

Editorial

- **Theme issue**

This theme issue of *PLA Notes* explores the use of participatory approaches to help local people better understand markets and to develop their skills in managing financial resources. The guest editor for the theme section is Andy Jeans. Andy originally trained and worked in mechanical engineering, but for the past 15 years has worked in small enterprise development, mainly in Africa and South Asia. His experience includes action-research in the fields of micro credit, vocational training and a variety of innovative approaches to the provision of non-financial services for enterprise growth.

- **In this issue**

First, however, this issue opens with half a dozen general articles. The first article, by Iokiñe Rodríguez describes the experiences of a Venezuelan NGO, EcoNatura, in using PRA for conflict resolution in a national park in Venezuela. This is followed by an article by Abigail Mulhall and Peter Taylor. Drawing on their field research in four countries, they show how participatory methods can be used to explore the learning environment in rural primary schools. The third article, by Abigail Willmer and Jennifer Ketzis, describes a methodology field tested in Honduras which enables gender and generational divisions of household labour to be explored. Somesh Kumar and Vinay Srivastava explore how genealogies, an anthropological method for exploring descent and kin relationships, can be made more participatory.

The final two articles in the general section address more technical topics. The first article has been collaboratively written by nine authors and documents the findings of a workshop held earlier this year, at the University of Durham, UK, on how geographic information systems can be made more participatory and locally relevant. The article takes a critical look at what has been

achieved so far and explores the opportunities and challenges for the future. In the final article in the general section, William Fielding, Janet Riley and Ben Oyejola explore the use of ranking and remind readers of the limitations of ranking when used as a decision-making tool.

Regular features

The *Feedback* article is written by David Thomforde and explores how participatory evaluation methods can be used with people with disabilities. In two reflective responses, Sulemana Abudulai and Deb Johnson comment on the use of participatory evaluation methods, in particular the level of trust that is required for an organisational assessment to lead to positive outcomes and contribute to an organisational learning process.

Continuing with the evaluation theme, the first of the two articles in the *Extracts* section describes an innovative method for evaluating a peer education programme for extension workers. The simple method provides women with a confidential self-assessment tool. On the same theme, the extended Tips for Trainers has been prepared by Françoise Coupal. It shows how drawing can encourage participants to think creatively about different approaches to evaluation.

The second article in the *Extracts* section, written by Neela Mukherjee, describes the communication linkage matrix. This method develops a Venn Diagram to enable participants to explore the quality of their relationships with different organisations.

The serialisation of the Trainers' Guide examines how to train in participatory methods in a workshop setting. The *In Touch* and *RCPLA Pages* provide updates and resources on participation.

Happy reading!

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Using PRA for conflict resolution in national parks: lessons from a Venezuelan experience in Canaima National Park

Iokiñe Rodríguez

• Introduction

This article describes the experiences of a Venezuelan NGO, EcoNatura, in carrying out a conflict resolution project in Canaima National Park, Venezuela. PRA was the main methodological tool for research, education and action. It was the first time in Venezuela that PRA had been used for conflict resolution in a national park context. Hence, The first two years of this project have been a learning process for all those involved in its design and implementation. We share a few of the many lessons learned in this paper.

Project context

Canaima National Park is located in south-east Venezuela. The Park was established by the National Parks Institute (INPARQUES) in 1962 and covered an area of 10. 000 km². Its size was increased to 30. 000 km² in 1975 in order to safeguard the watershed functions of its river basins. The best known features of Canaima National Park are its flat-topped mountain formations known as '*tepui*'.

The National Park is home to the Pemón indigenous people. Their entire population approaches 20. 000, with more than half of the Pemón living within the Park. The traditional subsistence activities of the Pemón are swidden agriculture, hunting, fishing and gathering, although there is increasing work to be found in mining and tourism.

Many years of repression and the prohibition of the Pemón traditional subsistence activities followed the establishment of the Park. But since 1990, the Pemón have started to show

open resistance towards management policies. This is expressed, in the most extreme cases, in the form of death threats to Park personnel, the expulsion of park guards from certain communities, the destruction of a park guard post and the burning of several thousand hectares of forest. Conflicts usually remain latent and manifest themselves only when management policies come into direct contact with the interests of the Pemón¹. The Pemón increasingly demand to be involved in decision making, for example in the granting of tourism permits or for development projects that do not arise from local initiatives².

Project description

The 'Conflict Resolution in National Parks Project' was established in 1995 in order to assess INPARQUES' response to the persistent and increasing conflicts with the local inhabitants of the Canaima National Park. The Nature Conservancy-US suggested that EcoNatura should facilitate the process. The Nature Conservancy-US had been funding

¹ At present, the construction of a power line represents perhaps the strongest source of conflict between the state and the Pemón. The Pemón have rejected the power line because they fear it will bring large scale mining into the Park.

² The Pemón have to apply to INPARQUES for permits to construct new tourism infrastructure. Permits are authorised at INPARQUES's office in Caracas, a lengthy and bureaucratic process. Once the permits are granted, the park superintendent monitors the construction to ensure it complies with the conditions established in the permit. Tourism regulations have created a clash between Pemón and INPARQUES' interests because there had been no attempt to allow Pemón participation in the definition of tourism regulation in the park.

park infrastructure in Canaima for a number of years and was in search of interventions that would address the social conflicts in the area. As the main objective of the project was to influence changes in the management of the park, the planning and implementation of the project activities were carried out in collaboration with INPARQUES.

The project was carried out in two stages. The first stage (October 1995 - September 1996) was devoted to evaluating the main resource use problems and conflicts in the Park. Three different types of PRA workshops (see Table 1) were carried out in this first stage in order to:

- assess the main management problems of the park;
- initiate a communication process between the main parties involved in the conflict; and,
- start to define, in a participatory manner, possible solutions to existing management problems and conflicts.

In the second stage of the project (October 1996 - September 1997) activities were directed to building INPARQUES' capacity to work in a more collaborative way with the Pemón. One of the priorities identified during the first stage of the project was the development of a positive relationship between INPARQUES and the Pemón, with a key aspect being the development of a proactive park management approach to local productive activities, rather than a simple reaction to their effects. In the first phase, tourism was identified as an economic activity which presented serious management problems both to the Pemón and the park administration. It was thus selected as an activity which would allow those involved to start building a more positive proactive relationship.

Hence, during this second stage of the project a special effort was made to strengthen the capacity of the Pemón in tourism management. PRA was used in this case for the assessment of community tourism management problems as well as for problem solving and planning (see Table 1)³.

³ Based on the results of the evaluation of community tourism management in Liwo-Riwo and

At present, an extension of the project for a further three years is being negotiated directly with INPARQUES as part of a national programme for strengthening the National Parks System.

PRA methods

A variety of participatory methods were used in the different workshops: matrices, transect walks, brainstorming, group interviews, group drawings and role play. Brainstorming and matrices were the main methods used in workshops held in local communities to focus on peoples' perceptions of the National Park and of INPARQUES as the management authority (workshops 'b' and 'c'; see Table 1). Group interviews and matrices were the main methods used in the workshop for the definition of conflict resolution strategies (workshop 'd').

There was an attempt to organise a workshop which would bring all the stakeholders (Pemón and local and regional institutions) together to discuss different perceptions of the Park's conflicts and management problems. However, this strategy was aborted due to the unfavourable context: the views about the park and its management were too polarised among the stakeholders. Hence, a more low-profile strategy, using group interviews, was adopted to allow INPARQUES to listen to different stakeholders' perceptions of the Park and its present management.

It proved easier to use more informal and creative PRA methods such as transect walks, drawings and role playing in workshops where the main focus of the workshop was *not* the discussion of conflicts or management problems. Where games were introduced to 'break the ice' in workshops that were intended to give the community space to express their views of the Park and of INPARQUES, participants felt insulted and 'treated as children'. Games, role playing, transect walks and drawings proved useful only when working with park guards

Peraitepuy, a series of training and capacity building activities were developed to strengthen the capacity of the Pemón to manage tourism. These included training for local guides, a first aid course, English classes and producing sign posts to aid tourism management.

(workshop type 'a'). or when working on community tourism management (workshops 'f' and 'g').

Workshop organisation

Most of the objectives of the workshops were defined by EcoNatura together with INPARQUES. There was very little

participation from the Pemón in the workshop design. The 'tools' and techniques were suggested mostly by EcoNatura. but the final content was decided together with INPARQUES personnel. primarily from the regional and local level.

Table 1: Type of workshops held in first stage of the Conflict Resolution Project in the Canaima National Park⁴.

Workshop	Participants
First stage (October 1996-September 1997):	
a) Assessment of conflicts and threats	10 Park guards and superintendent
b) Evaluation of local perceptions of the National Park	12 Pemón leaders and teachers from Kamarata
c) Evaluation of local perceptions of the National Park	24 Pemón leaders and teachers of Kavanayen and Liwo-Riwo 5 INPARQUES personnel (local. regional. national headquarters)
d) Definition of conflict resolution strategies	7 INPARQUES personnel (local. regional. national headquarters)
Workshop	Participants
Second stage (October 1996-September 1997):	
e) Evaluation of tourism impacts from a Pemón perspective	31 Pemón leaders from 9 different communities
f) Evaluation of community tourism management problems	29 Community members of Paraitepuy and INPARQUES local level
g) Evaluation of community tourism management problems	28 Community members of Liwo-Riwo and INPARQUES local level.

⁴ There were always at least two people from EcoNatura participating as facilitators in the workshops; in some cases. there were as many as four.

The organisation of the workshops carried out in Pemón communities differed in the first and second stages. In the first stage, workshops were planned primarily with the community 'captains' (chiefs). Informal conversations were held between EcoNatura and the local leaders to discuss the idea of a possible workshop that would allow the Pemón to express their views about the Park. A date was fixed and the captains were left in charge of all the necessary local arrangements.

In the second stage of the project, the initial discussions were held through community meetings. Open meetings were organised to discuss the interest in, and need for, an assessment of community tourism management. Prior to these meetings some community problems in tourism management had already become evident, and an assessment had been sought from INPARQUES.

In all the community workshops, the selection of participants was an internal process carried out either by the captains or by the entire community through community meetings. A total of 9 visits were made by EcoNatura to the Park to carry out the activities. Each workshop lasted an average of 3 days, although arrival in the communities generally took place two days ahead of time to allow for planning and organisation. Most of the workshops were facilitated both by EcoNatura and INPARQUES, although there were several occasions in which EcoNatura facilitated alone to provide a more neutral ground for communication.

• Achievements

A space for organising ideas: the PRA methodology used in the project was well received by those who participated in the workshops. It has allowed the development of a thorough, joint analysis of the existing problems of the Park, organising ideas, perceptions and opinions, and, at the same

time, raising critical awareness of the roots of the existing conflicts.

Bridging a communication gap: PRA has proved useful in bringing together, for the first time in the 30-year existence of the Park, local communities and INPARQUES personnel to discuss the Pemón's views of the park and to start developing agreements on necessary policy changes in the Park management. Some of the deep-rooted apprehensions of the Pemón towards the Park and INPARQUES are shown in Table 2 together with their suggestions for how these can be addressed (Table 3).

Development of a positive working relationship between INPARQUES and the Pemón: PRA has been the basis for developing a positive working relationship between INPARQUES and the Pemón. Developing a practical and problem-solving conflict resolution approach has proved useful both for the analysis of local perceptions of INPARQUES and of the Park, and for the assessment of community development issues, mostly related to tourism management.

A different view of the National Park: the importance of the Park has focused on national level biodiversity and watershed protection, issues which are not perceived as significant by the Pemón. Some of the PRA methods used, such as the resource use matrix (see Table 4), allowed the Pemón to express their views of the Park, a perspective which focuses on their own valuation of natural resources, and puts them in the centre of the park and not outside it. Visualising how important the Park and its resources are for the Pemón created common ground with INPARQUES, and, to a certain extent, justified the existence of the Park to them.

Changes in policy making: the first two years of the project have created awareness within INPARQUES of the views of the Pemón and of the danger of not adapting policy making to the particular social and cultural characteristic of the Park.

Table 2. Benefits and limitations of the Park to the Pemón. Brainstorming exercise. Local perceptions of the national park workshop. carried out in Kavanayen. April 1996 together with Pemón leaders and teachers.

Benefits	Limitations
<ul style="list-style-type: none"> - The park has limited the immigration of <i>Creoles</i> to our land 	<ul style="list-style-type: none"> - INPARQUES is here to prohibit - INPARQUES is associated with something negative for us - There have been very negative experiences in the past: National Guard (a militarised police force) has taken people to prison for doing 'conucos' (slash-and burn agriculture) - INPARQUES is perceived as a tool for the extermination of the indigenous peoples - The communities are not taken into account. The plants and animals are more important to INPARQUES - INPARQUES has never explained to us the objective and aims of the park - There is a lack of communication between INPARQUES and other institutions of the river basin - By law the Pemón have priority for tourism management but in reality people from 'outside' are given priority. This limits our possibility to develop in tourism management - Now we are not free to built houses where ever we want. We have to ask permission from INPARQUES. From owners we have been converted into to slaves

Table 3. Necessary changes in INPARQUES from the point of view of the Pemón. Brainstorming exercise. Local Perceptions of the National Park Workshop. carried out in Kavanayen. April 1996 together with Pemón leaders and teachers.

Changes that the Pemón would like to see in the management of the Park	Ways in which the Pemón could contribute with these changes
<ul style="list-style-type: none"> - We would like to see the dialogue between the community and INPARQUES continue after this workshop. - Don't allow the National Guard to regulate in the park. - Explain to the National Guard why we, the indigenous people, act as we act, in order for the abuses disappear. - INPARQUES should stop being indifferent towards other government institutions in order to achieve more institutional co-ordination. - We would like the indigenous peoples' tourism and housing permits to be taken seriously and dealt with faster. - We would like to see INPARQUES assess us in relation to environmental conservation measures that also take into account the rights of the Pemón inside the park. - We would like to see INPARQUES respecting the law and really give priority to the Pemón in tourism management. 	<ul style="list-style-type: none"> - Safeguarding and promoting the Pemón culture. - Receiving the people that come to exchange ideas with us in the same way that we have treated you. - Being in continuous contact with INPARQUES (in the good and bad moments). - Achieving a better community organisation that allows the integration of all the Pemón.

Table 4: Canaima National Park's natural resource importance. use and change according to the Pemón. Local perceptions of the National Park Workshop. carried out in Kavanayen. April 1996 together with Pemón leaders and teachers

Park Component	Importance	Changes	Causes	Consequences
Forests	-for water cycle -fauna habitat -materials for construction: houses. boats. -medicinal plants -protection of soils -for agriculture -attractive to tourists -wood. orchids. fruits	-less forests	-burning: savanna fires reach forest. difficult to control -deforestation	-the rivers will dry-out -lack of materials for construction -no more home for fauna -less humidity
Savanna	-place to build houses -home for rodents and birds -straw for ceilings -ants: protein -scenic beauty	-destruction of savanna -more savanna	-burning (in and out of season) -visitors-erosion -road construction	-will turn into desert -fauna will become extinct -more warm weather -no more refuge for rodents
Pemón	-first settlers -protectors of nature -natural and cultural patrimony -provide services to tourist	-clothing -tradition and culture -bigger communities -less sharing -food. housing. education. music. economy	-impact of 'western' society	-if the changes continue the Pemón will disappear -more immigration of Pemón to cities

Table 4 explanatory note: This is only a small sample of the final matrix. The real matrix also includes other park components such as rivers. water falls. tepuis. animals. fish. minerals. tourists. The park components are those that the workshop participants considered relevant to include. This matrix was first worked in small groups and later completed by all the workshop participants. The final matrix was approximately 3m x 2m in size and took a day to complete. Due to the fact that a considerable number of the participants only speak Pemón. the park components were drawn by some of the workshop participants in the first column of the matrix.

EcoNatura is now commonly consulted in decisions related to the Park. so that decisions represent the needs and views of the Pemón. Although it would be ideal if the Pemón were consulted directly and through their own institutions. this changes at least represents a shift in the traditional unilateral. autocratic decision-making process that has commonly characterised Venezuelan government institutions such as INPARQUES.

• Problems encountered

- *Mistrust and dependency on a paternalistic institutional approach.* The deeply rooted negative image of INPARQUES was a barrier to developing trust at the community level. Additionally. the conventional institutional approach to working with indigenous communities in Venezuela is paternalistic and based on agency-recipient relationships. The Pemón have become accustomed to this pattern when working with 'outside' institutions. Thus. developing a different working

relationship based on local participation. local perceptions and knowledge created confusion and resistance.

- *Language and cultural barriers:* Language sometimes proved a limitation to using PRA. The majority of the Pemón population speak Spanish but think and reason better in Pemón. There were always Pemón translators in the workshops and although everything said in Spanish was translated into Pemón, only a small fraction of what was said in Pemón was translated into Spanish. This is doubtless a community protection mechanism, whereby not all that is said and discussed in the community is shared with the 'outside'. However, it meant that in many cases there were communication barriers that did not allow for a fluid workshop dynamic. This could have been avoided if the 'facilitators' had spoken the local language, if there had been more involvement of the community in the planning of the activities and/or if Pemón people had participated in the project as facilitators.
- *Lack of immediate follow-up of PRA activities.* The headquarters of the project is in Caracas, which is two days (1,400 km) away from Canaima National Park. Visits to the Park were carried out every two months and lasted for 15 to 20 days. This meant that it was difficult to follow up PRA workshops in the days and weeks immediately after the activities were carried out. Community discussion usually followed the PRA workshops, especially those related to tourism management. After the workshops communities thought things over and made their own changes at their own pace. Being in the area during the time in which misinterpretations, doubts and confusions could arise would have been ideal but was logistically difficult.
- *Using PRA without enough prior understanding of the social and political community structure.* Only one series of interviews - in order to get a general picture of the management problems of the Park - was carried out before starting the PRA process. The project faced quite a serious setback in one of the communities because insufficient attention had been paid to power structures before initiating

the workshops at the community level. PRA can create unexpected results and expose social and political friction within a community. It would have been better to dedicate more time prior to the PRA workshops to understanding the power relations in the communities.

- *Resistance to change at the institutional level.* PRA proved useful for initiating the conflict resolution process, especially in promoting an understanding of the perceptions and interests of the Pemón in relation to the National Park. However, the PRA process, on its own, does not guarantee changes in policy making. Much effort is still needed to ensure that the results of PRA are used to influence decision making and to change the perceptions of government officials about local communities, especially about indigenous communities. It took one and a half years for INPARQUES (especially the headquarters) to start valuing and taking into account EcoNatura's work. Much more time and effort will be needed for the Pemón to become part of decision-making processes in the Park.

• Conclusion

One of the main conclusions of the project is that resource-use conflicts are not necessarily wholly a product of incompatible or opposing interests. Indeed, they commonly arise from a lack of communication between the state and local communities. In this case, lack of communication is related to the traditional autocratic approach of environmental management in countries like Venezuela, where the state has the monopoly and control over resource management, and local knowledge is neither recognised as important nor taken into account in policy making.

In this respect PRA has been useful for initiating the communication process between INPARQUES and the Pemón, in order to understand how the Park and the management policies are viewed at the local level. It has been particularly useful in enabling National Park officials to experience first-hand, through workshops and interviews, the views of the Pemón, and other local stakeholders, about the park. They now understand why local people think changes should be made in the way the

Park is managed in order for conflicts to decrease.

