion in *PLA Notes*. It features articles which raise common concerns in fieldwork or training, together with a response from another PRA practitioner. Letters and articles are welcomed for this section, as are your comments on any of the issues raised by *Feedback*.

## 21

## Extracts

## Props for research

**V A Bourai, S R Bahadur, K M Panwa  
and K M Mishra**

The rural population in Garhwal, India, where we worked, often have difficulty in understanding questionnaire surveys. We have found that props can make it easier for them to understand the meaning of questions. We define props as tools that enable local people to visualise the theme of questions and debates. They should be made out of materials that are commonly used and locally meaningful. To collect data relating to the quality of life for rural people in Garhwal, we used several props, two of which we describe here.

## The ladder

The ladder proved a useful method of enabling people to express their level of satisfaction. The ladder was made of sticks (see Figure 1), which are easily available, and contains five different steps. As one moves up the ladder, it represents higher levels of satisfaction.

Respondents were asked to choose a step that best represents their level of satisfaction. For example, to the question, 'How much are you satisfied with your level of education?', respondents could point a step on the ladder representing: Very dissatisfied (Step 1), Dissatisfied (Step 2), OK (Step 3), Satisfied (Step 4) and Very satisfied (Step 5). Whenever a researcher asked the question related to satisfaction, he explained the details of the 'ladder steps' of satisfaction

## Happy and sad faces

The second prop used for the research was seven faces showing different expressions. The faces were used for measuring the happiness of the people of Garhwal.

**Figure 1. The satisfaction ladder**

Drawing: Laura Greenwood.



One of the questions asked was, 'Overall, how happy would you say that you are?'. The respondent was then asked to choose a face that best represented his or her feelings. The faces were popular amongst the villagers and helped to make the questionnaire very easy to understand.

## Experiences

Eight teams involved in the research used the props in their work in Garhwal. The two props made the questionnaire easier and more interesting for the respondents, as well as for the investigators. Without them, the teams may not have been able to explain the questions to the local people. The people were also able to better communicate their feelings to the researchers. We suggest other researchers should use props and adapt them according to the needs of the local people and environment.

- **V.A. Bourai**, SPEED, 15-Araghar, Dehradun, 248001 India; **Shri Raj Bahadur, Kumari Mamta Panwar and Kumari Madhu Mishra** Department of Economics SGRR (PG) College, Dehradun, India.

## ACKNOWLEDGMENTS

The paper is jointly written by the team of the Department of Economics SGRR(PG) College. The research was conducted with the help of the Division of International Development University of Calgary, Canada. Financial Assistance was provided by the Indo Canadian Shastri Institute, Canada.

## Looking beyond: PRA or PRI?

**John Wilson**

'What we need is PRI, Participatory Rural Implementation' the head of a community-based learning centre said to me recently. 'Isn't PRA just a farce for academics?'. I responded: 'I think you are misunderstanding it. It may be a farce for some people but, carried out as it should be, it is a very useful and empowering approach that can help communities analyse and better understand their own situation'.

However, PRA is just one of many approaches that help turn a theoretical and important awareness into reality. PRA has caught the imagination and funding of a wide sector of people. It may have grown not because it is the 'wonder' that some people think it is, but because of some 'big names' jumping on the bandwagon.

For PRA to achieve its full potential, it should be recognised for what it is, limitations and all. It should be seen within a larger context and linked to other approaches that achieve what it cannot achieve. This seems to be a critical issue in development work today: to link together methods and experience into a fuller process. Too often, 'new' methods, useful as they are, remain trapped within themselves.

Establishing the interface between external agents and the community is a first step to building up trust. But is an external facilitator needed? In many less industrialised countries, people have been repressed, both mentally and physically. They no longer believe in themselves or their abilities. They feel at the bottom of a social ladder which does not recognise their skills and knowledge. I believe that, in these situations, an external facilitator can act as a catalyst: to spark a revitalisation, begin a process of renewal and help people recognise the depth of their knowledge and skills.

Approaches such as PRA enable communities to carry out exercises in which they look closely at their own situation. They may map their resources or look at their history, but

what is important is the recognition and reflection of how much they know.

Cause and effect become connected. The result should be a much fuller understanding by many more people. If done properly, this process enables true participation. It also provides the foundations for involvement and awareness in the next stage: where to? With a community vision or goal, implementation becomes important. But this is frequently missing. Comprehensive assessments are carried out. People get excited about the level of participation but implementation may not follow.

Of course, people are living their lives and 'implementation' is happening to a certain extent. In fact this forms the basis of future action. However implementation, in terms of substantially improving the situation can be lacking. There is a danger of romanticising local knowledge and skills and so condemning people to poverty and further exploitation. It's a question of balance.