However, there is a limit to the extent to which PRA methods can contribute to the resolution of the existing conflicts in the Park. The first two years of the Conflict Resolution Project in Canaima National Park have only been the beginning of a complex process which requires much effort to change power structures, ideologies and fixed patterns in policy making. The challenge in the future for institutions, like EcoNatura, and for the Pemón, is to influence policy making in order to address the underlying issues in existing conflicts, such as legal land rights and shared decision-making processes in the management of the Park. PRA methods alone will not be enough to influence these necessary changes.

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5

Participatory GIS: opportunity or oxymoron?

**Jo Abbot, Robert Chambers, Christine Dunn, Trevor Harris, Emmanuel de Merode,
Gina Porter, Janet Townsend and Daniel Weiner**

• Introduction

In January 1998, a group of 35 researchers and practitioners met at the University of Durham for a workshop to discuss participatory research and the potential for participatory Geographic Information Systems (GIS). The workshop drew on experiences with participatory GIS in South Africa and on participatory approaches to the management of the coastal zone ecosystem in Ghana. The objective of the workshop was to identify the benefits and problems of a participatory GIS approach.

In this article, we share some of the workshop findings and hope to stimulate debate about the potential, but also the pitfalls, of attempts to integrate GIS and participation. We start by briefly describing GIS and participatory GIS, including a case study of what has been achieved in South Africa through combining land survey maps with mental maps generated by local communities. We then describe the complementarity between GIS and PRA and discuss some of the emerging opportunities and challenges. We conclude by sharing the debates that were raised in the workshop and include a checklist for practitioners to consider before embarking upon participatory GIS.

• What is GIS?

A GIS is a computer-based technology increasingly used in planning, resource management, optimal siting studies, marketing, and numerous other activities which involve map-making. However, unlike mapping software which only draws maps, GIS enable complex spatial analysis.

GIS comprise several components. One component brings geographical data into the GIS, either from remote sensing sources, ordinary printed or digital maps, or field reports, and converts those data into computer-readable form. Secondly, a GIS incorporates a database which allows the data to be manipulated and managed. A third component of GIS comprises the ability to bring together selected themes or 'layers' of data and perform a number of spatial analytical operations. Finally, the results from analysing data in a GIS are disseminated in a number of ways, but most commonly in map form. The very rapid diffusion of the technology has arisen because of the need to handle information that is geographical, that is, it is or could be mapped.

• Participatory GIS

As GIS becomes widely used in spatial decision-making, there is concern that top-down development planning will be reinforced. This is because GIS hardware, software, and data are expensive, require a high level of technical expertise, and are usually seen as 'expert' systems. Participatory GIS is, therefore, an attempt to utilise GIS technology in the context of the needs and capabilities of communities that will be involved with, and affected by, development projects and programmes.

Participatory GIS draws on the diversity of experiences associated with 'participatory development' and involves communities in the production of GIS data and spatial decision-making. For example, local people could interpret output from a GIS or contribute to it, such as by integrating participatory mapping information to modify or update a GIS. Capturing local knowledge and combining it

with more traditional spatial information is, therefore, a central objective (see Box 1 and Figure 1).

Through the use of participatory GIS, it is expected that community involvement in development projects will be enhanced. This requires structures and procedures within planning agencies, NGOs and the private sector that facilitate GIS production and use

which are community-based and not elitist. To achieve such a goal, participatory GIS methodologies need to be established and field-tested. It is important that participatory GIS builds upon the successes of existing participatory development concepts and methods.

BOX 1 THE KIEPERSOL PROJECT

Kiepersol is a locality in the Mpumalanga Province of South Africa and is the location of an experimental participatory GIS project. The area exhibits significant social and ecological variation, has a long history of contested resources and forced removals, and the demand for land and agrarian reform is high. The initial phase of the project involved 'capturing' local knowledge through the production of mental maps and the integration of that knowledge with traditional spatial information within a GIS. The mental maps were produced from a series of participatory workshops involving residents of the former KaNgwane 'homeland' (see Figure 1). The integration of 'local' with 'expert' knowledge raised four broad sets of issues:

1. *The historical geography of forced removals:* Using data obtained from oral histories, aerial photography, and satellite imagery, we are recording the historical geography of forced removals and information on past farming systems. Together these data provide complementary images of changing local apartheid geographies and an understanding of contemporary natural resource struggles and land restitution demands.
2. *Defining agro-ecological potential:* Overlays of official land type data and local knowledge about soils indicate conflicting representations of land potential. These discordant understandings are a product of scale, the multiple meanings of agro-ecological potential, and differing farming systems. We were able to make maps of the area from these different perspectives which could help groups understand each other better.
3. *The politics of land, water, and biomass access:* The Kiepersol participatory GIS demonstrates that proximity should not be confused with access. For example, differential access to river water and changes in the boundary of the Kruger National Park were identified as significant issues which the traditional GIS obscured.
4. *Developing policies for socially appropriate land use:* The GIS incorporates community ideas about spatial transformation and supports a more democratic land use planning process.

Source: Weiner et al. 1995

Figure 1. Integration of local knowledge with spatial information

The Durham workshop arose from a desire to explore the opportunities and constraints of a participatory GIS in more depth. The workshop drew on the University of Durham's work in Ghana, where there is considerable interest and capability in GIS, as Jacob Gyamfi-Aidoo illustrated at the workshop. At the same time, the Ghanaian government is

committed to popular participation in planning and is currently undergoing a decentralisation exercise. Thus, the possibility of developing some kind of participatory GIS is attractive to government institutions. But the challenge is to build a participatory GIS which is user-friendly and inexpensive so that it is accessible to local people at district level.

The combining of participatory approaches with other methodologies is not new. As the use of participatory approaches has expanded, practitioners have realised both their potential, and some of their limitations. This has

encouraged experimentation and the sharing of principles and methods between disciplines, as was explored in *PLA Notes* 28.

An area of commonality between a map generated through GIS and a PRA diagram is that they both provide visual information in a way that is intuitive to the people who have created them. The challenge for integrating them is whether common ground can be found, such that each group can first understand and secondly develop in a meaningful way the data generated by the other group. If this can be achieved, then GIS has the potential to complement PRA in the following ways:

Scaling up

One of the challenges of participatory approaches is how to scale them up to show local concerns as well as broad regional or national perspectives. GIS provides the potential for local level PRA to be integrated at a regional or state level, which means that, under a system of decentralised administration, local priorities can be developed into regional plans. This could result in a more integrated approach to needs assessment and service delivery, as local-level priorities become shared knowledge, rather than the more exclusive product of dialogue between an intervention agency and a community. However, there are also risks to local knowledge becoming recorded and centralised (see below).

Legitimacy and advocacy

One force behind the growth of GIS has been its use as a policy tool, through the new access it gives to use and manipulate quantitative and qualitative data. So far this access has been limited to a number of high-level decision-makers. A question now is whether GIS can give similar access to local people, empowering them to influence policy decisions through owning and using the data. An advantage of GIS information is that it can be presented to policy-makers in a form and at a scale which they find credible and usable. In contrast, they may have difficulty with the richness of local detail generated through PRA. The challenge is to combine the realities and detail expressed locally through PRA with the precision and scale of GIS. The question

then is whether such a ‘participatory GIS’ would simply be extractive, or whether it could empower local voices to more effectively influence policy.

• Opportunities and challenges

GIS, like PRA, is only as good as the local politics. Whose interests are considered in local policy? Who owns the information and decides what is important? What are the goals of local politicians, experts and bureaucrats? Politics is important as it determines the extent to which people trust their local and national government. To get public services, schools, post, transport, health services, clean water, *you need to be on the map*. But the map also tells state authorities where you are, which may not be so attractive.

Jon Duncan, a civil engineer from Cape Town, provided a fine example at the workshop. Local people in Isthumba Village, near Durban, South Africa, helped him build a GIS of their area, marking the scattered houses, people and facilities. Before the GIS was finished, there was a police raid on Isthumba, and people wanted to know how the police knew how to find them. Presumably the answer was a local informer, because the police had not seen the GIS. But this highlights the problem: a PRA or a GIS turns local knowledge into public knowledge and out of local control. It can be used to locate resources and development needs, or merely to extract more taxes and to increase control from the outside. The people of Isthumba village used the GIS to get latrines and a postal service, but they are now on the map and will have to deal, in the future, with other consequences of this.

A GIS, being more powerful than a map and easier to update, is both better and worse. A GIS can handle an immense volume of data. While PRA can be controlled by experts against the people (Mahiri 1998), or by a powerful clique in a village or town, a GIS is even more susceptible to control by experts and by the powerful, from district officers to transnational corporations (TNCs).

Information about people is expensive to gather, so there is a dangerous temptation to do without it. But PRA can help build and update these GIS. Councillors and citizens could use the GIS for development, integrating local and outside expertise, or the GIS could be a high-tech waste of money, or another tool of repression.

A GIS can legitimate local information (which is important) and enable local people to use a modern argument, or it can legitimate bad data (which is disastrous). TNCs which sell GIS software and hardware claim that a GIS can do the planning for you, but this is nonsense: GIS can analyse, select and display information for people to think and talk about, but, like a map, they are only as good as those who use them. Users do not need to be technical experts, but they do need to know that a GIS is good at patterns, but not at processes or relationships. Often the 'physical' information from satellites is very reliable, but the information about people is wrong or out of date.

• Workshop discussions

Presentations at the workshop showed what is achievable, although discussions, both in small groups and in larger fora, remained critical. It was clear that the invited participants were keen not to become self-congratulatory in terms of the potential benefits of participatory GIS. However, the discussion remained constructive, and addressed three main issues:

- whether a top-down technology such as GIS has a place in participatory research;
- whether a technology developed largely by commercial companies in North America and western Europe can be used appropriately in the 'South'; and,
- how local knowledge can be integrated with, and represented in, an information system which, by definition, has traditionally rejected such knowledge in favour of spatially-defined 'expert' information.

The above questions represent awkward challenges, not least, for the mainstream GIS community, many of whom would regard the theme of the workshop as a minority interest. Similarly, there is much resistance amongst the non-GIS community towards any forms of GIS. There may be common ground, however; for example, in the call for 'softer' sources of information (e.g. mental maps) to be incorporated into a GIS framework.

Small group discussion at the workshop focused on the following key questions:

- is participatory GIS achievable and in what context?

- what are the principal constraints to the development of participatory GIS?
- what role does participatory GIS have in systems research?
- where next?

Each of these is discussed below.

Is participatory GIS achievable?

The workshop discussions centred around issues of the ownership of, and access to, information and the final outputs. Participation in a GIS can operate not only at the level of producing information but also in terms of the active use of that information. By exposing alternative representations in one system, participatory GIS should generate dialogues and stimulate reflection and debate, e.g. in relation to conflicts over the use of resources. The most appropriate participatory GIS is perhaps one which is issue- and context-driven.

What are the constraints?

Many of the identified constraints are common to both participatory GIS and conventional GIS (e.g. cost, sustainability, privacy and confidentiality, skills and training, user-friendliness, data quality, and currency and legitimisation of 'bad' data). More specific issues related to: the difficulties of capturing power relations and politics in a spatial database; integrating information derived at small scales from conventional sources with that at much larger scales from exercises such as participatory mapping, and finding an appropriate 'balance' between such widely differing types of data and information; the dangers of raising expectations for local communities; and problems in controlling the use and development of a participatory GIS, including the potential need for a gatekeeper.

What role for participatory GIS?

The key roles for participatory GIS in systems research were identified as: a means of integrating previously isolated qualitative and quantitative information sources; a potential aid to conflict resolution; and a means of consolidating and sharing ideas. In this last context, GIS provide an opportunity for interdisciplinary work which, by raising

awareness across different interest groups, can avoid dangerous misrepresentations, such as using the physical environment to infer lifestyles.

Where next?

Proposals for future developments included a call for the implementation and evaluation of practical case studies of participatory GIS; development of World Wide Web-based GIS; and considering the use of participatory GIS in urban settings in the 'South'. In addition it was suggested that GIS should be promoted as a potentially valuable tool for participatory research practitioners: 'GIS in participatory research' rather than 'participatory GIS'. Finally, it was felt that more thought should be given to appropriate representations of geographical information which go beyond simple two-dimensional space as found in most mapping exercises. This does not negate the value of maps *per se*, however, since mapping can be used to highlight the dangers of accepting 'bad' data or as a route to raising awareness of the need for political action (Kumar et al, 1997).

• Checklist for participatory initiatives

Before embarking on a participatory GIS, GIS professionals may find value in a basic PRA tool: participatory resource mapping (PRM), where local people make their own maps. PRM can take the form of maps made on the ground and/or redrawn on paper, or of overlays on aerial photographs. PRM has probably been practised in over 100 countries but since it is dispersed and not linked to centralised information systems, its prevalence has largely been overlooked.

Unless those who ask and answer the questions about participatory GIS have personally experienced the power of PRM, they are likely to misjudge what best to do. (When the Director of one Remote Sensing Centre was shown slides of ground and paper PRM, he asked whether it had taken one or two years to teach people to do it. In all cases, people had made the maps without help in one go).

Key questions

Before opting for a GIS, some questions to ask are:

1. Have you experienced PRM? If you have not, can you gain that experience of well-facilitated PRM before you commit to any GIS-related programme? Or failing that (but very much a second-best) consult others who do have experience?
2. Is a GIS really necessary? Would GIS add anything that cannot better be achieved through PRM?
3. Are you proposing to start with PRM or GIS? If you start with GIS, will this trap you from the outset in ways of thinking, seeing, representing which are alien to, and disempower, local people? Conversely, if you start with PRM, will you be empowering local people to express and explore their realities?
4. Who would gain and who would lose from PRM and who from GIS? To assess this:
 - List stakeholders. These may include (i) *local people*: children, women and men, landless and landed, the better off, the poorer, pastoralists, cultivators etc. and (ii) *professionals*: NGO staff, government staff, technical professionals, researchers, and international donors.
 - List types of gains and losses. Gains may include income (salary etc.), capital, access to and control of resources, knowledge, power, professional prestige, personal fulfilment etc.. Losses or costs may include the personal time of local people, power through sharing knowledge, and loss of access and control.
 - Draw up a matrix of stakeholders and questions and score each box, first for PRM and then for GIS. Some questions could include: Whose reality is expressed? Who is empowered/disempowered? Who gains and who loses? (see Table 1).
 - Review process and practice and identify ways in which realities, power, gains and losses can be made more equitable.
 - Repeatedly ask: Who participates in whose mapping? Whose knowledge, categories, perceptions and reality are expressed? What is missed (e.g. micro environments like home gardens)? Who owns the map? Where is it kept? Who has access and how? Who does not have access and why? Who

understands it? Who does not understand it? Who updates it? Who uses it? For what purposes? And ask again, and again: Who is empowered, and who disempowered? Who gains and who loses?

Table 1. Suggested matrix for comparing the value of PRM and GIS to different stakeholders

	Stakeholder 1		Stakeholder 2	
	PRM	GIS	PRM	GIS
Q1				
Q2				
Q3				

• Final thoughts

Rundstrom (1995) describes GIS as 'potentially toxic'. There are examples where this potential has been realised: software companies are selling GIS as a solution to low-income governments and are serving further to disempower the powerless. How far then can a *participatory* GIS help to bring about desirable change? (Dunn et al. 1997).

Some of the real value of a participatory GIS, or perhaps more appropriately termed 'community-integrated GIS' (Harris and Weiner 1998), will come if it can help to inform process and relationships, rather than simply extracting patterns from large volumes of data, which conventional GIS are best at. A more radical GIS may also alter the position of potential funding bodies who, following experiences of failed projects where conventional GIS has been used as a quick technological 'fix', may otherwise be reluctant to provide support.

But even a GIS which allows multiple realities, and which is locally controlled, finds it difficult to handle 'tacit' indigenous knowledge, that knowledge which we all have and use but which we find difficult to describe to others, since this cannot be 'geo-referenced'.

As one participant at the workshop noted, participatory GIS do not currently exist. But they are at a stage of exploration. Workshop

participants felt that much more needs to be known about achievements and limitations, as well as the conditions under which participatory GIS can produce something of value which empowers a range of stakeholders. This calls for monitoring and evaluation, specifically participatory monitoring and evaluation (see *PLA Notes* 31, February 1998), of what participatory GIS has achieved and an assessment of what it can and cannot deliver in the future.

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6

Ranks are statistics: some advice for their interpretation

William J. Fielding, Janet Riley & Ben A.Oyejola

• Summary

Ranking is commonly used by researchers to obtain farmers' assessments of a project. Ranks can be obtained directly through farmer responses or indirectly by classifying collected data. This article results from examination of a number of training manuals and papers which consider or use ranking methods in PRA. We are concerned that the original use of ranking methods in PRA has become replaced by an increasing reliance upon ranks for decision making. This change in emphasis requires practitioners to be aware of the limitations of ranking so that justifiable decisions can be made. We remind readers of how to rank and give guidelines on interpreting ranks.

• Introduction

There is often pressure on researchers to quantify qualitative data; numbers seem more concrete and easy to manipulate than qualitative opinions generated by social science studies. This seems to have resulted in the increased importance and use of ranks (and scores) for presenting opinions collected from farmers. One consequence of this is that the rankings obtained from PRA studies appear to be increasingly used to justify decisions associated with project design and implementation.

However, it is worth remembering what Ashby wrote in 1990: *"the technique of ranking among alternatives must be used with caution"* and that it is *"useful primarily as a tool for getting farmers to explain their preferences"*. Although Chambers (1988) stressed that

ranking should not be *"an end in itself"*, the impression from recent literature is that rankings are considered a very important tool and are frequently used. However, the statistical aspects of ranks seem to have been largely ignored and training manuals on PRA are almost totally devoid of statistical aspects of ranking. This seems to have resulted in rank order being accepted at face value.

How to rank

Irrespective of the method used (direct matrix, preference, wealth ranking etc.), the literature indicates that researchers do not always know what to do when farmers cannot decide which of two items they prefer. If a farmer cannot distinguish between items, they should be given the same rank. If this is not done, some farmers or characteristics may have greater influence on the overall result than others (which we assume is undesirable). If a farmer has to rank six items (vegetables) and s/he can assign a unique order to the set, then six different ranks, for example, 1 to 6 are obtained (see Box 1 Continuous Production as an example). However, if the farmer wishes to give the same rank to two or more items, then these items should be given the same rank. This is the mean of those ranks which would have been assigned to this group of items if the farmer had been able to distinguish between them. If a farmer has a first choice (rank 1) and a second choice (rank 2), and regards the other vegetables as equal, then each of the remaining items gets the same rank of 4.5. 4.5 is the average of 3, 4, 5 and 6, which are the ranks which would have been assigned to the items if the farmer could have distinguished between the vegetables (for example see Production Time).

Box 1 contains two sets of ranks. The figures outside the brackets are the ranks given in the original published report. These ranks are faulty because some criteria have unintentionally been given more importance than others due to the method of ranking. The total of the ranks for Production/Duration is three, while that for Continuous Production is 21. When the correct scores are used, the figures inside the brackets are obtained. Consequently, quite different totals are obtained (Correct score) compared to the score given in the original table (Original score).

In Box 1 some items are not ranked and a blank is entered. It is important to determine why the item was not ranked. If blanks occur due to faulty data collection, some imputed values may have to be considered, which may not be desirable. If the farmer chose not to rank the item, it could be that the criterion may

not be applicable (a tree may not be used for firewood) or the farmer simply may not know if the tree makes good firewood. If the criterion is not applicable, the rank associated with 'worst' should be assigned. The reason for this is that if the tree is not used for firewood, we are probably implicitly being told that it makes such poor firewood nobody burns it. If, for example, the wood is not burnt because it is too valuable to burn, then we would still want to give it a poor rank for burning. If the farmer does not know enough to respond, the researcher should consider why that farmer is being asked to rank the criteria and whether or not another more useful respondent should be chosen.

Box 2 gives some general points which must be remembered when collecting ranks.

BOX 1 HOW TO RANK

When a person gives two items the same preference, the average rank for the two items must be given. Thus if a farmer considers two crops as equal best, they do not get a rank of 1 each, instead they get $(1+2)/2$ or 1.5 each. This ensures that the sum of the ranks is equal across all criteria. In the example below, taken from a published report, quite different ranks arise when equal preferences are taken into account.

Direct matrix ranking of criteria for vegetables.

	Pepper	Cabbage	Eggplant	Cauliflower	Tomato	Onion
Continuous Production	3	5	1	6	2	4
Production Time	-	-	2	-	1	-
	(4.5)	(4.5)		(4.5)		(4.5)
Production/ Duration	-	-	1	-	2	-
	(4.5)	(4.5)		(4.5)		(4.5)
Ease of Marketing	4	5	3	6	1	2
Farmer eats	4	5	3	6	2	1
Ease of transport	4	1	5	1	1	6
		(2)		(2)	(2)	
Pest Resistance	1	6	2	5	4	3
Nursery size	3	3	1	3	2	3
	(4.5)	(4.5)		(4.5)		(4.5)
Transplant Labour	5	2	1	2	2	6
		(3)		(3)	(3)	
Harvest labour	3	1	3	1	3	6
	(4)	(1.5)	(4)	(1.5)	(4)	
Original score	27	28	24	30	20	32
Correct score	42.5	41	25	43	23	42.5

- no score given by farmer. Values in brackets show the rankings that should be used where there are equal preferences.

BOX 2 POINTS FOR RANKING

- A full list of criteria for ranking is essential; choosing preferences from an incomplete list will give faulty information.
- When equal preferences occur, an average score must be given, of the scores which would have been allocated to those items if they had not been considered equal.
- Items not ranked must be considered carefully; were the criteria irrelevant or should the poorest score have been given to that item?
- Although correlation analysis can give information about preferences, farmers MUST always be asked which are the most important criteria and which is the preferred item.
- Ranks are subjective choices and are open to influence by the interview environment and context.
- As a result of (v) and of statistical aspects, ranks may not give an ordering which we are sure is unique, particularly if the sample size is small.
- Statistical methods can provide objective ways of finding groups of farmers with similar preferences.

• Interpretation of ranks

A league table of items, listed according to their ranks can give a misleading impression that the item at the top of the list is *the* most preferred item that could be found and the one at the bottom of the list the least preferred item. This view is probably an extension from football league tables and other sports' rankings.

However, this sense of a clear preference, which ranks give, is misplaced. Even if we accept that the researcher has used a method of obtaining preferences which does indeed reflect the farmer's assessment and farmers can give reliable answers, simple ranking does not account for the level of disagreement between farmers which is 'lost' when individual figures are summed to get the final rank figure. As it is most unlikely that all farmers will assign the same rank to each item, our interpretation must reflect the differences in the farmers' responses.

This variability is important as it can help identify groups of farmers with local needs. The variability may indicate that there are no global needs, only local needs and to pretend otherwise would be to ignore possible recommendation domains.

Table 1, on the following page, is taken from a training manual and the simple interpretation is that Drought and Pests are the main problems. Can this interpretation be justified? Firstly, before we look at the total scores, we need to check that farmers are giving consistent responses; i.e. what is the level of agreement between farmers? In this case, statistical analysis¹ indicates that there is broad agreement between farmers' rankings, so we can now look at the total scores.

Now we need to discover whether given the information we have, we can be sure that the total scores are actually different. Most farmers consider *Labour Shortage* as the least important and most identify *Drought* as the most important. Again, statistical analysis² of the total scores helps us to place limits on the justifiable interpretation of the totals. In fact, we could justify projects which address, *Drought*, *Pests* or *Weeds*, as we cannot distinguish *Drought* as being more important than the other two. Likewise we cannot say that *Labour Shortage* is the least important problem as we cannot distinguish between the total scores of *Cost of Inputs* and *Labour Shortage*. Thus the simple interpretation that '*Drought is the major problem*' or '*Labour Shortage is the minor problem*' is not justified by the information in the table.

¹ Using Kendall's coefficient of concordance

² Using Friedman's test

Table 1. Example of preference ranking on constraints to agricultural production

Problem	Farmers						Total score	Ranking*
	A	B	C	D	E	F		
Drought	5	5	3	5	4	5	27	a
Pests	4	3	5	4	5	4	25	ab
Weeds	3	4	4	1	3	3	18	ab
Cost of Inputs	2	1	2	2	2	2	11	bc
Labour	1	2	1	3	1	1	9	c
Shortage								

* Only scores with different letters are those which we can be sure are really different ('statistically significant').

BOX 3 GUIDELINES

When six items are ranked by varying numbers of farmers the ranks must differ by the value given below for one to be sure that the items have different ranks

No. of farmers in group	4	6	10	15	20
Minimum difference between mean ranks	15.5	19.0	24.5	30.1	34.7

Friedman's test can be used to determine if the ranks really are different.

Table 2: Pairwise ranking of favourite pastimes.

TV Reading	Sleep	Music	Sport	Score	Rank
TV	TV	MU	TV	3	B
	RE	MU	RE	2	C
		MU	SP	0	E
			MU	4	A
			Sport	1	D

Our ability to distinguish between criteria depends not only upon the number of farmers we interview, but also on the number of criteria. Box 3 offers some guidelines as to the number of farmers who should be questioned if six criteria are to be ranked.

Table 2 gives an example of pairwise ranking, again from a training manual. Casual examination of the scores suggests that Music is the most popular pastime. Although Music is preferred on all four occasions, we have insufficient information to be sure that the preference for Music did not emerge as a result of random choice. In this example we can only be 38%³ sure that Music really is preferred over other pastimes, and act accordingly. Box 4 overleaf gives guidelines as to the number of preferences which must be observed between pairs before we can start to be sure that real preferences exist.

Wealth ranking poses even more problems of analysis and interpretation than pairwise or preference ranking. As not all those who do

the ranking may know all the farmers to be grouped by wealth, gaps in the wealth ranks of individual farmers are to be expected. Also, those who do the ranking are allowed to choose their own number of wealth groups. To overcome the difference in number of wealth groups, researchers are told that the data should be changed to percentages but this can result in the original data being modified in a way which could invalidate the overall ranks. The final division of farmers into wealth groups is a subjective choice of the researcher. Clearly, the objective is to assign farmers to wealth categories which result in distinct groups and the correct allocation of farmers to each group. In Box 5, we urge that great caution be exercised in interpreting wealth ranks.

³ Using Binomial probabilities.

BOX 4

NUMBER OF TIMES AN ITEM MUST BE CHOSEN WHEN COMPARED WITH ALL OTHER ITEMS BEFORE WE CAN BE SURE (95% CONFIDENT) THAT IT IS A REAL PREFERENCE

Number of items being compared	5	6	7	8	10
Must be preferred at least:	5	6	7	7	9

The number of times an item needs to be preferred before we can be sure it is ~~the~~ preferred item can be obtained using the Binomial test.

BOX 5

OBSERVATIONS ON WEALTH RANKING

- Mean ranks should not be used.
- If the data are incomplete, values must be imputed before obtaining average ranks.
- Split the population into groups so that they contain equal numbers of households.
- Obtain ranks from as many people as possible so that peculiar rankings do not have a great influence on the final groupings.
- Wealth data probably need to be analysed by more powerful statistical methods.

• Conclusions

We have highlighted some limitations which should constrain the interpretation of some commonly used ranking methods in PRA. The correct interpretation of wealth ranking probably requires the assistance of a statistician, but interpretation of other ranking methods is less difficult and methods of statistical analysis can be found in books on statistics for the social sciences. Where ranking is carried out as a method for farmers to explain their preferences, our concerns over interpretation are probably not justified, but when actions are justified by rankings, then we feel that greater objectivity and analysis are required in interpretation.

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NOTE

The methods of statistical analysis mentioned in this article can be found in books on non-parametric statistics: one such book is by Siegel and Castellan (1988).

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Understanding market opportunities

An enterprise approach to livelihood strategies

Andy Jeans

• Introduction

So-called 'resource-poor' people are often very resourceful at securing their livelihoods from a range of activities such as farming, fishing or other forms of small enterprise. While many of such economic activities are traditional ones within their communities, the changing world around them presents a variety of threats and opportunities to their effective continuation.

Changes occur in a number of ways:

- in the availability and/or price of resources and inputs - such as land, fish stocks, fertiliser, raw materials, fuel and skilled labour;
- in the availability of alternative production methods, tools and equipment;
- in what people are prepared to buy - this depends in turn on customer preferences and competition; and,
- in the legislative and policy environment in which they are operating, and the level of extension and support services available.

The pace of these changes has been steadily increasing. The term globalisation has been used in recent years to describe this process spurred by the so-called 'free-market' economic policies. It has always been the case that those farmers or small producers which effectively adapt to the changes do better than those that do not. However, the influence of these changes has now become so profound, that for many it is no longer a choice of whether to change or continue as they are, but whether to change or for the enterprise to collapse altogether.

Much of the work to date on participatory approaches has focused upon the involvement

of community members in assessment and prioritisation of their livelihood *needs* (e.g. for health, water, transport, food, income). This has often led to the participatory development of plans to meet those felt needs - plans which usually involve inputs from a range of actors including the intervening agency and the community members themselves.

This theme of this issue of *PLA Notes* is understanding market opportunities. These methodologies are quite new in the field of participatory learning and development, although there are many connections with the small enterprise development activities of assistance agencies, which have explored this area more. The novelty arises in part from the focus on *opportunities*, rather than needs. From an enterprise perspective, a prime need is for a sustainable income or profit - in cash or in kind. In order to optimise that income, certain choices can be made by the enterprise owner, such as what to produce, how to produce it and what to do with the products. The costs and benefits that may result from such 'business' decisions can only be assessed by consideration of the world of opportunities outside the enterprise - the customers and the suppliers with whom the enterprise must link.

The range of opportunities open to an individual or community is not limitless of course; there are constraints - of skills, resources, information, market-access etc. But a better understanding of the possible opportunities and the likely consequences to income of making certain choices, can only empower people in their decision making.

In agriculture, as in any business, profit-maximisation is not the only guide to decision making. Other factors play an important part and these have been emphasised by much of the earlier participatory research e.g. the

importance of cultural and social factors, environment, food security, community development and self reliance. The set of articles in this issue of *PLA Notes* emphasise peoples' understanding of the *financial* aspects, and the consequences of certain decisions. This financial or market information should be used in addition to the other factors listed above to assist small producers in their decision-making.

• Why participation?

Whatever the small enterprise - farmers, fishers, blacksmiths, tailors, food-processors - the resource-poor are operating in a fast-changing and unpredictable environment. As the pace of change is increasing, enterprises will need to adapt and change to survive, let alone to thrive and grow to provide employment for others. To achieve this, individuals, representative groups or communities will need to be continually aware of the changing opportunities and to assess for themselves whether, when and how to change. Intervention agencies are by definition usually intervening for a limited time period, but the survival and development of a range of viable enterprises in a community will depend upon their agility in responding to changes as they occur. Thus, participatory learning is particularly relevant to the market opportunities discussed in this issue of *PLA Notes*, as the enhanced capability of people to identify opportunities and assess consequences of certain choices is a critical component for effectiveness over the long term.

The contributions

The contributions to this issue reflect a variety of development efforts to enhance the capability of groups involved in smallholder agriculture, natural resource management and income-generation activities to understand some of the financial aspects of their enterprises, and to explore some of the options and consequences for change.

Roos and Mohatle (this issue) describe how a producer group (in this case a sewing and knitting group in South Africa) were assisted to take a fresh look at both the needs of local consumers, and the strengths and weaknesses of their competitors. This information enabled

them to consider adapting their production away from what they know how to *make*, to what they believe they can *sell*.

Kar and Datta (this issue) focus not on the product but the marketing channel. They describe an approach adopted by Proshika, a large Bangladeshi NGO, to assist smallholder farmers and food processors to compare the relative profitability of selling their products through different marketing channels. Not surprisingly, the study found that the profit margin when sold through middlemen is often lower than when direct sales are made. However, mention is made of some of the difficulties and the costs of taking harvests to distant markets - a service that is provided by middlemen. In contrast to the Roos and Mohatle study, these producers are seeking customers outside their local community. While profit margins per unit may be lower, due to the need to pay for transport and the middleman, the increased volume of sales possible through such alternative marketing channels may yield higher total incomes to the smallholders. Thus, where the limitation of an enterprise is not how much they can produce, but how much they can sell, the total income as well as the unit profitability could be considered.

Dorward et al's article (this issue) describes an interesting adaptation of the 'mancala' board game (popular in many parts of Africa) to assist farmers in Zimbabwe to compare resource utilisation and the likely return for alternative crops. Some interesting features of the farm management tool developed are that: it permits both cash and non-cash resources to be represented, resource utilisation over the seasons can be seen, and cash profit and other benefits (such as food for consumption, by-products for fodder) can be displayed. This adapted game provides a relatively simple and user-friendly tool for farmers to structure their decision making.

The authors emphasise the critical issues of resource needs and availability (e.g. of labour) at different times of the year that face smallholder farmers. The tool appears to be particularly effective at enabling farmers to see the implications on labour and cash requirements throughout the year of selecting a particular crop. While the inputs necessary

(labour, other costs and their timing) are fairly predictable, production and sales as every farmer knows, are much less certain. Farmers can estimate yields and market price, and they can hope that they will find customers willing to buy, but none of these are guaranteed. Thus, while the tool does enable farmers to estimate production and sales, it could perhaps be developed further if some means of risk and market assessment were included.

The papers by Bond (this issue) and Mitchell and Walsh (this issue) also focus on participatory techniques to assist people with resource-utilisation decisions. Bond describes a board game (adapted from 'MONOPOLY') which is used with local wildlife management committees in Southern Africa, to help them (in conjunction with more formal training) to develop their financial management skills in a way that is active and fun. In MONOPOLY, the objective of players is to make the most money during the period of the game. Clearly the objectives of the wildlife management committees are broader - not least in ensuring continuity of an environment that can support the wildlife in the future. As Bond suggests, perhaps the game could be broadened to enable a longer term perspective to be included.

However, a useful component of this approach is the element of 'chance' - in the game revenues depend upon whether other players 'land' on the right square and, in wildlife management, on whether visitors decide to come. A successful enterprise cannot depend upon good luck; thus some element of risk assessment is required.

Mitchell and Walsh describe a step-by-step model of 'participatory business planning' developed and used with rural Aboriginal communities in Australia. In addition to the familiar land-use mapping, this approach uses stories and pictures to complement written information. An interesting inclusion at an early stage of planning an enterprise is an opportunity to share ideas on what the

participants hope to get out of the venture. It is good to have aims and make them explicit early on in business planning. External agents or facilitators may come to the community with preconceived notions of what it is that they believe the community would like to achieve from pursuing a particular enterprise. In the same way as practitioners of participatory methods would strongly support the choice of activity being made by the community, so the decisions within an enterprise venture should be made with a view to the nature of benefits prioritised by them, and it would be unwise to make assumptions.

• Remaining challenges

The papers show a span of useful experience in this relatively new area. As the papers report, many of the techniques have proved popular as learning tools and helpful in reaching planning decisions. The methods used have been developed for particular conditions and may not be readily transferable across countries or enterprise sectors, but we hope that they will get researchers and practitioners thinking about how they can be adapted and further developed for other situations.

Coming from an enterprise background, I feel that further work could usefully be undertaken looking at the sales and purchasing side of the enterprises (see Box 1). Many participatory tools and techniques have been developed with 'local communities' rather than enterprise owners. Participatory techniques are fairly well developed for assisting decision-making around the utilisation of immediately available resources. There is room for further development of techniques to help individuals and communities to look further afield - for alternative inputs, products, processes or customers outside their current knowledge.

BOX 1

HOW CAN SMALL BUSINESSES BE IMPROVED? AN EXAMPLE OF USER LED INNOVATION FROM KENYA

Many artisans live from day to day, making products because their neighbours do; innovation is limited to copying products they happen to see. Their contacts are limited, not extending far beyond family and friends to bring new product ideas, suppliers or customers. The most common marketing strategy can be described as 'buy my product here or leave'. Feedback from customers is often negative resulting in artisans compete fiercely with their neighbours.

In contrast, the work described here on agricultural tools in Kenya explores interventions in design, manufacturing and marketing from the customers' perspective. It has therefore been called user-led innovation.

In 1994, FIT (the Farm Implements and Tools Programme) discovered that DAREP (Drylands and Applied Research Extension Project) had identified the lack of appropriate tools as one of the major problems inhibiting agricultural productivity around Embu, Kenya. FIT offered to facilitate a meeting of local blacksmiths and welders with DAREP's farmers so they could listen to their needs. At the meeting, the farmers explained at length both what tools they need, and what they need from their tools. They discussed the different aspects of tool design and specified how much they would be willing to pay for improved tools. The farmers were keen to attend the meeting, paying their own expenses. But when this initiative was replicated independently at Kisumu Innovation Centre, it was found that artisans were initially reluctant to attend as they assumed (rightly) that farmers would give negative feedback. Only after farmers had expressed their low opinions of the products was the meeting able to move towards more constructive dialogue.

Although the majority of small-holder farmers in Kenya are women, it is typically the men who make purchasing decisions, particularly with regard to tools. When meetings with artisans were presented as 'Tool Days', most of the participants were men. By contrast, when the meetings were advertised as 'Farmers Days', at least half the participants were women - who had very clear ideas about what they looked for in implements.

Enterprise visits have been found to be successful at raising awareness and providing artisans with information. Artisans are often willing to pay to visit innovative businesses, particularly where they have organised themselves into a group and understand what they might gain from such a trip. Another approach which promises to give artisans the 'know-how' they need involves the middlemen and women - the traders who market so many artisanal products. Their knowledge of local markets is likely to be extensive, and it is in their interests to feed that information back to local producers. As the existing communication was poor, FIT and a local small business service company organised a series of monthly meetings between small-scale metalworkers and local merchants. These meetings broke the ice, leading the merchants to place orders for a wide range of products including hoes, ploughs, forks and wheelbarrows.

In the DAREP collaboration in Embu, several of the artisans worked hard to respond to the expressed needs of farmers. A range of new products (hoes, ploughs etc.) were designed and produced, and some of have been sold to farmers. But uptake has been slow, not least because DAREP's target group, the poorest farmers, have limited purchasing power. The Kisumu experience has been more positive. One artisan sold US\$1000 -worth of newly designed tools in the five months following the process. Two others achieved significant, although more modest, sales. Designs included chaff cutters and water pumps. A follow-up process between transport equipment and metalworkers in Kisumu also generated substantial sales of improved water carts and water barrows, with one-third of the purchasers being women.

It is evident that some artisans are able to innovate well, responding quickly and appropriately to the needs and preferences expressed by the end-users of their products. But it is clear that communication between these two groups is inadequate. Interventions can be made, at very low cost, to address this bottleneck. In some cases, participants are also willing to pay all the direct costs, thus pointing to the potential for true sustainability.

Source: Adapted from Jim Tanburn and Martin Osumba, Appropriate Technology Vol 24 No 1 pp 5-8, Intermediate Technology Publications Ltd., London.