Thus, while I believe it is important to develop, innovate and improve methods, it is just as important that any one of them does not get carried away with itself. The methods of participation should not become separated from the process of participation. For those working in development, the agenda must be meaningful empowerment for millions of people. It is the responsibility of agents involved in facilitating this to continually look beyond what they are doing, to see how it links with what others are doing.

- **John Wilson**, PELUM Association, P.O.Box MP 1059, Mt Pleasant, Harare, Zimbabwe.

## 22

## A brief guide to training methods and approaches

### • Methods of training

This section of the *Notes* provides training materials for participatory learning, exploring a different theme in each issue<sup>1</sup>. This issue explores different approaches to training other people in participatory learning. Many methods of instruction can be used during training. For a training which stresses active participation and open dialogue, it is essential that trainers use a style of training that is consistent with these values.

It is best to use a combination of learning methods and to alter the tempo of the training. A regular change of both the methods and pace will keep the trainees interested and ready to learn. It will also be more interesting and less tiring for you as a trainer.

### Lectures

Traditional teaching and training most frequently rely on the lecture. This is the one-way communication of a prepared talk, accompanied by a period of questions and answers at the conclusions. A lecture provides you, the trainer, with an opportunity to get many ideas across to your audience. However, there is little opportunity for discussion and a process of learning is not guaranteed.

Lectures can be used for groups of any size. For very large groups, they are the most common method of instruction. The trainer is in complete control of the session and can predict the timing and content accurately.

Lectures are useful for introducing new subjects or presenting summaries or overviews

<sup>1</sup> Taken from *A Trainer's Guide for Participatory Learning and Action*. Published by IIED. Price £14.95 + postage and packing (25% UK & Europe, 35 % airmail)

to participants. They are often combined with visual aids, such as slides or overheads. Even in training programmes on participatory learning, some lecturing will be needed. However, lectures have many disadvantages. They do not necessarily take into account the individual needs, interest and pace of trainees. Discussion and debate are kept to a minimum so creative and reflective learning is limited.

Deliver short lectures and break them up with buzz sessions (see Box 1). Allow plenty of time for the preparation of materials. Remember that your presentation will be more effective if you say what you are going to say, say it and then say what you have just told them.

#### BOX 1 LECTURE CHECKLIST

Are you using lectures only when other methods will be less effective?  
Have you limited your talk to 20 minutes?  
Does your talk have a clear beginning, middle and end?  
Do you always keep to simple key points?  
Do you support your talk with a clear handout?  
Do you know your own body language mannerisms and how these affect the lecture?

### Buzz groups

During a longer session, the plenary group can break into sub-groups to discuss specific questions or issues. The room soon fills with noise as each sub-group 'buzzes' in discussion. While they are buzzing, participants are able to exchange ideas and draw on their wide collective experience. It may provide a good opportunity for trainees to reflect on the content of a lecture. A good buzz session will generate many ideas, the most important of which can be reported back to the plenary.

Your role as the facilitator is to watch time and manage feedback concisely. Buzz groups are helpful for trainers as they allow you to:

- draw your breath and gauge the mood by listening to some of the discussions;
- change the pace of the session; and,
- encourage participants to reflect on what they have learnt and how they might incorporate it in their work.

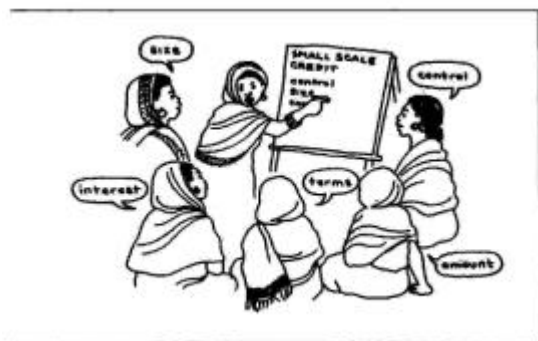
The main obstacles to using buzz sessions include: unfamiliarity with their use, the time required, the need for leaders or facilitators in each sub-group and the need to have tables and chairs arranged for quick and easy discussions.

### Brainstorming and collecting ideas

Brainstorming sessions help us discover new ideas and responses very quickly. All ideas are given equal credence. Participants are encouraged to let ideas flow freely, building on and improving previous ideas. No idea, however crazy, should be rejected.

Ideas are listed exactly as they are expressed on a board or flipchart, or written on pieces of paper and tacked to a pin board. This combination of swiftly generated ideas usually leads to a very animated and energising session. Even the more reserved members of the group should feel able to contribute.