In most enterprises, some transactions - the purchase of inputs and/or the sale of products - take place with individuals or groups outside the community with whom the participatory work has taken place. Thus participatory approaches need to be broadened to work with people along the trade/enterprise chain.

As Sarch notes (*PLA Notes* 30), participatory techniques have been used with fishing communities to reach consensus between different interest groups. This demonstrates that methods are being tried in which the participation of outsiders, with perhaps conflicting priorities, is prioritised. The important point about enterprise development is that an individual enterprise is mutually dependent upon its customers and suppliers. Thus, rather than engaging with others for the purpose of conflict resolution, there can be mutual benefits through co-operative participation between the various actors.

More could be explored with the participation of suppliers (of materials, training, credit etc.), and with customers as illustrated by Tanburn and Osumba (see Box 1). They demonstrate the various techniques through which metalworking artisans in Kenya have been stimulated to interact with a wide range of potential customers. This has led, not only to increased sales, but to important innovations in product designs which were tailored to the specific requirements of their customers - farmers, food processing enterprises and retail outlets.

Thus the customers are getting what they want today, and the approach enables the artisans to keep abreast with their changing requirements in the future. Tanburn and Osumba's work also addresses the important aspect of the sustainability of such approaches. This is critically important as the capability of people to identify opportunities and respond to them is essential for their survival in the future.

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8

Investigating local markets using PRA

Mathilda Roos and Mampone Mohatle

• Introduction

Income generating initiatives in communities are often production-oriented, with little thought given to who might use or buy the products or services being offered. Recognising that an understanding of the ‘market’ was lacking in many community development initiatives where we work in Free State, South Africa, we developed and piloted an approach to help communities explore marketing opportunities for their business ideas using PRA tools¹. This project is part of the Free State Department of Agriculture’s support for the development of small businesses in those communities previously disadvantaged by the apartheid regime.

In this article, we introduce the approach and describe its application in the Itsoseng Sewing and Knitting Group, a women’s group in Mokwallo Township, in the small town of Vredefort in the northern Free State, about 80 km north of Kroonstad and 120km south of Johannesburg. The Itsoseng Sewing and Knitting Group had been making items for several months but hadn’t been able to sell their products. The group requested help from the home economists, who are extension officers with the Free State Department of Agriculture. They were visited by one of the authors (Mampone Mohatle), in her capacity as training officer, who talked to the group about their needs. Subsequently, a 3 month action learning book keeping and marketing course was developed for which the women

had to develop a marketing plan for their business. The group consisted of 18 women, all of whom were low-level learners. Four of the group were totally illiterate, but they still attended the course because they did not need to be able to read or write for all the modules. Here we describe some of the marketing tools that adapt PRA methods.

Market planning

If it is to succeed, any business must be led by the ‘market’, and not only by the skills or ‘ideas’ of aspiring entrepreneurs. If not enough people (or none at all) are interested in, or can afford to buy, the service or product a business is offering, then there is no ‘market’ for the service or product, and the business will fail.

There are two possible approaches to starting or running a business, which may be illustrated by the following statements that might be made by someone starting a dairy business:

- *“I can produce 100 litres of milk per day because I have cows and I can get funds to built a milking parlour”;*

OR

- *“People have expressed the need for good quality and easy available milk in my community; I have the cows and skills to produce that milk; I can access funds to help me to develop my business; so I will satisfy their needs through my milking business”.*

The first approach is production-orientated while the second is market-orientated. Our approach encourages an entrepreneurial group to move away from an emphasis on production and to focus on marketing and selling their products.

¹ The informal manual ‘Investigating local markets using PLA tools’ was developed by Mathilda Roos, while she worked with the Rural Strategy Unit. It was translated by Mampone Mohatle into Sesotho and piloted by her in the field. Copies of the manual are available from Mathilda Roos (see author details at end of article).

Products and services

For an entrepreneurial group to be able to sell their products, they must have a good understanding of the most important items (products/services) that are being used in a community and investigate changes in the demand for the products. Box 1 shows how livelihood mapping and Venn diagramming can be used to examine the range of products being used in a community and to determine how much of the local demand for these products is met by local supply. In the case of Itsoseng Sewing and Knitting Group, the Venn diagram shows that miniskirts are in high demand but are not available locally. Tracksuits and curtains are also in high demand, but can be bought in the nearby town of Vredefort. School uniforms and dresses are available in Mokwallo, but only at certain times of the year.

While it is important to know which products/services are currently important, it is also helpful to understand the residents' perception of significant changes in the product or service over time. Trend line analysis can be used to explore and understand long-term changes in the demand for products (see Box 2). The Itsoseng Sewing and Knitting group explored changes in demand for six products and, on the basis of their analysis, dropped two items that they realised had declining demand because of changes in fashion. They prioritised tracksuits, curtains and duvet sets, school uniforms and miniskirts as items for which demand was greatest and increasing.

Additionally, seasonal calendars can be used to show cycles and patterns of availability and use of certain products/services within a community over a period of 12 months (see Box 3). For example, the Itsoseng Sewing and Knitting Group realised that demand for curtains was high from October until December, when people prepared their houses for Christmas visitors. Demand for miniskirts is also high at this time, as people like to dress up for the festive period, which coincides with the hottest period of the year. After Christmas, money is usually short, so demand for most items drops. However, there is high demand for school uniforms as children go back to school in January. April and May are usually quiet times, with demand for tracksuits increasing with the start of the cold season (June and July).

The seasonal calendar is also useful to help groups to prepare and plan ahead for times when there is great demand for products but also for periods when business is likely to be slow. For example, most materials take up to two months to be delivered from the time of ordering. The Itsoseng group realised that they should order materials for miniskirts and curtains in June, in order to be prepared for the Christmas rush. Similarly, material for tracksuits and school uniforms needs to be ordered between August and November.

Taken together, the information gathered using the activities described in Boxes 1 - 3 helped the group to decide where are the best market opportunities. This is explored further in Boxes 4 and 5 which help to deepen local analysis of market conditions.

BOX 1 LIVELIHOOD MAPPING

Objective

To identify the products/services that the participants consider as very important in the livelihood of their community.

What to do

The participants are asked to list all the products/services that they consider as most important to the community's livelihood. The products/services can be from their homes, workplace or recreation. 'Importance' can refer to necessity for daily use, status or luxury. Participants must mention products/services, and not issues. A participant can be asked to write these products/services on a flip chart. The next step is to have the participants indicate where each of these resources comes from. A large circle representing the community boundary is drawn on the ground or on a flip chart and pieces of paper containing the names of the products/services listed are then placed beside the 'map' of the community. The participants should be able to provide this information through discussion based on the following:

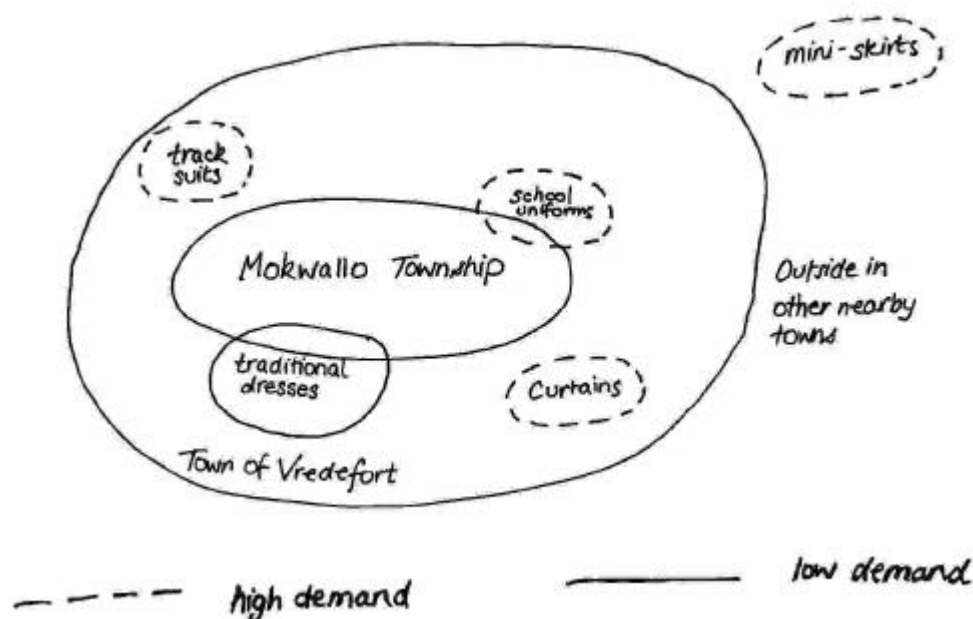
- whether a particular product/service is available within the community boundary and is sufficient in quantity;
- whether it is partially available in insufficient quantities within the community;
- whether it is completely unavailable within the community and has to be acquired from outside.

All the products/services which are available within the community are placed inside the 'map'. All the products/services which are partially available are placed on the border of the 'map'. The resources which are completely unavailable within the community are placed outside the 'map'.

Application

Livelihood mapping of a given community is an indirect way to investigate the needs and desires for particular products/services. In this process the participants identify the most important products/services that can be produced or 'imported' and sold in the local community.

Figure 1. Mapping demand for Mokwallo Township in Vredfort



BOX 2 TREND LINES

Objective

Trend analysis will help the participants and the workshop facilitators to:

- learn from the participants how needs are changing over time;
- integrate key changes in market trends into the market plans of small businesses; and,
- make use of the new markets and marketing opportunities that are developing over time.

What to do

The following steps are important for proper generation of trend lines.

- Carefully explain the meaning of trend lines to the participants.
- Explain the concept of trend lines using simple graphs. Demonstrate the meaning of the two lines. Show how time (years) moves from left to right along the bottom (horizontal) axis and how the rate of increase/decrease in time use is indicated on the upright (vertical) axis. Emphasise that the numbers do not have to be exact, but rather show how the participants see changes over time.
- When the participants have understood the concept, ask one of them to draw the two lines (vertical and horizontal) on the ground or on a large piece of paper (flip chart). Once this is done, years should be indicated at equal intervals along the horizontal (bottom) line. Write the years in one year intervals under the line.
- Take the products/services listed in the livelihood mapping and ask the participants to place a stone, a leaf, or any other material, to indicate the status of that item during the first year of the trend line. This should be repeated for the following years up to the present. The position of those materials marks the points of the graph.
- A line is then drawn connecting all the points on the ground. After the trends have been drawn and confirmed by the participants, someone should transfer the graph onto an A4 sheet of paper for later use.
- Use the discussions of trends to try and understand why the changes took place. This will inform trends in the local market.

Application

Trend lines give a good indication of trends of product use in a community over a long period of time. This exercise enables the participants to look back at their own community and to understand that products have life spans and 'fashions' of use.

BOX 3 SEASONAL CALENDAR

Objective

To find out if there is a difference in the availability and use of certain products in the community on a monthly basis over a year.

What to do

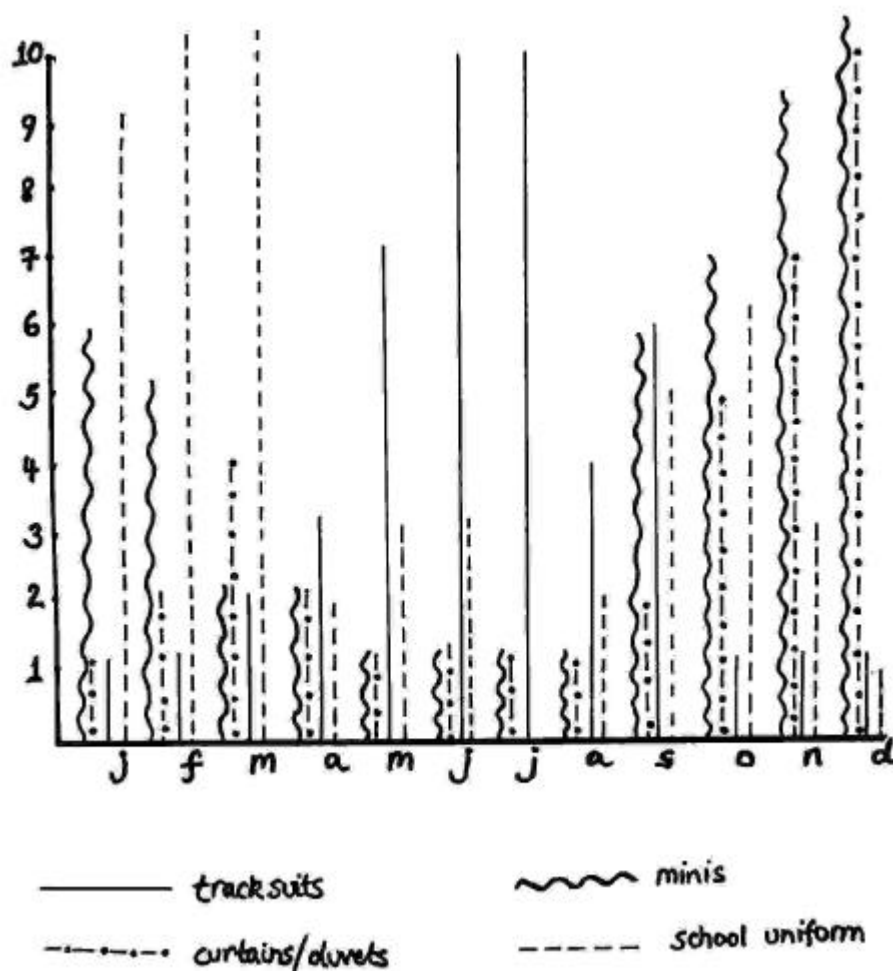
Use a large sheet of paper (flip chart paper) or make sketches on the ground. The data is presented in a single page chart with a common time scale on the horizontal axis so that people can scan the entries up and down for a specific month. Set up a sequence of months across the bottom of the page.

Use the list of products/services identified during the exercise in Box 1. If you want to, make two calendars: one showing current availability and the other showing current need.

Application

The calendars will identify gaps in the market, but will also show if the market gets flooded at certain times of the year.

Figure 2. Seasonal demand for tracksuits, curtains and duvets, mini skirts and school uniforms



BOX 4 ENTREPRENEURS' WINDOW

Objective

To determine what needs the business is satisfying, now and in the future. An important challenge is to determine whether you must change your product/service or clients. Information from Boxes 1 - 3 can guide the participants in this decision.

What to do

Draw a rectangular window with 4 windowpanes on the ground or a large piece of paper.

- In Block 1: What services/products are you currently selling to existing clients? For example, if a range of clothes, give the sizes. Write the current products/services and clients in block 1. For example, if you are selling a range of traditional Basotho dresses, give the sizes and who are buying from you. Be specific with your clients, e.g. sizes 14-22 for women between 40 and 60 years of age on Mokwallo. Do not use the generic term 'the community'.
- In Block 2: Do you plan new products/services for your existing clients? Write these products/services in block 2. For example, you want to add tracksuits, sized 14-22 for women between 40 and 60 years of age.
- In Block 3: Do you want to provide your existing products/services to new clients? Write these clients in block 3. For example, you want to market the traditional Basotho dresses of sizes 14-22 to women living in the neighbouring town of Vredefort.
- In Block 4: Do you want to develop new products/services for new clients? Write these products/services and clients in block 4. For example, you want to make miniskirts (sizes 8-12) for girls between 14 and 18 years old.

If you already have a business/enterprise, you will complete Block 1 and any of Blocks 2,3,or 4. If you are starting a business/enterprise, you will complete only one Block.

Block 1 What existing services/ products are you currently selling to existing clients?	Block 2 What new services/ products are planning to sell to existing clients?
Block 3 Do you want to provide your services/products to new clients?	Block 4 Do you want to develop new services/products for new clients?

Application

This exercise will assist the participants to describe their products/services and their clients, whether new or old.

Clients

Through market research, you need to find out who are the people who will want to buy your product. You must also find out how many potential and real clients there are who you can target to buy from you. This will enable you to decide how many items to produce that will be sold within a certain time (see Box 5). After this activity, it may be necessary to make changes to the Entrepreneurs' Window.

To understand what products people in the community might buy, the Itsoseng Knitting and Sewing Group used photographs of products which they cut from clothing catalogues. They showed these to potential clients and asked them which ones they would be prepared to buy. Illiterate women used different coloured beans to record different levels of interest in purchasing the items. More literate women recorded names and interest directly onto a sheet with the photograph. While undertaking the market research, the group gained some orders and were able to take deposits on the products. In this way, they had sufficient money to order and pay for the materials.

BOX 5 FINDING THE SIZE OF THE MARKET

Objective

To work out the total market potential; your potential share of the market; and the number of clients you can really serve.

What to do

A map of the town or part of the town or district can be drawn on the ground or on a large piece of paper. Draw in and mark the main places where the potential clients are, who are using the product/service. This can be schools, houses or businesses. Also add the following information onto the map:

- what is the total potential market for your product? (How many clients use this product in your market area?) Get this information through interviewing the clients;
- what is your share of this market? (How many people will buy from you?) Get this information through interviewing the clients;
- how many clients can you really serve? How many products are you producing per month to serve the clients?

Transfer all this information onto an A4-page to include into your report.

Application

The real and potential sizes of the market are vital to help you to plan the size of your business.

Competitors

Competitors are businesses which sell the same products that you want to sell to the same client group. They may buy the products in the outside town to sell locally or produce it themselves locally and then sell it. It is therefore important to know who your competitors are, where they are based, what they sell, at what cost and how many they sell over a certain period. For example, the Isoseng Group found that a lady entrepreneur was selling school uniforms, bought in Johannesburg, in Mokwallo. A well known chain retailer in South Africa is selling school uniforms in Vredefort at a very affordable price, but made of material of a low

quality. The students are not keen to wear these uniforms, because they considered them to have an 'old fashioned' pattern. Boxes 6 and 7 outline methods that can be used to help a group identify its competition.

The remainder of the manual (not described here) includes simple ways of pricing and costing. It also includes the distribution and promotion of products or services to address all the usual market planning issues. For example, the Itsoseng group identified government organised shows as an important 'showcase' to market their products outside Mokwallo and Vredefort. At one of these shows, they met the provincial health minister who introduced them to new contractors. They are now working on orders two months ahead.

BOX 6

GETTING TO KNOW YOUR COMPETITORS**Objective**

To find out how many competitors you have and how they influence you.

What to do

Brainstorm to identify all the competitors to your business. List the competitors on a large piece of paper or on the ground. Ask the group to rank these competitors on the influence they can have on your business. Discuss the reasons why the other business or group is considered to be competition. How 'important' are the different competitors? Decide what is the meaning of 'important' when discussed here. Give reasons for the 'importance' of each competitor. Also think about influential businesses outside your community. Write all this information down.

Create a 'competitors' institutional diagram. Focus on the relationships between your business and your competitors. Cut out (ahead of time) paper circles of differing sizes and lay them on the floor or table. Ask the group to write the names of the most important competitors on the largest circles, the less important on the medium-sized and the least important on the smallest circle. Then ask which institutions work together and how closely. For those institutions that co-operate or overlap a great deal, place the paper circles together. Draw a large circle that represents you on the ground or on a large piece of paper. Place the other circles next to or at certain distances from your circle, indicating the influence of the competitor on your business. By the end of the session, there will be a diagram of the relationships between competitors and yourself. Use glue to preserve the 'diagram' for the future. Draw the diagram on an A4-size paper to include in your report.

Application

Knowing your competitors and their influence on your business will help you to work out a strategy to overcome their influence. It may sometimes be important to change your services/products to overcome their impact.

BOX 7

COMPARING COMPETITION IN YOUR COMMUNITY**Objective**

To investigate in detail how your most important competitors are performing against your performance.

What to do

Draw 3 to 5 columns on the ground or on a large piece of paper.

Make a list of 'criteria for good business'. These might include: target market; quality of the product or service; price; location of the place of selling; delivery; follow-up service; availability; reliability; guarantees; credit lines; polite help; client advice; unique selling point; etc. Write these in the first column. Decide on symbols or words to compare the performance of the different businesses on the table.

Head the second, third and fourth columns with the names of the most important competitors but keep the last column for yourself. Collect information on your competitors if you do not know them well. Write the information in the appropriate column.

Application

This information will help you to understand your strengths and weaknesses in the competitive world of business. When you put your final marketing plan together, you can plan ways to overcome the impact of your competitors.

• Discussion

As trainers, one of us (Mampone Mohatle) had to travel for eight hours once a week, over a period of 10 weeks, to the group in Mokwallo in order to present the course between 09:00 and 13:00. This short training day enabled the women to have time for cooking at home and to complete other chores. The one-day a week training also allowed action learning to take place. During the week between training sessions, the group went out to do the research. They were then able to report back on their findings and we could assist them to make the findings relevant to their own learnings and situation.

The training was an experiment for us in working with people who are illiterate. After the course, we saw motivated people and realised that the lack of reading and writing skills are not a restriction to developing the capacity of people. Combining action learning with PRA methods was a major success in this situation.

All the women completed the marketing section of the course because it did not involve writing. Because everyone participated in the marketing exercises, the group gained an understanding of why their business struggled to sell their products. Ten of the women completed the full course successfully and gained a certificate in Basic Marketing and Small Business Skills. Lack of literacy prevented the rest of the group from completing the book keeping section of the course.

The women described themselves as 'afraid' of developing a business before the course, but

the group is now confidently making and selling their products. It was personal triumphs for the 'illiterates' on the course to have acquired skills to do market research.

After the training course on business and marketing, the Itsoseng group attended a sewing course to improve their sewing skills. They also changed to a new and large supplier in Johannesburg for cheaper priced materials. The group began to sell school uniforms at a lower price than their competitors.

• The future

There are, however, new challenges for the group. As a group of women who are now prospering, they are concerned that their husbands are jealous of their new found success. They have asked for a course in gender sensitisation to help their husbands understand better what they are trying to do and to help them feel less threatened as the group becomes more confident. But they are also looking inward, reflecting on how to deal with their financial success to ensure transparency and equity in their dealings with each other. They feel their next training should be in conflict resolution, to help them deal with crises amongst the group in a structured way.

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9

Understanding market mobility: perceptions of smallholder farmers in Bangladesh

Kamal Kar and Dipankar Datta

• Background

This article describes the experience of participatory research with smallholder farmers in central Bangladesh. The research looked at how and why farmers use different markets to sell their products and what could be done to maximize their profit.

Bangladesh is largely an agricultural country with a total area of 147,960 sq. km. With a population of 118.7 million (official estimate, 1994) it is also one of the world's most densely populated countries, with more than 806 people per sq. km. GNP per capita stood at just US\$230 in 1994, making it, by this crude measure, one of the world's poorest nations. In rural areas the poor experience scarce and diminishing resources, insufficient and inadequate physical infrastructure, lack of basic education and health services and, most importantly, a situation of dependency on those who control production assets.

Besides government activities, thousands of Non-Government Organizations (NGO) have been working to improve the socio-economic conditions of the rural poor since independence in 1971. Most of the NGOs concentrate their efforts on organizing groups of small-scale and marginal farmers and landless labourers, providing credit, training, and other support to ensure stability in the production process and overall improvement in living conditions.

Proshika is one of the largest NGOs in Bangladesh, supporting over a million families in nearly 70 000 groups. After several years of intervention, it appeared that poor farmers could improve their access to and control of

local markets by bypassing 'middlemen' and selling their produce directly to consumers and wholesalers. A number of conventional impact assessment and monitoring surveys were carried out by NGOs (including Proshika). Economic empowerment indicators were used to study changes in market mobility¹ and group members' access to various markets for maximising their profits. While the earlier surveys revealed information about marketing outlets in general, they did not address specific issues of market choice, access and profitability.

• Objectives

Given these gaps in knowledge, the objectives of the study were to understand:

- to whom, and in which markets, group members sell their products;
- which markets or sales outlets provide the best price for products;
- what problems groups face in marketing their produce in those places which offer the highest return; and,
- what steps group members felt would be appropriate to improve their marketing of products to ensure highest profit.

¹ There is a great variation in market mobility. Not all producers have easy access to a wide range of markets and are often compelled to sell their produces in local markets.

• Methodology

In order to understand the perceptions of group members, a study was designed using PRA methods. It was decided to select a village where Proshika has intervened for a period of three or more years and where a number of groups are engaged in various income generating activities. Janna village in Manikgong district was purposively selected for the study as meeting these criteria. The PRA tools which were used in this study were:

- Semi structured interviewing;
- Matrix scoring and ranking;
- Problem tree and problem prioritization; and,
- Participatory planning for developing community marketing plans.

The villagers were informed in advance about the PRA exercise and were asked for a time for convenient time for discussion. They decided that it was best for discussions to take place in the evening and this was how the PRA was scheduled. The men who attended the discussions were excited about the topic. However, it was difficult for women to participate because the meetings were large and they were out numbered by men (see below).

After rapport building, the villagers were asked to name products which they sell at different times of the year. They named fourteen different products. These were written on cards and placed on the ground vertically. They were then asked about different marketing outlets. These were written on cards and placed horizontally. This created a market preference matrix and the villagers were asked to score out of ten seeds the following:

- their preference for marketing each product in each market;
- to rank the markets against the criteria of profitability for each marketable item.

Next, the villagers were asked to name the buyers, people who buy directly from the group. Using ten seeds, they were asked to rank buyers according to whom they prefer to sell to and the price a buyer offers for each

product. Finally, discussions were facilitated to elicit the members' views on developing a suitable marketing strategy for enhancing the profitability of their products.

• Findings

Great diversity in the marketing of agricultural produce was noticed. Overall, the villagers named seven different markets², where the fourteen different products are normally marketed (see Figure 1). Except for processed rice, all the other major field crops (paddy, wheat, pulses, mustard, and jute) are marketed in a hat either inside the village or outside e.g. in the neighbouring villages or towns of Kalampur, Savar and Jayra.

It is important to note that hats and bazaars occur both inside and outside the village. While the hats outside the village generally offer better prices for all agricultural products (Figure 1), the group members prefer to sell many of their products in the hat inside the village mainly because:

- of the difficulties and costs involved in handling the bulk quantity of agricultural produce;
- of the time involved in visiting distant markets;
- of the wages foregone by travelling to other markets;
- members' produce is not harvested or ready for the market at the same time;
- small quantities of each product are produced by individual producers, making it difficult to fill a truck and make visits to more distant markets viable;
- farmers cannot keep up-to-date with fluctuations in prices at markets outside the village; and,
- of insecurity and the risk of robbery when returning from distant markets with money.

² The term *market* is used to define any place where a transaction of goods (selling and buying) takes place. A *hat* is a weekly or quarterly open market which sits in a particular place and where people from surrounding villages come for purchase, sale, and other business transactions. A *bazaar* is a daily market in a particular village. Bazaars are generally smaller in size than hats and are mostly visited by people local to the village.

Villagers' prefer coarse rice which is processed from coarse paddy varieties. Coarse rice increases in volume more than fine rice when cooked and so local people find it gives them more energy and staves off hunger. Coarse rice is cheaper than the processed varieties which are favoured by richer and more urban people. Thus, Figure 1 shows that the coarse paddy gets a better price in the village hat whereas the fine paddy fetches a better price in the outside hats.

In the case of potato, the daily village market offers the best prices, but group members tend not to sell their product in the local market. Instead, most potatoes are sold from the field to middlemen. While middlemen offer lower prices, they take care of harvesting, packaging and transporting the potatoes to market. By

accepting a lower price, the group can avoid undertaking these tasks themselves.

In the case of milk, eggs, and poultry, the villagers prefer to sell them either from home to the interested buyers or at the local hat. This is due to the perishable nature of these products. For the same reasons, vegetables are sold at local markets. The group members reported that vegetables always fetch better prices than other field crops. In order of profitability they ranked agricultural products as follows: vegetables, jute, pulses, wheat and milk.

It was further reported by the producers that the entire crop of tobacco is purchased by the tobacco companies (e.g. Aziz Biri Company) from the village when the crop is green.

Figure 1. Market preference matrix. Markets are scored out of 10, according to members' preference to sell their products in that place (a score of 10 indicates that the market is preferred by the members). The profitability of each market (shown in parentheses) is also scored out of 10 (a score of 1 indicates that the market is the most profitable).

Product	Markets						
	Inside bazaar	Inside hat	Outside bazaar	Outside hat	Sold from the field	Jayra ³ hat	Home
Processed rice	8 (1)		2 (2)				
Paddy		7 (1)		3 (2)			
Wheat		6 (2)		4 (1)			
Pulses		5 (2)		5 (1)			
Mustard		4 (2)		6 (1)			
Jute		5 (2)		5 (1)			
Potato	1 (1)	1 (2)			8 (3)		
Vegetable	3 (3)	3 (2)		2 (1)	2 (4)		
Tobacco					10 (1)		
Cattle				5 (1)		5 (2)	
Poultry		7 (2)		3 (1)			
Egg		3 (2)					7 (2)
Milk	8 (1)						2 (2)
Cottage industry		6 (1)		4 (2)			

³ A weekly market, known as the Jayra hat, sits in Jarya village. Villagers sell only cattle in this hat.

Figure 2: Buyer preference matrix. Buyers are scored out of 10, according to members' preference to sell their products to them (a score of 10 indicates that the market is preferred by the members). The profit received from each buyer (shown in parentheses) is also scored out of 10 (a score of 1 indicates that the market is the most profitable).

Product	Buyers			
	Direct consumer	Bapari/Faria ⁴	Butcher	Company
Processed rice	8 (1)	2 (2)		
Paddy	7 (1)	3 (2)		
Wheat	2 (1)	8 (2)		
Pulses	2 (1)	8 (2)		
Mustard	1 (1)	9 (2)		
Jute		10 (1)		
Potato	2 (1)	8 (2)		
Vegetable	3 (1)	7 (2)		
Tobacco				10 (1)
Cattle	4 (1)	4 (1)	2 (2)	
Poultry	3 (1)	7 (2)		
Egg	2 (1)	8 (2)		
Milk	2 (1)	8 (2)		
Cottage	4 (1)	6 (2)		

⁴ Bapari/Faria are the middlemen who purchase products from small producers and sell them to large buyers known as Mohajan.

A close look at the buyer preference matrix (Figure 2) reveals that, in general, domestic consumers from the locality offer a better price for all products than those offered by businessmen (Faria/Bapari). It is also clear from the same matrix that, except for processed rice and paddy, producers sell their produce to middlemen for less than could be obtained elsewhere. This is because there are not many local buyers in small villages and it is not possible to store large quantities of commodities, like wheat, potato, pulses, mustard, etc. as they might spoil. Thus, although they get a lower price, producers sell to bapari where they can get rid of bulk quantities and receive a one-off payment in cash. This matrix quickly generated a discussion as to how to ensure more profit by combining the efforts of different producers.

• Future prospects

After the exercises, the group members and other villagers realised for the first time that they had been losing money by not channelling their products to the most appropriate markets. The discussion generated the following findings which could be further discussed and developed into a collective marketing plan:

- Group members can come together and market their products collectively at distant markets by hiring trucks.
- Members can plan their harvest so that the final product can be marketed together and at the same time.
- External support (e.g from NGOs) to help develop new markets.
- Collective marketing plan could generate employment for two to three unemployed village youths. They could work for the producers in marketing their products and would be paid from the extra profit earned in the process.
- Collaborative action among the producers would enable them to eliminate the middlemen (Bapari) and increase their profits by reaching the businessmen (Mohajan) directly.

The role of women

This study did not adequately explore the role of women in the marketing of agricultural and

cottage products. Women have distinct roles in production and marketing of products at household and farm level. An earlier impact assessment study of Proshika's development interventions showed that many women members (including widowed, divorced, and separated women) had successfully established small businesses e.g fishery ponds, cattle fattening, poultry, puffed rice making, etc., using credit from Proshika. All these products are marketed by the women, mostly at the household level. Thus the price is controlled, to a great extent, by the outsiders who come to purchase the products periodically. Due to the restricted mobility of women in Bangladesh and their dependency on others for marketing their products, women do not always receive fair prices for their products.

It is essential to explore the role and contribution of women in production and marketing of agricultural and cottage products. Exclusive participatory study with women is likely to reveal patterns different to those presented here. Our experiences of facilitating participatory studies with women suggests that it is always better to have separate discussions with women during their leisure time.

• Conclusion

From the participatory exercises carried out with the farmers, it is apparent that smallholder and marginal farmers could improve and stabilize their production through better analysis of existing and new market options. A lack of understanding of alternative market opportunities enables middlemen to control production, particularly in the agricultural sector.

Few NGOs promote marketing opportunities as a way of bridging the gap between producers and consumers. This is particularly relevant for the agricultural sector. Where they can't sell their produce, small farmers are compelled to pay interest on their credit for longer, or they are forced to sell their products in the existing markets in the local areas. This tends to strengthen the role of middlemen. This study indicates how farmers can begin to orient themselves towards new and better market opportunities and the role that NGOs can play in supporting this process.

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10

Participatory budgets: a farm management type tool to assist farmers in their decision-making

Peter Dorward, Mark Galpin and Derek Shepherd

• The challenge

This paper describes a method developed and used in the field through on-going work at the University of Reading. The aim of the research is to develop ‘farm management type’ methods which could be used by small-holder farmers, by combining conventional farm management tools with participatory methods. The method described has been used over a period of 18 months with over 250 farmers in rural Zimbabwe.

Farm management tools try to assist farmers in their decision making, particularly with regard to the allocation of resources. However, conventional tools, such as budgeting, have proved to be of little use to small-holder farmers in developing countries. The main reasons for this are that current tools:

- are too complex for use by illiterate or poorly-educated farmers;
- do not take account of non-cash resources e.g. labour or non-profit based objectives;
- often do not take account of time, e.g. the variation of resources within a season; and,
- require the use of materials which are often unavailable.

The challenge therefore was to develop tools which are simple and usable, include non-cash resources, take account of time and use local materials.

Using a traditional board game

The ‘mancala’ board game is played throughout most of Africa, with rules differing slightly between areas (see Figures 1 and 2). It is essentially a mathematical game and is played by literate and illiterate farmers with incredible speed and skill, demonstrating their mathematical ability. Thus, it has been used for ranking and scoring (see Barker 1979).

Farmers’ abilities to rank, score, diagram and analyse have been amply demonstrated by many practitioners of PRA. Thus, a combination of the techniques of ranking and scoring and the mathematical concepts of the ‘mancala’ game, seemed to have potential for use in ‘participatory farm management’. Below, we describe the game and give an example from Zimbabwe of how participatory budgets have been used to assist farmer decision-making.

• Participatory budgets

Requirements: Rows of holes in a board or on the ground or a grid. Beans, seeds or anything which can act as counters.

Outline: Different resources and/or activities are indicated by different types of beans, seeds or symbols (Figure 1). Quantities of resources are indicated by the number of beans, usually with a specific value attached to each bean. Time is represented by each hole or column being a month or other period of time. Different resources, such as labour, cash, food stocks, and how their quantities vary over time can therefore be represented on the board (similar to a seasonal calendar).

A budget for a particular enterprise can be made showing the different activities which will be undertaken and the labour, cash and other resources used and received from the

enterprise each month. The income and expenditure which the farmer is likely to receive during the time of the enterprise can be estimated, and the net cash flow for each time period can be calculated. This enables the farmer to know when he/she will require more money. An estimate of the overall profit can also be worked out. Budgets can be made either for a specific enterprise incorporating all resources, or for a specific resource used on the farm.

What if.....?

Once a budget has been made, the effect of different events can be assessed, such as the effect of goats invading a vegetable garden, or an increase in the price of an input, or poor rains. The different scenarios can be suggested by the farmers, who can then work out the effects on cash, labour, and other resources. This helps in assessing the risk involved in initiating an enterprise; e.g. 'What will I lose if this happens?' This is particularly relevant for working out the effect on loan repayments for a range of possible outcomes.

• Comparing ground-nuts and sunflower

This exercise was carried out at the request of farmers in Buhera District, Zimbabwe, who wanted to compare the two main cash crops grown in their area, sunflower and groundnuts. This example illustrates one of the potential uses of participatory budgets and how they can be combined with existing PRA techniques to assist farmers in their decision-making.

Procedure

Initial discussion focused on why farmers grow these two different crops and what factors are taken into consideration when deciding which crop to grow. A scoring exercise was carried out to examine the relative importance of these decision-making factors (see Table 1). In this way, non-resource factors, such as ease of marketing and seed availability that could not be considered in the budget, were taken into account. This procedure is not always necessary before the construction of a participatory budget, but it can help in the decision-making process.

After the farmers described the field in which they were considering growing the crop, the group divided into two smaller groups of 4 farmers each. Group A drew up a budget for Sunflower and group B a budget for Groundnuts for the field described. The two budgets were then combined on a single grid (see Table 2).

Figure 1. Diagram showing the 'mancala' board game

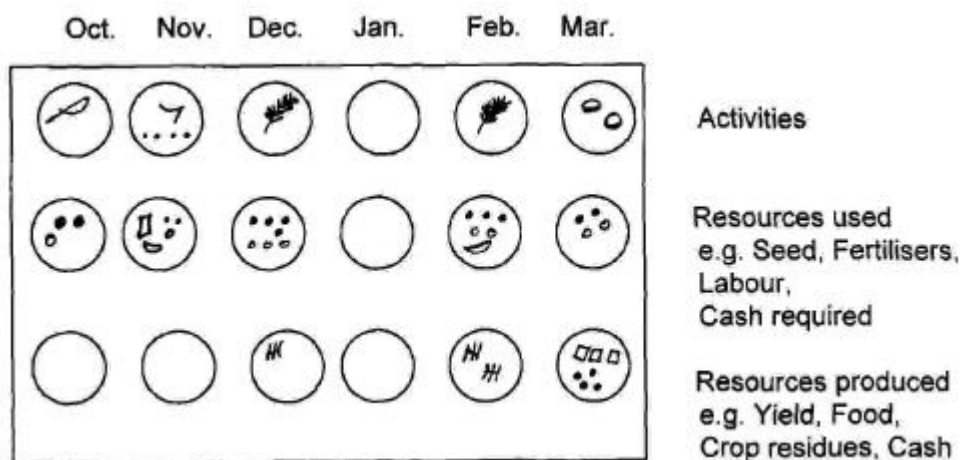


Table 1. Scoring of decision-making factors indicating the level of the problem or criteria for each particular crop.