After a brainstorming session, ideas can be discussed further and evaluated. They can be grouped and analysed so they belong to the group rather than individuals. Unlike a buzz session, brainstorming can work well in a large group and usually takes less time. It is best to limit the time for plenary brainstorms, as you might lose the attention of some participants.



### Role plays

In role plays, participants use their own experiences to play a real life situation. This can increase their self-confidence and give them the opportunity to understand other perspectives. Role plays are useful for improving interviewing techniques and examining the complexities and potential conflicts of group meetings. They help participants to consolidate different lessons and are also good energisers.

However, role plays can be time-consuming and their success depends on the willingness of participants to take active part. Some trainees may feel a role play is too threatening or embarrassing. Their reluctance may be overcome by careful explanation of the objectives and outcome.

### Case studies

The case study involves the presentation and analysis of an incident or scenario that has happened or could happen. Trainers can select examples of relevance to the trainees, such as learning how various diagramming methods can be used in sequence in the field.

Simulation exercises or games are a form of experiential learning that uses both case study material and role plays. Participants are briefed about 'real world' situations about which they make decisions and must accept the consequences. They are sometimes given pre-determined roles and asked to act out the situation from the perspective of their respective characters.

Experiential activities are highly participatory but require clear, explicit objectives and careful facilitation. As with role plays, sufficient time must be allocated for a debriefing sessions.

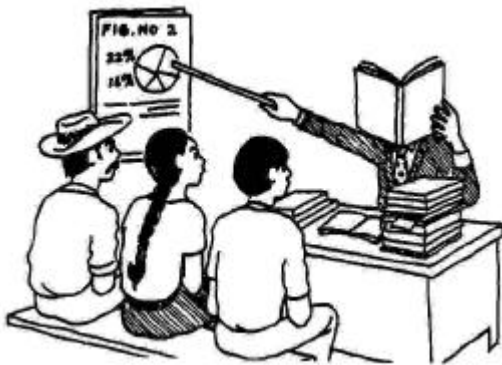
### • Notes and visual aids

Even very experienced trainers will usually require some notes. These are best made in the form of key points or topics arranged around the order of the presentation, and are planned around the use of visual aids. Many speakers use small cards on which they write key points.

Remember that old saying 'A picture is worth a thousand words'. It has been said that trainees remember 10% of what they read, 20% of what they hear, 30% of what they see and 50% of what they hear and see. Visual aids such as overhead transparencies, slides, flipcharts, posters and videos help to ensure effective communication and are a crucial part of any well-designed training session. They can also act as a prop for the trainer, reducing the need for notes.

### • You, as a performer

To train well is to give a good performance. People will grasp your message if you keep it simple and avoid jargon. Your gestures and body language can overwhelm your words. So look at the group and make eye contact, smile and avoid distracting body movements.



Those who are training for the first time commonly misunderstand performance anxiety or 'nerves'. But being nervous keeps the adrenaline flowing and helps you deal with problem situations. Even experienced trainers feel nervous or anxious before beginning a training course. There are ways to deal with nerves and use them to help, rather than hinder, your performance:

- prepare thoroughly as this builds confidence;
- calm yourself by breathing slowly and deeply; and,
- smile and talk to participants as they arrive, by getting to know a few names and faces, it will make the group less intimidating.

By putting your participants at ease, you will also feel more relaxed and friendly. You can

express this using some of the following techniques:

- Highlight the benefits that the participants will receive from attending the course;
- Speak to the participants as equals rather than as students, use 'we' and 'our' rather than 'you' and 'your';
- Try one or more new exercises during each training programme. Don't be afraid to try new activities because you fear criticism. Mistakes are a valuable part of the learning process;
- Develop training materials that build on the skills of trainees. This increases their self esteem and helps them to relax; and,
- Plan an easy exercise early on in the programme so that participants can experience success.

### • Questions and answers

A useful and brief exercise is to ask participants to reflect on a question that you give them and to write down their thoughts. For example, how might you use this approach in your work? The objective is not to collect the answers, rather to encourage the trainees to participate more actively by reflecting on what you have presented.

You can also encourage question and answer sessions after any presentation. Sometimes questions don't flow immediately. You can use a quick buzz session in groups to energise people and enable each person to contribute. Each subgroup can then select the best question to ask.

Remember to pause before answering questions and respond concisely and honestly. Never invent an answer: if you don't know, say so. If you sense hostility, try to remain calm. Give the question back to participants by asking them to comment. If in doubt, rephrase the question by asking 'Do I understand you to mean...'. Remember to summarise what the group has said to round off the question and answer session.

### • After you have finished

Conducting training sessions in participatory methods is always exhausting for trainers.