Criteria	Groundnut	Sunflower	Importance of criteria and comments
Yield	9	2	1 (i.e. most important)
Seed availability	3	8	2
N-fixation (manure)	8	1	2 (important because if rotate with maize, get good maize crop)
Price/income	6	1	3
Process into oil	2	7	4
Process into butter	10	1	5 (Sunflower can't be made into butter)
Use for feeds	1	1	6
Drought resistance	2	10	7 (considered unimportant because is outside farmers' control)

The higher the score, the smaller the problem, the lower the score the worse the problem. Farmers also ranked the importance of each of the criteria in their decision making; e.g. yield: groundnut (9) yields much better than sunflower (2)

Table 2. Budget for comparison of Groundnut and Sunflower crops. Kutsungirira Group, Vidco 3, Ward 12, Buhera District, Zimbabwe.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
SF	Winter plough	Seed preparation (1 bucket)	Planting	Thinning early weeding	Ridging up of crop			Harvesting cutting heads	Threshing winnowing	Buy empty bags	Transport to market	Clear lands
GN	Planting	Weeding	Weeding	Ridging up of crop		Check ripening	Uprooting	Drying, picking, winnowing	Bagging and transport	Ploughing – for next season		Preparation of seed, 3 baskets
SF	Labour (9inds) 2 (days) 3	23	33	52	22	0	0	5+1 (hired) 5	84	11	11	86
GN	33	56	54	23	0	21	55	56	0	23	0	81
SF	Cash spent							\$30		(cost of bags excluded as farmers keep them)	Transport \$140	
GN		\$60					\$30	\$30	\$240			
SF	Income (outputs)									(poultry feed)	\$1400	
GN									3 scotch carts hay for fodder	\$4000 (5 bags kept for consumption)		
SF	Cash profit										1400-170=\$1230	
GN										4000-360=\$3640		

SF = Sunflower; GN = Groundnuts; \$ = Zimbabwe dollars.

• Findings

Through construction of the participatory budget, the farmers were able to express which crops they would opt for in the next growing season and why. It was found that farmers with little family labour and no money to hire labour prefer sunflower because groundnuts require more labour than sunflower. Better off farmers, or those who have more family labour, often grow groundnuts as it is a more profitable crop and there are more uses for it. However, those who grow groundnuts will often also grow sunflower as an insurance policy in case there is a drought; groundnuts are much more susceptible to drought than sunflower.

The process of constructing the budget assisted communication between the facilitator and farmers, and between the farmers themselves. The budget illustrated clearly the resources required and profitability of the different crops. Although farmers possessed all the knowledge presented on the budget, expressing it in this form clarified and

summarised the differences for them and, together with the scoring exercise, made a powerful tool to help farmers make a decision between the two crops. All the farmers were enthusiastic about the exercise and keen to repeat it for different enterprises.

Uses of participatory budgets

Participatory budgets have a variety of potential uses in both research and extension. As is demonstrated in this paper, they can be used by extensionists to assist farmers in their decision-making. They can also be used at several stages of the research process; in initial needs assessment, in screening and evaluating technologies with reference to their resource implications for farmers with different levels of resources, and in the monitoring and evaluation of technologies during on-farm trials. Investigation with farmers into the resource implications of new technologies, including potential profit and resources required, should help to promote the adoption of more appropriate technologies.

Figure 2. Enjoying participatory farm management [Photo - Peter Dorward]



Below, we list some of the specific uses of 'participatory budgets':

- Exploring the suitability of a new enterprise or technology by analysing its demand for resources at different times of the year and comparing this with other demands on those resources.
- Comparing a new enterprise or technology with an existing practice.
- Examining the likely effects of making changes to an existing enterprise; e.g. replacing artificial fertiliser with manure.
- Investigating the effects of timing of activities; e.g. to determine the best timing for broiler production activities to exploit the Christmas market.
- Exploring risks and the effects of factors outside the farmers control, by the examination of 'What if..?' scenarios.
- Determining the size of a loan required and the realistic timing of repayment.

• **Benefits and impact**

Our experience of using these tools in the field has been positive. Farmers have picked up the methods quickly, adapted them to fit their situations and enjoyed using them to investigate a number of different enterprises and scenarios. After working with the extension workers initially, farmers began to use the methods by themselves, investigating different uses and possibilities.

The flexibility of the basic concepts was highlighted by farmers and extension workers in the variety of ways the budgets were used. In-depth discussion during the process resulted in a sharing of ideas and experiences.

Extension workers gained insights into what resources farmers feel are important when considering alternative and existing enterprises and technologies. Participatory budgets also helped extension workers to identify what information farmers required from them, and made them think about the feasibility and implications of the technologies that they were encouraging farmers to adopt.

Central to the successful use of participatory budgets is acknowledging that the *farmer* is the decision-maker. The role of the extension

worker or outsider is to facilitate, for example, to help the farmer explore the implications of trying something new or of making a change to their farming system. Participatory budgets should not be used to attempt to convince the farmer to make a particular change. They do not give a definitive answer, but rather help to explore a range of possibilities.

Participatory budgets, should be 'empowering' rather than 'extractive', increasing the farmers' capacity to plan and analyse. However, a large amount of information is generated during the use of the methods. This can be helpful to outsiders in increasing their understanding of the farmers' situation.

From this initial work we feel that 'participatory budgets' can be a useful tool, primarily by empowering farmers through assisting them in their decision-making. However, as with all participatory methods, it is essential that they are used with the right attitude, with the farmer at the centre of using and developing the method.

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A limited number of draft 'Participatory Farm Management' manuals are available from: Mr.P.T. Dorward (address as above).

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11

A board game for financial management training

Ivan Bond

• Introduction

Throughout southern Africa, policy and practice during the colonial era alienated most rural people from their wildlife resources. Since wildlife was controlled by the state, there was no incentive for communal land households to manage or conserve it. Often, the only benefit to individual households was through hunting, while those on the wildlife-settlement interface suffered the cost of wildlife inflicted crop, livestock and property damage. Over the past decade, a number of initiatives in Southern Africa have sought to return rights of access to natural resources through legislative change, devolved responsibility and economic empowerment. In Zimbabwe, CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) seeks to place the proprietorship of natural resources, especially wildlife, with the people living most closely with them. Other similar programmes in the region are LIFE (Living in a Finite Environment) in Namibia, and ADMADE (Administrative Management and Design) and LIRD (Luangwa Integrated Rural Development Project) in Zambia.

Under CAMPFIRE, rural district councils with appropriate authority for the management of wildlife, enter into contracts with entrepreneurs for the consumptive (sport hunting) or non-consumptive (tourism) use of their wildlife resources. Revenue from these contracts is disbursed, usually on an annual basis to 'producer wards and villages'. Since 1989, approximately US\$9 million has been earned at district level from wildlife, of which a total of US\$4.8 million or 54%, has been devolved to sub-district levels. These revenues are the primary incentive for institutional change for the management of wildlife and wildlife habitat. They are primarily managed

by Ward Wildlife Management Committees (WWMCs) or Ward CAMPFIRE Committees. These are constituted as a sub-committee of the Ward Development Committee and thus form part of the government initiated development structure for communal lands.

In 1992, the CAMPFIRE Collaborative Group, which has guided the development of the Programme, tasked the World Wide Fund for Nature Programme Office in Zimbabwe with developing active and innovative ways for communities to manage their wildlife resources and the benefits derived from them. The subsequent project, 'Support to CAMPFIRE' has focused much of its attention on developing appropriate management methods in partnership with wildlife producer wards. Although the focus has been on natural resource management methodologies (e.g. the estimation of wildlife populations, fence management and quota setting), the project has worked with WWMCs to improve their financial and project management.

• The problem

At the start of the project, participatory appraisal exercises were carried out with each of the WWMCs. These exercises indicated that the management of the financial benefits derived from wildlife was one of the most serious problems facing the wards and that the misuse and mismanagement of financial benefits was eroding the incentive for institutional change. Furthermore, PRA showed that the WWMCs were not using their records in any meaningful way and that records were not being analysed and used to inform future decisions.

Consequently, all the partner wards requested that the project provide 'financial management

training'. Because there is very little scope for innovation in book-keeping as a method - it is either right or wrong - the project focused on the development of new and innovative methods to train those involved in the management and administration of revenue earned from wildlife.

The communal lands with wildlife have, until very recently, been among the most isolated and underdeveloped areas of the country. Consequently a higher than average proportion of the population has either been denied access to school, or has not been able to go beyond primary school level. As a result many of the WWMC office bearers are not fully literate and/or numerate. To address this problem, and in recognition of the new approaches to training based on PRA, the CAMPFIRE Game was developed, which emphasises active learning.

• The CAMPFIRE game

The CAMPFIRE Game is based upon the board game 'MONOPOLY'. This is a popular board game in which participants buy properties, develop them with hotels and houses and then earn rent from the other players. The simple goal of the game is to earn as much money as possible.

In the CAMPFIRE Game, the properties that characterise 'MONOPOLY' have been replaced by CAMPFIRE Districts and Wards (see Figure 1). However, the underlying principles of the game are similar. At the start of the game, the participants are given a sum of money, their objective being to move around the board 'renting' wards. Once they have control of the ward, they can develop its wildlife potential by building either hotels or hunting camps, but not both in the same ward. Other players 'visiting' these properties are required to pay rent to the owner. The rent payable is dependent on the wildlife resources of the ward and the commercial developments made by the owner. Other payments are introduced through a set of 'CHANCE' cards. These for example, may require the player to pay school fees, undertake repairs and maintenance to infrastructure or receive money from the sale of ivory.

Book-keeping skills

The game involves each player making many financial transactions, either paying or receiving money. These transactions are used to develop the participants' book-keeping skills. Each player keeps a cashbook, issues receipts and writes payment vouchers. The set of accompanying documents can be tailored to represent the actual financial recording system of the ward or district in which the training is being conducted.

As described so far, the CAMPFIRE Game allows participants to practise the mechanics of book-keeping, namely: making the correct entries in the cashbook and writing and receiving supporting documents, such as receipts and payment vouchers. It also tests the participants' mathematical skills which are essential for accurate record keeping. Periodically the trainer can stop the game and request that the players balance their books. There is always at least one player whose books do not balance. This gives them, and others, practice at going through their records and finding the errors and rectifying them.

Financial management skills

Although the mechanics of book-keeping are essential to financial management, one of the problems was that WWMCs were not using their records in any meaningful way to inform future decisions. Through playing the CAMPFIRE Game, each participant generates a real set of data. The second and probably more important stage of the Game is to develop analytical skills which allow the participants to understand what their sources of income were, which investments were successful or which were not, how much money they spent and on what. These analyses form the basis of financial management.

Budgeting and budget management

Once participants have analysed and understood their financial records, the third stage of the Game can be developed. This requires the participants to use their records to develop budgets for another game. In this new game, the participants are required to manage their finances based on their budgets developed during the previous stage as well as

keep a full set of financial records. This stage stresses the need for fiscal discipline, especially when individuals and or a committee are managing finances on behalf of a much larger community (see Figure 2).

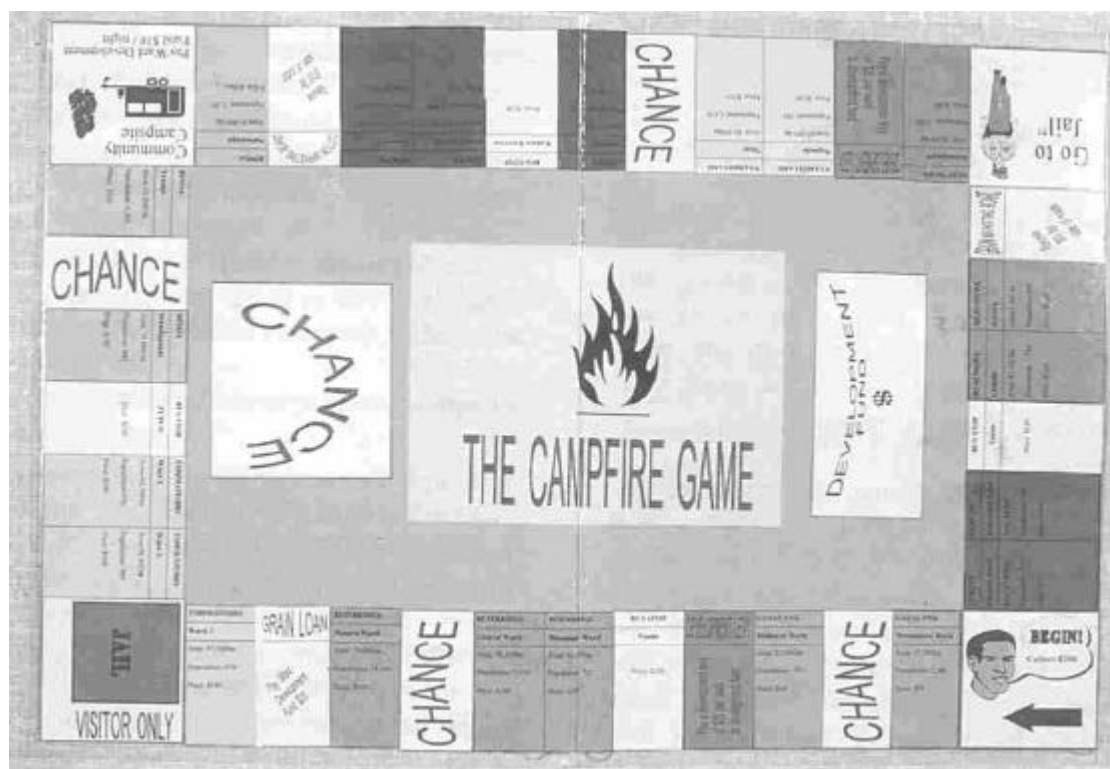
Further areas for development

The Game and the training methodologies described above have been developed and tested in six wards in Zimbabwe. The CAMPFIRE Game has also been adapted for use in two other community based wildlife management programmes, LIFE (Namibia) and LIRDP (Zambia). In both countries, slight modifications and improvements to the original have been made (see Boxes 1 and 2). There are further areas for development, such

as exercises for training participants in simple cost-benefit analyses. Implicitly, each participant is making these with each property purchased or development. However, it would appear that the game has potential to develop and enhance these skills more explicitly.

A second development, related to the above, which could constitute a forth stage, would be the possibility of participants investing in and developing the natural resource base of their wards thereby affecting their income from wildlife. However, this would take the Game beyond its initial objectives which are the development of financial skills amongst WWMC office bearers.

Figure 1. The board of the CAMPFIRE game, adapted from 'MONOPOLY' [Photo: Ivan Bond]



BOX 1

LUANGWA FINANCIAL GAME: ADOPTING AND ADAPTING 'MONOPOLY'

Twelve secretaries and treasurers had turned up together with the Community Liaison Assistant (CLA) from the area. They went into a classroom in the local school and the participants sat at the desks. "No, no" said the facilitator "today we will sit differently". Within minutes, four desks were placed so they formed one big table. A big coloured board, entitled the "Luangwa Financial Game" was placed in the middle of the table. Based on "MONOPOLY", the game has been localised so all the events and places refer to a part of the daily life in the Luangwa valley.

The CLA is usually the bank manager. Each team gets K150 000 (UK£ 3150, play money!) as a start. As the different teams move around the board clockwise, they can buy different Village Action Groups (VAGs) from all six Area Development Committees. Sometimes they landed on a space where they had to take a 'chance card', which can be either good or bad for the team. The good cards enable the team to get some money from hippo culling to sell meat cheaply to the community or to collect money from the development fund. The bad cards required the team to pay clinic fees, school fees or that they be 'Caught as poacher. Go directly to jail'. It is also possible to land at a place on the board where money is received from the bank for a bumper harvest in either maize or cotton. Within a couple of rounds, it is possible to develop the VAGs by building either hunting camps or safari lodges.

All the money transactions are recorded by each team using a single entry accounting system. The set-up is more simple than that used by the treasurer uses in the cash analysis book, but the game provides important and basic skills in learning how to enter figures and balance them. It is a financial training tool using a participatory learning methodology, and most of all: IT'S FUN.

Source: Bjarne Kaulberg, Community Development Facilitator, Community Based Natural Resource Management, Luangwa Integrated Resource Development Project.

The CAMPFIRE Game, as it has been developed and used to date, does not replace formal training sessions in book-keeping, analysis and budgeting, but rather provides a 'simulation tool' which allows participants to practice their skills. Because it is a participatory tool, it is 'facilitator intensive'. However, apart from simulating financial transactions it also provides a forum in which a wide range of issues can be discussed.

Developing financial memory

Besides the development of the CAMPFIRE Game, which builds skills for current committee members, the Support to CAMPFIRE Project has been experimenting with the production of 'ward level financial manuals' as a form of institutional memory. These are manuals written by the ward secretaries and treasurers for use in that particular ward. This approach allows each ward to record the specific details of their own

financial management system. These have been developed in preference to more general manuals which might be applicable at district or national level.

Secretaries and treasurers who have written these manuals have expressed two important advantages of such manuals:

- Office bearers are elected officials. When they are replaced, there is not always formal training available to their successor. The manual becomes the WWMCs 'memory'.
- The ward manual provides documented evidence of the procedures that are to be followed when another WWMC or community members try to persuade the treasurer to take a short cut.

BOX 2

THE MONEY MANAGER IN NAMIBIA

We have easily adapted the CAMPFIRE Game for a different country and programme. A Namibian version of the game, 'the Money Manager', is currently being tested as a training tool and is proving to have good potential to build both awareness of the extent and nature of enterprises associated with community based natural resource management and to develop the skills of people responsible for financial management at community level. The Namibian game is designed to simulate the earning of, and accounting for, money in communal area conservancies which have been registered with the Ministry of Environment and Tourism and where communities are establishing natural resource and tourism enterprises.

The game is intended as a training tool to be linked with other approaches and materials in teaching accounting for money in conservancies and other enterprises. It also seems possible to teach investment concepts relating development cost to financial benefit and profit. The Money Manager targets (a) individuals responsible for conservancy and enterprise finances e.g. conservancy and campsite treasurers and managers, (b) conservancy and enterprise committees i.e. those who have been given responsibilities by their communities to plan and evaluate business ventures, oversee management and hold financial managers accountable and (c) agencies supporting enterprise development and management.

The Money Manager engages participants in a simulated experience enabling them to learn and practice skills while at the same time enjoy themselves. Under these circumstances learning, if facilitated well, may be more effective than conventional methods of teaching accounting. The game not only teaches skills but also has a group building and bonding function. The process of the game can provide a rich experience for discussion on group dynamics as well as the mechanics of keeping accounts, cash book records, issuing receipts, etc..

Some of the questions that we are exploring in the piloting, include: how to facilitate the learning of skills, the extent to which the game can be played with people who cannot read and write, the number of people who can play (partners or teams have been tried), and the extent to which facilitators have to be trained and provided with guidelines.

Source: Dhyani Berger, Living in a Finite Environment, Namibia.

- **Accountability**

The CAMPFIRE Game is a new and exciting approach to financial management training at a ward and village level. However, it does not replace the need for accountability. Persons elected by a community to manage and use wildlife revenues on their behalf must be accountable to that community. Similarly, communities must demand both accountability and responsibility from persons who are elected to these important posts. Improved training methods can only assist treasurers and secretaries by providing them with the skills to perform their tasks. Accountability and responsibility are characteristics which can only be developed from within communities by themselves.

- **Ivan Bond**, Resource Economist, WWF Support to CAMPFIRE, WWF-Zimbabwe, PO Box CY1409, Causeway, Harare, Zimbabwe. Email: IBOND@wwf.org.zw

ACKNOWLEDGEMENTS

The development of the CAMPFIRE Game would not have been possible without the financial support of NORAD. Numerous individuals have made important contributions: Hasan Moinuddin convinced me to develop the idea, Lilian Dimbi, Snoden Mutake, Takemore Chamboko and Kanyurira Ward Wildlife Committee tested and commented on early versions. Brian Child and Bjarne Kaulberg adapted and modified the Game for Luangwa and Dhyani Berger and Chris Weaver have been responsible for its development in Namibia.

12

The business planning story: planning land based enterprises with rural Aboriginal people

Paul Mitchell and Fiona Walsh

• Introduction

Aboriginal people are assuming increased responsibility for the management of vast rangeland areas of central Australia. They have many uses for the land ranging from traditional hunting, harvesting, burning and ceremony, to cash generating uses such as tourism, pastoralism and the sale of artefacts and 'bush tucker' (food from wild plants and animals). The cash economy is now a strong part of the local Aboriginal economy, but many rural Aboriginal people have not had the opportunity to understand the cash system, or business planning and management. To promote better understanding, the Land Management Section of the Central Land Council and Aboriginal traditional owners have developed and used a simple model of participatory business planning.

The major aims of this model are:

- to provide a clear, structured planning process;
- to increase peoples' understanding of business planning and management; and,
- to test the viability of a proposed business.

The process is similar to the accepted process for Property Management Planning which is widely used on non Aboriginal farms and pastoral stations in Australia. However, the methods are adapted to people with low literacy and numeracy standards and different cultural assumptions to non Aboriginal people. The steps (People map, Aims, Land map, Land use map, Business story, Money story, Budget

and Action plan) are shown on the following pages.

Where have we used this model?

The process has been used to plan a range of activities in different parts of Australia, including central Australia, the Kimberley and north Queensland. Activities include a commercial farming enterprise running 6,000 head of cattle, small-scale cattle activities running only 100 head, and an orchard development. It has also been used to decide whether to go ahead with a tourism venture and to resolve a conflict between two business partners.

How can we make business planning effective?

The process must be flexible so it can be adapted to suit local needs. For each step there are many possible methods that may be used, and we continue to try new ones. Although the steps are shown here in sequence, there is often a need to review past decisions as new understandings are gained.

This process is a tool. Facilitators must understand the principles of action research if they are to use it effectively. Everyone taking part should be prepared to share knowledge and share responsibility for action.

Participatory business planning requires that local perceptions, values and goals come face to face with the rigidity of the competitive market. If the model is to be useful, the participants must themselves determine, or at

least, accept the productivity and market information put into the model. This information must be technically sound and reflect the reality of the market economy. This can provide difficulties for facilitators, who often need to think about new ways of breaking down economic systems into their parts, with assumptions clearly explained. For example, interest is explained as paying rent for the use of someone's money. Facilitators can use an agreed external 'expert' to provide technical information if necessary. If people have low numeracy skills, most of the planning process can be done without counting money but by simply comparing and allocating piles of money. To help this, we have printed our own model money.

Where to from here?

We are testing various ways of recording the planning process using photos and drawings. We leave these records in the community for ongoing use as a planning and management tool. We are also trying to adapt land use plans so they meet funding agency information needs. We also need to convince funding agencies to change their application forms so they can be understood by community members. We hope that community plans and funding applications can become the one document that is understood by all. Another challenge is to encourage and support local Aboriginal people in the role of facilitators. They may adapt and develop steps and methods that are even better suited to rural Aboriginal people.

- **Paul Mitchell**, Rural Enterprise Unit, Central Land Council, PO Box 3321, Alice Springs, Australia and **Fiona Walsh**, Land Assessment and Planning Unit (address as above).

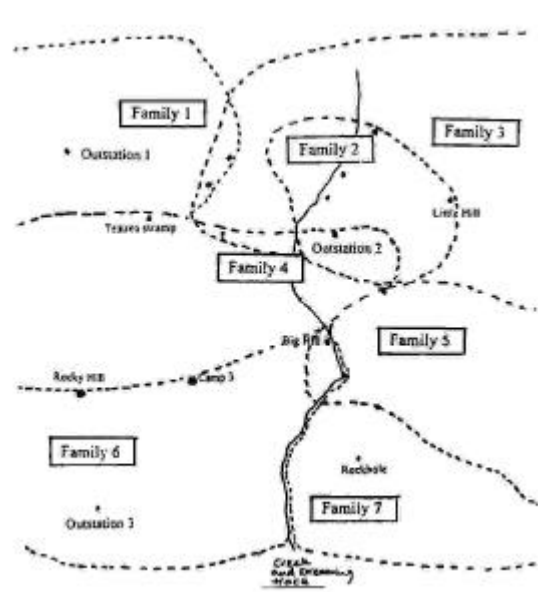
The business planning story: the steps

• People map

It is important to know who are the traditional owners for the country. Land ownership is often very complex. There are participatory

ways of finding out who are the right people to make decisions about the land. Land Councils or anthropologists can help to do this (see Figure 1). All the land owners must be invited to share in the planning process. They must all understand and agree to any new land use, before it can go ahead.

Figure 1. People map



• Aims

It is important to find out why people want the business to go ahead. A good way to listen to people's ideas is to travel through their country with them and let them show what is important. Later, important ideas can be shared and agreed upon by 'pinboarding'. To do this, each person draws pictures on their cards to show what they want to get out of the business (see Figure 2). All the cards are put in the middle on a big piece of paper. The cards are sorted into groups. Some of the people will have similar aims. All cards showing a similar aim will be put in the same group. People can decide which aim is most important, and which aims are not so important.

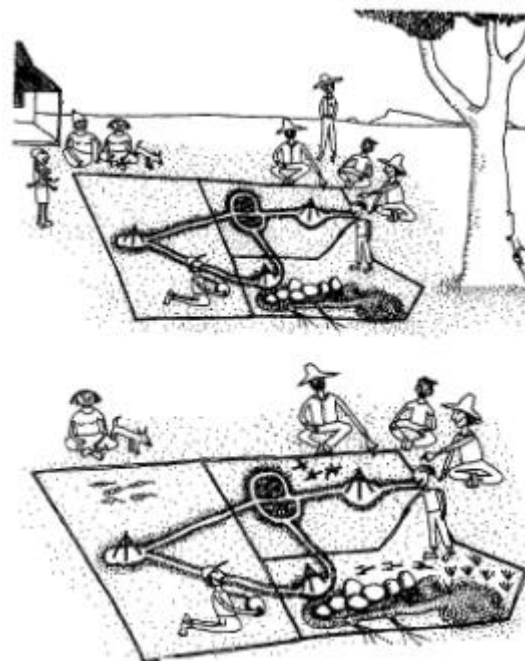
Figure 2. Aims

• Land map

"If maps of our country, our communities and our plants and animals are made by outsiders, then it is their future that will be mapped". Local people should decide what is important to put on their maps. Maps can be made in many ways. A land map can be drawn with charcoal on a verandah, or a map about 6 metres across can be made in the sand. Important features can be put on the map using sticks, cans, stones, or anything that can be easily found (see Figure 3).

The important features might be:

- water places- soakages, rockholes, or springs;
- land forms - hills, creeks, water floods, sand plains and other places; and,
- Man-made features- roads, buildings, fences, bores or cattle yards.

Figure 3. Land map (above) and land use map (below)

• Land use map

People have many ways of using the land. Each land use might be best suited to a different kind of country. Some of the different kinds of country and land uses might be where:

- sweet grasses are grazed by cattle;
- bush potato is found;
- hill kangaroo is hunted;
- firewood is collected; and,
- outstation areas have stable soils, wind protection and no flooding.

These can be marked directly onto the land map (Figure 3). Mapping different kinds of country for different uses can help to get the best use of the land. It will also help to look after the country over many years, so that children and grandchildren can enjoy it too. After land use maps are made, it is important for someone to copy them onto a big piece of paper so they can be used again.

• Business story - business management and making money

The business story helps people to talk about the management of their business and how much money the business can make for them. You should be able to make up a model of any kind of business. The business might be tourists, selling 'bush tucker', selling wild camels or horses, or any other business you think of.

The business story shown here is the *Cattle Story* (see Figure 4). In the *Cattle Story*:

- white poker chips are cows,
 - spotted poker chips are weaner steers,
 - dark poker chips are weaner heifers.
- (One poker chip might show 10 head of cattle or might show 100 head)

Figure 4. Cattle story



The cattle are put on the land map, and shifted around to show weaning, or sales, or deaths, or grazing management. The *Cattle Story* can help people think about all kinds of management issues:

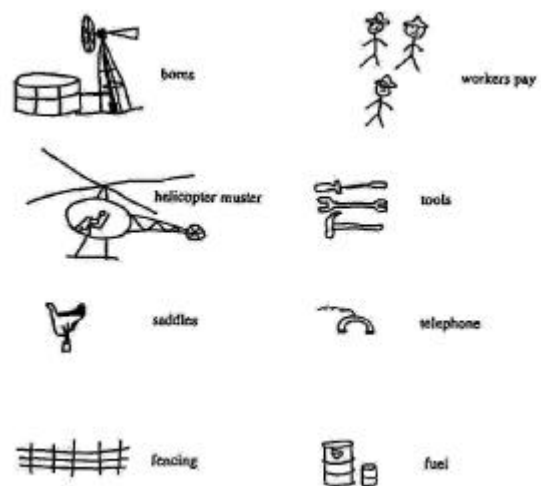
- where you will run the cattle;
- how many cattle you can run;
- how many bulls you need;
- where will you put fences or waters;
- where you want to spell and burn country;
- where you want protected areas;
- the effect of cattle on other land uses; and,
- how much money you can make.

When the cattle are 'sold', they are taken off the land map and model money is put under them to show how much they sold for. Later on, this money is used to do a budget.

• Money story

In the MONEY STORY, people decide what they need to spend money on to make the business work. A big piece of paper is put in the middle of all the people. Everybody takes a turn to draw something that is needed to make the business work. This is a MONEY STORY for the CATTLE STORY. Each spending area is called an ACCOUNT. The ACCOUNTS for this business are as follows (see Figure 5).

Figure 5. Money story



• Budget

In the MONEY STORY, people decided on their spending areas, or ACCOUNTS. To make a BUDGET, the money that is made in the BUSINESS STORY is divided among the ACCOUNTS.

Sometimes there's not enough money to pay for all the things people want to do. Maybe they'll have to leave some of their aims and just do the really important things. This is a good time to think again about the aims of the business. Is this business really going to provide all the benefits people were hoping for? Should people go ahead with the

business? Should people think about another way to do things?

Figure 6. Budget



The finished budget can be drawn as a bar graph on a big card and stuck on the wall (Figure 7). When money is spent people can mark off how much money is spent. They can then see if the money will last long enough to get the job done.

• Action plan

When there is a lot of work to do, it is helpful to divide a big job into small steps. By returning to the BUSINESS STORY, a step by step action plan is put together. The action plan is drawn on a big card and stuck on the wall for everybody to see. This makes it easier for people to do the work, and make things happen (see Figure 8).

Many other skills can be made using participatory methods, such as:

- do people have the skills they need to carry out the action plan?
- if not, where can they get those skills?

Figure 7. Graph

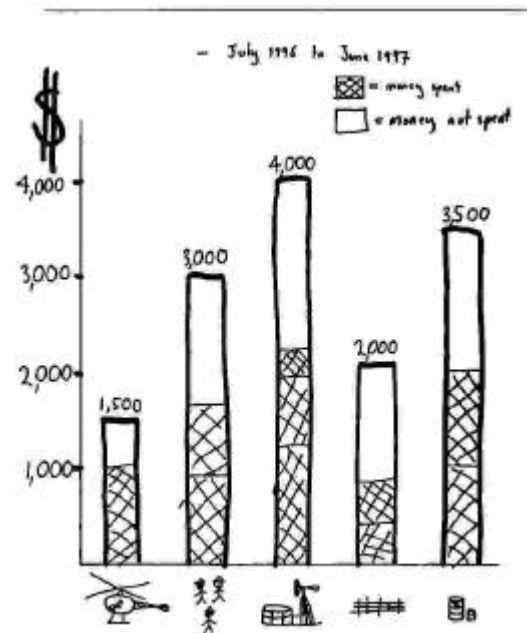


Figure 8. Action plan

STEP	WHO		FINISH BY
	LOCAL PEOPLE	OTHER PEOPLE	
Fix fence	Jakamara mob		January
Work out stocking rates	Jakamara mob	Dept. of Primary Industries	March
Fix bore	Jungarai mob	Funding agency bore training mob	March
book keeper training	Nakamara + Jakamara	training school	December

ACKNOWLEDGMENTS

The model is derived from the work of many people including Jim Downing, Julia Mitchell Stuart Phillpot and Richard Trudgen. Our colleagues at CLC and Aboriginal landowners have also helped us to think through the issues. Drawings are by Sally Mumford.

13

Participatory assessment for people with disabilities

by David Thomforde

with responses from Sulemena Abudulai and Deb Johnson

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.

- **Background**

The number of associations of people with disabilities has increased greatly in the last few years in Uganda. Government and NGOs have encouraged this growth as a way of channeling technical and funding assistance. The goal of most of these associations is to improve the lives of the members. As the number of associations grows, the competition for assistance also grows. Funders need methods for deciding which associations have been most effective in helping the members. Currently, funders depend on subjective measures such as site visits and conversation with group leaders and members. This paper outlines a method that was developed during a series of participatory sessions for associations of people with disabilities. The method is designed to let members of the associations give their opinions on how well they are being served by their association.

- **Method**

As a group, the participants choose about six criteria for judging well-being. Common criteria chosen are wealth, health, degree of disability, amount of schooling and feelings of unity. For each criterion, the participants are asked to judge if their individual conditions have improved or declined since the association was formed, and if the change is due to the association or to outside factors.

During the first seminar, each participant expressed his or her opinions to the group, and the opinions were marked on a large chart posted on the front wall - the chart had symbols to represent the different criteria. However, there was a tendency for participants to be influenced by the group. When a participant voted that his or her life had been improved by the group, there were cheers. When he or she voted that his or her life had declined, there was silence. In addition, the many layers and boxes on the chart made it confusing. The result was that the association was credited for making changes in areas which it had not even addressed.

Therefore, during subsequent seminars, individuals marked their opinions on a modified chart, placing a bean for each change due to the association and a kernel of maize for each change due to other factors. Each person's opinions were recorded and then the beans and maize were removed from the chart before the next person came up to vote. This succeeded in greatly decreasing the group influence - the assessment became an individual rather than a group activity. The result was a much greater variety in the voting pattern, with the association credited for changes by some participants and blamed for declines by others.

After all the opinions were recorded, the votes were tabulated and presented immediately to the group for discussion.

Critique of the method

Some weaknesses of the method include:

- confusion on the part of some participants, particularly those who were illiterate. The chart and the choice of a bean or a kernel of maize was difficult for some participants to grasp. Most of the participants required

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individual explanation of where to place their beans or kernels of maize. This made it a tedious process for the facilitators and, as they were often the more educated leaders of the associations, their personal biases may have influenced their explanations.

- a tendency for some participants not to reflect on the individual criteria, but instead to vote according to a pre-determined view of their past. Participants who were leaders in the associations tended to rate their lives as having improved, and credited the association for the changes. Participants who were peripheral members of the associations, or felt more negatively about their disabilities, tended to rate their lives as getting worse. At times, they blamed the association even in areas where the association had had no planned or actual role, perhaps for lack of action.

Strengths of the method include the ability to:

- compare two associations to see which has made more difference in the lives of the members e.g. by comparing how different criteria for well-being have changed and what percentage of the members of the association have shown improvement according to the different criteria;
- determine the impact of assistance by comparing the type of assistance given to an association with areas where the association has made positive changes;
- highlight progress made by members of an association; and,
- use the results to prioritize which problem areas the association should address: those areas where members' well-being has not improved, or is declining, can become the first priority for discussion and action by the association.

• Impact of using the tool

Discussions with group members indicated that the activities of the associations had not changed significantly as a result of using this tool. This is probably a reflection of the difficulties of the association, rather than a weakness of the tool: the areas where the association was seen as having made progress were the easier issues e.g. improving unity or increasing awareness,

whereas the association was not seen as having made much progress towards issues that are more complex or long term e.g. declining health or income.

Further refinement of the tool should come in the following areas:

- developing a system of recording the votes that is less confusing for illiterate participants;
- steps to minimize voting according to a predetermined mind set e.g. through providing more time between introducing the activity and registering of opinions, so participants have more time to think about individual changes
- asking participants to provide justification for their choices in front of the group (although this may increase the group influence);
- emphasizing that people should vote according to their own situations, and not their view of members in general; and,
- some system of including criteria which could not have changed over the past few years, or which the association could not have influenced, in order to identify those people voting for reasons other than their own experience. Their votes can be eliminated or analysed separately.

In conclusion, this tool has potential to be used by funders in determining objectively how membership in an association of people with disabilities is affecting the members. It requires further field-testing and modification. However, it could be used with other groups and as part of a broader participatory organisational assessment.

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Disability and assessment: a response from Sulemana Abudulai

Following on from the *Feedback* in June 1998, I hope this interesting article spurs readers to think both about working with people with disabilities and about innovative methods of organisational assessment.

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My concern is that the use of participatory methods to assess the impact of associations of disabled people may well be flawed if they are used with associations that have not had a participatory approach from the outset. If, as the experience in many countries show, the associations have been started by well-meaning but often self-interested people, the initial objectives are often not "owned" by the wider membership. It is then difficult to come along after several years and assess the impact of the association for members.

This article demonstrates the need to assist disabled people and disabled peoples' organisations (DPO's) to revisit the objectives of their organisations with the wider membership. This re-assessment should include questions, such as why associations are needed, what activities should be carried out, what leadership structures are appropriate, what decision-making systems are most transparent and how financial accountability can be promoted. The need for this re-assessment is supported by the observation that members reacted differently to questions in the presence of different people. Members are unlikely to criticise an association if the "founder" is present at the meeting. However, if the origin of the association was based on more shared objectives, then self-criticism may well come freely as the members understand the process as one aimed at making things better for all members.

Monitoring the adverse or positive effects of project activities is important for long-term sustainability. However, it is never an easy task for an outsider to determine inter- and intra-community social and economic dynamics during a short visit. For example, the extent of unity, co-operation and cohesiveness within and between groups spontaneously formed or promoted by a development agency as a medium for implementing, say, agricultural credit schemes may not be apparent from participatory methods. Disability, gender, age and other socio-cultural differences will tend to be down-played only to surface in covert efforts to undermine agreements arrived at community-wide meetings.

Thus, PRA should be used selectively. It may not always be the best way of obtaining

information. In this case, a semi-structured questionnaire may have generated more useful information as it would have provided a more confidential environment.

- **Sulemana Abudulai**, Action on Disability & Development, PO Box 306, Tamale, Ghana. Email: addghana@africaonline.com.gh

Disability and assessment: a response from Deb Johnson

It is my pleasure to take part in this critical look at the application of participatory tools in evaluation. I believe critical self-examination of how, when, and where we use participatory methods is essential to our growth and understanding of how to create an environment for empowerment. It is encouraging to see David Thomforde and Sulemana Abudulai push the discussion further. There are some basic weak points about the method used and about the concepts of participation noted in both articles. It is important to highlight these as they have an impact on the strengths and weaknesses of the method described. These key points are listed below.

• Stakeholder involvement

David notes in the beginning of his article that the tool described was meant as a way for *donors* to assess the capacities of Disabled Persons' Organisations (DPOs) for possible support. This is a key point as it highlights that the information is meant for the donors, and hence the motivation for collection is for external use. The participation of the association's members is more of a 'temperature gauge' for the donors to make decisions about which DPOs to fund. Any benefits (such as lessons learned, analysis, skill development, etc.) derived from the tool by the DPO members are secondary to the donor's need for information.