Make sure that you have space and time to recover. But remember that immediately after the workshop is a critical time to learn from the experience, even if you are tired. It is an excellent habit to make notes on your performance as soon as possible so you can learn from yourself and improve for next time.

Analyse the good and bad points by reviewing each session thoroughly. Focus in particular on the weak points of your performance. It is from mistakes that we can learn the most. How accurate was the time-keeping? Were you able to focus the interest of the trainees?



A good way to learn from your trainees is to ask them to evaluate you. This can be done formally with a written evaluation of their overall training experience. However, do not ask more than a page or two of questions.

### • Working as a team

Interactive training demands good concentration, flexible planning and improvisation, creativity in dealing with problems and above all patience and enthusiasm. Your training can be made more effective by working with another facilitator, thereby providing mutual support.

Working as a team with another trainer has several advantages, not least sharing the workload and the facilitation of sessions. By complementing each other's input, you are less likely to overlook a key learning point. Changes of style and rhythm between trainers will keep the group more concentrated.

#### BOX 2

##### A TEAM CONTRACT FOR TRAINERS

We will strive to communicate honestly with each other.

We are committed to attend all trainers' team meetings.

We will strive to be together during the training course as much as possible.

We will have daily assessments of each other's performance.

We will not interrupt each other's sessions.

We will try and contribute constructively during each other's sessions by mentioning at the end of the session any additional learning points that the session co-ordinator may have missed.

Although working with another facilitator can have clear benefits, smooth teamwork will not happen automatically. It is important that you are seen to work together as conflict between trainers will undermine the learning process. You should reach agreement with co-trainers about the content of the training and ensuring that your training styles are complementary.

A good way to promote collaboration is to draw up a team contract (Box 2). This requires all the trainers to make explicit what they require to work effectively and how they expect the partnership to develop.

#### BOX 3

##### TRAINER'S CHECKLIST

Have you reached an agreement with co-trainers about the division of roles, training objectives, the programme and training styles?  
Have you planned your sessions to include a variety of learning methods?

Are you planning to use several techniques to calm yourself before the session starts?

Have you planned an evaluation for your session or workshop?

*Next issue: Group Dynamics and Team Building.*



## 23

## Tips for Trainers: card sorting on the ground

### • Introduction

Writing on cards and sorting them into lists, categories and relationships is becoming a common method in participatory training, workshops and practical analysis. It allows all participants (providing they can write) to share their ideas and wishes, usually anonymously, with others.

In the classic traditions, a facilitator arranges the cards on a wall or board, asking for suggestion and comments from the group. Often the facilitator stands while the others sit. This can be slow and tedious and the facilitator may 'facipulate' the process.

Instead, facilitators are now increasingly using the ground, finding it quicker, more fun and more democratic.

### • Objectives

To enable all participants to express and share their ideas or wishes - for example, for a workshop agenda, questions to be asked, recommendations for action, principles to be followed, words to describe relationships... and to group these.

### • Preparation

Have enough cards or pieces of paper (A4 torn in two is a good size) and marker pens (not pens which write small). A few larger cards of a different colour can also be useful.

Ensure that there is enough ground space big enough for the cards and for sorters.

### • Time

5 minutes for preliminaries and then 5-20 minutes for writing individual cards, and 5-20

minutes for sorting, giving a total of 15-45 minutes, depending on topic and numbers of people.

### • Procedure

- Clarify the purpose and procedure (paired or small group discussions can help thinking before writing);
- Invite all individually or in small groups to write down on the cards with a separate card for each idea/question/wish etc.;
- Cards are thrown down on a large open space with plenty of room;
- All take part in sorting and grouping the cards on the ground. More cards can be added;
- As cards are grouped, write the title for each grouping boldly on a different sort of card. Put these cards down as markers;
- Invite checking and changes; and,
- Stick the results up on a wall for all to see.



### • Comments

This method encourages the democracy of the ground. The process is non-threatening, encourages all to take part and gives joint ownership of the outcome. It can be fast. Those who care most can have their 'say' even

if they normally say little. It is a good icebreaker at the start of a workshop as a means to setting the agenda.

If very many people (say over 50), or very many cards (say over 120) are involved, it may be best for a few participants to sort them while the rest continue with something else.

Beware of cards written early in a process being given too much importance later on when the thinking has moved on. Deletions and rewriting may be advisable.

- **Variant**

To promote discussion and move towards consensus, participants can walk around and turn over, or put a sticker on, any card they disagree with or think should be reviewed. These can then be displayed and discussed one by one. The other cards can be taken as agreed. (This method was used in May 1994 in the process which led to 'Sharing Our Concerns and Looking to the Future'. *PLA Notes* 22, pp 5-10).

*Source: Robert Chambers, Institute of Development Studies, University of Sussex.*