Sulemana does not talk directly to this premise, but he does pick up on the point that it is an assessment tool which is based on some faulty assumptions. He points out that the tool misses some important preliminary

Feedback.... Feedback.... Feedback....

questions, i.e., 'Do the criteria for a "good" association actually reflect the original objectives of the DPO? and, taking his point further, 'Do they reflect the reasons why people are members now?' The underlying assumption is that the donor already knows *why* disabled persons have joined/created the DPO and that the reasons are straightforward. Experience shows that people join membership organisations for a wide variety of reasons and, as noted by Sulemena, these organisations do not frequently revisit their basic objectives to see if these objectives still fit their current membership.

Of course, this does not mean that this method, or other participatory methods, cannot be used to revisit these assumptions. Nor does it mean that because the motivation to critically examine the strengths and weakness of DPOs is external that the method of assessment should be dismissed outright. It does mean, however, that the facilitator needs to think carefully about how to meet the needs of both the major stakeholders in this kind of an assessment - the donors - and the DPOs.

• Goals of the assessment

The purpose of the tool discussed by David was to evaluate the DPO's contribution towards meeting the members' criteria for well-being. It must be appreciated first that one organisation cannot meet all of the well-being needs of a diverse membership, especially given that the label of 'disability' covers the blind, the deaf, and a whole range of people who fall under the category of being physically or mentally impaired. It is unrealistic for a single DPO to be judged on its ability to ensure well-being for all of its members (a feat not possible by governments, let alone generally poorly-resourced NGOs). Thus, the method may have been comparing apples with oranges.

Based on the short description of the tool and its strengths and weaknesses, it may have been a more effective process if the facilitator(s) assisted the group members to critically reflect on their expectations of the organisation's goals and objectives. Upon deciding what goals and objectives they expect from their

organisation, they could then judge the organisation's performance accordingly.

It would seem that the facilitators attempted to accomplish too many aims with one tool - organisational evaluation, wider appraisal of the institutional environment, and a capacity building assessment. A common and dangerous fallacy of promoters of participatory methods is the belief that the application of one or two *participatory tools* is sufficient to accomplish their goals and they neglect to focus on the participants' discussion, analysis, and learning. The application of participatory tools without local reflection, analysis, and learning results in highly questionable data and damages the concept of *empowering participation*. Cases of the application of methods without reflection justify Sulemena's comments of caution about the selective use of participatory methods as the information collected may not represent a true picture of the situation.

• Creating a safe assessment atmosphere

A final point is that organisational assessments and evaluations have and, in many cases, still do bring lots of concerns and insecurities. They are seen as something that must be lived through and that do not offer very much in terms of learning and growth. Until organisational assessments are seen as part of a learning and growth process, the members and staff will always be cautious in commenting on an organisation. It is true that assessments can be used by some members of the organisation to sabotage projects and people within the organisation.

For example, Sulemena suggests that organisational members will rarely speak out when the founder is present. People speaking out about their organisation depends greatly on how much they feel they *own* the organisation, how important the issues are to them, and how *safe* they feel if they are open and honest. This is a primary function that an outside facilitator can provide - it is not 'objectivity' but the advance preparation by, and ability of, the facilitator to create a safe atmosphere. A safe atmosphere is defined here as a place where

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issues can be discussed openly, honestly and where they are not personalised or used as attacks.

As David observed, some of the participants can greatly influence (even intimidate) others during large group meetings through cheers, silences, or various forms of body language. This influence can be attributed to the type of atmosphere that is created at the assessment - an open and self-critical atmosphere without fears of retribution could reduce the amount of undue influence members have on voting, but creating this atmosphere takes time. The decision for the participants to vote individually first, then come together for analysis can be a quick and effective way of dealing with negative influences. David suggests some good additional steps to improve the effectiveness of this method.

It must be clearly stated that participatory assessments should be very careful in pushing difficult issues. If the facilitator is external to the organisation and not able to provide long-term support to the organisation, s/he cannot assure that those encouraged to talk openly are not victims of retaliation later. The facilitator is obliged to provide methods which allow the participants to discuss difficult issues without putting them at risk.

• Conclusion

I hope these comments provide supplementary discussion 'fodder' concerning the use of participatory methods for organisational assessment. One of the main points is the crucial role that the facilitator plays in any participatory activity. It is an unavoidable fact that the facilitator's preparation, abilities, and underlying beliefs and principles will greatly colour the outcomes of any participatory activity, especially when the participants lack self-confidence or a sense of self-awareness or worth. A facilitator can either try and provide an atmosphere for safe exchange and movement or s/he can manipulate the process to gain her/his own desired goal.

In this case, more thought could have been given to reconciling the assessment objectives to meet the needs of both the DPOs and the donor(s). This would give the facilitator an opportunity to further develop the method to

support the needs of the DPOs and create a better learning atmosphere for the assessment.

• **Deb Johnson**, Sikiliza International, PO Box 31618, Kampala, Uganda. Email: djohnson@imul.com

Author's response: David Thomforde

Deb has correctly noted the emphasis in my article on the use of this tool by donors. The tool was originally developed as part of a sequence of PRA activities which DPO members used to determine the problems their DPOs had, and to formulate strategies to address those problems (see *PLA Notes* 32). The use by donors was not part of the original programme, but was noted later on. I believe that a skilled facilitator could create the atmosphere of trust necessary so that the same tool could be used to assist the DPO with self-examination, as well as collecting information for a donor.

14

Extracts

A new approach to evaluating a peer education programme for sex workers

Kate Butcher, Sumi Baral, Krishna Bista, and Rajendra Adhikary

Two years ago, a peer education programme was developed in Nepal to equip urban sex workers with the skills to help their fellow workers practise safer sex, to update their own knowledge on risks from unsafe sex and to provide a forum for sex workers to discuss imaginative approaches to safer sex beyond the condom. Initially 18 sex workers, all women, attended and this number has increased as the programme has developed. The women are keen to become peer educators because they are interested to learn about health issues and enjoy increased status among their peers because they give out condoms and assist other sex workers in the use of local services for sexually transmitted diseases.

While some of the sex workers who attended were able to read and write, the majority were illiterate or semi-literate. In the spirit of good participation, the workshop was adapted accordingly, using picture codes, symbols and stories to promote communication. However, one problem remained. How could we evaluate the success of the programme with regard to the desired objective of reducing risky sexual behaviour? Furthermore, how could the women evaluate their success as peer educators? Diaries were out of the question because of limited literacy, and besides, if discovered, they could be incriminating for women whose occupation was a secret from their loved ones. Verbal accounts were likely to be inaccurate and forgotten and women could not be expected to report to the programme on a daily or even weekly basis.

Mala

As a result, we developed an innovative and attractive alternative: the 'Mala' system. 'Mala' means necklace and is a popular accessory for all women. We decided to provide each participant with a set of different coloured beads, and during the workshop, and, in consultation with the group, allocated different colours to different activities relating to their role as peer educators as well as their own sexual practice. The activity relating to each colour is listed below.

- Red; asked a client to use a condom and he agreed.
- Green; accompanied a girl to the clinic.
- White; asked a client to use condoms and he refused.
- Yellow; gave a fellow worker condoms.
- Black; avoided intercourse, had safer sex.
- Blue; had sex without a condom.

The idea was that after each activity, women would thread the appropriate colour on to their mala. Each month the situation would be reviewed.

Figure 1. Diagram of a 'Mala'



At the monthly review meetings, project outreach workers sit with the peer educators individually and look at their necklaces checking that the colours represent the agreed activities. Since the sex workers/peer educators themselves allocate the colours and activities, this has not proved too difficult. Results and queries are noted in the record book and subsequently discussed with all the peer educators together.

Impact

The Mala is a unique self assessment tool which has helped women to monitor both their own activities as commercial sex workers as well as their role as peer educators. Because it is highly visual, patterns and trends are easy to identify. There has, for example been a marked increase in condom use among the peer educators and their peer sex workers over the monitoring period. However there are usually several blue beads where women have sex with regular clients and/or boyfriends and do not wish to use condoms. Non penetrative sex initially never occurred, although in the last 6 months it has appeared in two women's necklaces.

Monitoring of the system has been increased in the last 6 months and it has become clear that, with regular support and supervision, the Mala system can be an effective, attractive and enjoyable way of evaluating an otherwise difficult field of work. Not only can sex workers measure their own success and activities, but they also have an attractive accessory at the end which can be understood by no-one, other than their fellow peer educators and project supervisors.

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The communication linkage matrix

Neela Mukherjee

The Agricultural Resources Conservation and Development project, funded by IFAD/UNDP/UNOPS at Dong Hoi, Vietnam, was recently engaged in organising and conducting a series of basic PRA training-workshops for senior officials of the project and representatives from peoples' organisations in Participatory Micro Planning and Design.

One innovation from the training which I would like to share is the communication-linkage matrix. In this method, village groups first explain their relationship with different institutions using a Venn diagram. They then analyse their communication linkages with each institution. This enables a communication-linkage matrix to be completed (see Table 1), providing villagers with the opportunity to analyse aspects of their communication with different organisations. Selected criteria for discussion include the relationship between the villagers and the institution ('behaviour'), 'timeliness of service', 'information exchange', and suggestions for improving communication.

Assessment

The communication linkage matrix can be a powerful tool for local community members to assess services provided by different service providers and other developmental agencies. Through the matrix, community members can assess institutional strengths and weaknesses and make their own performance assessment by adding new columns to the matrix.

Table 1. Communication-linkage matrix for village households raising livestock

Institutions	Behaviour	Timeliness of service	Information exchange	Suggestions
HH-Extension Service	Strong bond	Regular	Receive information from villagers	More training courses required
HH-Veterinary Service	Good linkage	Frequent	Fast, punctual	Provision of medicine should be on time
HH-People's Committee of Village	Strong bond	Regular	Fast	Can provide information on good techniques, disease and its treatment, marketing
HH-People's Committee of Commune	Good linkage	Irregular	Fast	Officials must visit HH more often on a regular basis
HH-Commune Farmers' Association	Strong bond	Regular	Fast, punctual	Can provide regular information on economic benefit of farmers
HH-Village Farmers' Association	Strong, co-operative bond	Regular	Good linkage	
HH-Women's Association	Good linkage	Regular	Fast	Awareness creation on ways of livestock raising and application of new techniques required
HH-District Agriculture Unit	Weak bond	irregular	slow	Livestock raising programme inputs should be provided in time

Note. HH stands for households raising livestock in village ThonTrung in Vo Ninh Commune, Quang Ninh District, Vietnam.

When preceded by Venn diagramming, the communication-linkage matrix helps to focus discussions on organisations and their role and significance to villagers. The method helps in the comparative analysis of the strengths, weaknesses, constraints and opportunities of different service providers. As a 'visual' method, the communication-linkage matrix facilitates the cross-checking of views, open-ended analysis and consensus building. Field experience shows that villagers, both women and men, enjoy constructing and analysing the communication-linkage matrix.

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15

A brief guide to training in participatory methods in the workshop

This section of the Notes provides training materials for participatory learning, exploring a different theme in each issue¹. The exercises described in this article provide a range of examples of how to train in participatory methods in a workshop setting. Many of them evolved through individuals making adaptations to fit their own needs and contexts. So do adapt those presented here to meet your own particular training requirements. Even better, invent your own and find your own way of doing things. All training in participatory methods should cover three basic groups of methods: Semi-structured interviewing, diagramming and visualisations, and ranking and scoring methods. Each of these is described below.

• Biases and behaviour

The vital ingredients for success however, are not the method themselves, but the attitudes and behaviour of those who use them. Accepting and valuing other knowledges will be difficult at first. Where extension workers are used to believing that they have the 'correct' message to teach, now they must learn what it is people need before making suggestions. Where scientists are used to believing that they have higher status because they possess 'better' knowledge, now they must be open to learning from local people as well as colleagues from other disciplines.

These changes imply significant shifts in the way participants are used to thinking and behaving. This is a critical component to address in any training course. At first, participants may be sceptical of the approach,

but through practice they will learn what is needed to make it work effectively. They will still, however, need to be encouraged to reflect upon their own attitudes towards other people's knowledge. This is essential if participants are to consciously seek to involve those who are often ignored, such as the poor, women and the very young and very old. Suggestions for topics to cover in a training session on attitudes and behaviour are shown in Box 1.

BOX 1

CHECKLIST: TRAINING IN ATTITUDES AND BEHAVIOUR

- buzz sessions to identify differences between our knowledge and local people's knowledges
- discussion on 'rural development tourism' and biases - when outsiders visit rural areas, which places they tend to visit, who they tend to talk to and why they get there, how long they tend to stay
- buzz sessions on how to offset biases in fieldwork
- 'do-it-yourself' (DIY) sessions in the village - being taught local activities by villagers
- using video playback of images of fieldwork facilitated by trainees to see behaviour and correct immediately
- team contracts, shoulder tapping

• Semi-structured interviewing

At the heart of all good participatory research and development lies sensitive interviewing. Without it, no matter what other methods you use, the discussion will yield poor information and limited understanding. Semi-structured interviewing can be defined as: "Guided conversation in which only the topics are predetermined and new questions or insights arise as a result of the discussion and visualised analyses". Although semi-structured interviewing is the most essential skill for

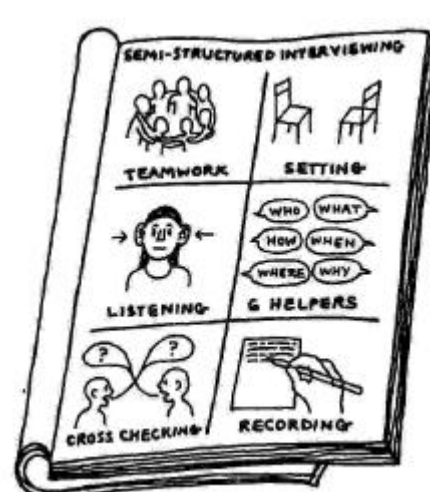
¹ Taken from a *Trainers Guide for Participatory Learning and Action*. Published by IIED. Price £18.95, plus p&p (25% UK and Europe, 35% airmail). See inside cover for details on how to order publications.

participatory methods, it is also the most difficult method to master and the most difficult to train others in. Good interviewing skills will only come with plenty of practice and constructive feedback from colleagues. There are seven core components to semi-structured interviewing which need to be addressed in training: team preparation, interview context, sensitive listening, judging responses, recording the interview, and self-critical review. Each aspect can be emphasised through the use of a range of workshop exercises. Many of these have been described in previous 'Tips for Trainers' within PLA Notes and are described more fully in the Trainer's Guide (see Chapter 5).

To help the trainees remember the key points of semi-structured interviewing, you can discuss with them its core elements (Box 2). Instead of providing them with this list, you may want them to discuss in small groups and afterwards add any items on the list that they may have or missed. There are many ways to design a semi-structured interviewing training session. Try and use a range of buzz sessions, plenary discussions, role plays and small group exercises and allow plenty of time - training in sensitive interviewing will require at least half a day.

BOX 2
TEN POINTS FOR SENSITIVE
INTERVIEWING

1. Prepare as a team and agree a team contract
2. Use a checklist or interview guide
3. Be sensitive and respectful to everyone involved
4. Use visualisation methods to enhance participation and dialogue
5. Listen and learn
6. Ask open-ended questions using the six helpers (Who? What? Why? Where? When? How?)
7. Probe responses carefully
8. Judge responses (separate facts, opinions, rumour)
9. Verify through triangulation (cross-checking)
10. Record responses and observations fully.



• Diagrams and visualisations

Many of the recent innovations in participatory approaches have involved a shift from verbally-oriented methods (formal interviews and written assessments) to visually-oriented ones (participatory diagrams and visualisations). Everyone has an inherent ability for visual literacy, and the impact of visual methods on communication and analysis can be profound.

There are many different diagram and visualisations, including resource maps, social maps, mobility maps, transects, timelines, seasonal calendars, crop biographies etc.. As with most participatory methods, the best approach to training is *learning by doing*. Participants will learn quickest and be better able to apply the key lessons to their own work situations if they try the method first hand. This is best accomplished by setting up exercises in which they can practise themselves and/or analyse diagrams produced in different settings.

This experiential learning can be done in the workshop so that participants have adequate practice before visiting the field. No amount of workshop experience, however, can substitute for observing local people creating their own diagrams. You should emphasise the switch that the participants will need to make to 'hand over the stick' in the field and help local people conduct their own analyses using visual methods.

From the verbal to the visual

There are important contrasts between visual and verbal modes of communication (see Table 1). In the training session, it is important that you discuss these differences so that the trainees will understand the importance of trying out different forms of communication. Although you can do this before an exercise, you might find that comparing visual and verbal communication will be more meaningful if it is carried out as part of the debriefing after one or more visual exercises.

Table 1. Examples of differences between the verbal and the visual

Comparing the verbal and the visual	Verbal (interview, conversation)	Visual (diagram, model, drama, play)
Investigator's mode and role	Probing	Facilitator and analyst
Local person's mode and role	Reactive respondent	Creative analyst and presenter
Aim	Extraction of information	Generating local analysis
Degree of eye contact	High	Low
Medium and materials chosen by	Investigators	Local people
Ownership of information	Appropriated by investigators	Shared, can be owned by local people

Debriefing after diagramming

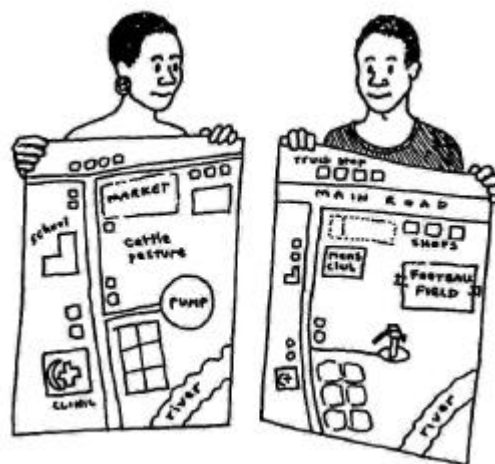
Many new issues will arise during these exercises on participatory diagramming and participants will need time to consider them. The value of good debriefing sessions cannot be overstated. It is always better to stop exercises early, even if trainees have not finished the diagram, to ensure adequate time for reflection and discussion. In training, remember the point is not to create the perfect diagram, but to consider the potential applications and limitations of the methods.

During the debriefing, you might want to ask some of the following questions:

- What did this exercise tell you about your own perceptions?
- How well did your team members work in your group?
- Did people hand over the pen or the stick, or did certain people dominate?
- How well were you able to integrate conflicting ideas into the diagram?
- How much time is required for a useful visualisation?
- If you were working with local people, how would the process have been different?

Guidelines for diagrams

The purpose of the workshop training is to prepare participants for using participatory approaches in the real world. At the end of every major workshop session on diagramming, you can help by encouraging participants to consider the implications of using these methods in the field. Encourage the participants to think about four important phases of diagramming in the field: preparation, getting started, during and after.



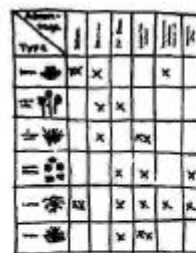
• Ranking and scoring exercises

Ranking and scoring methods can be used to explore people's perceptions, elicit their criteria and understand their choices regarding a wide range of subjects, from resource allocation to wealth and well-being assessment. While many exercises can be carried out in a workshop setting or in the field, preference or pairwise ranking, matrix scoring, and wealth and well-being analysis are some of the most common methods.

With these methods, as with all visual methods, it is important that you remind participants that it is not the final matrix that is important, but the discussion that occurs as it is being created and the knowledge is shared. It is as common to talk of “interviewing the matrix” as it is to talk of “interviewing the farmer”. In short, it is not the final product, but the process involved in creating it that counts. To be truly beneficial, that process must inevitably include sensitive and perceptive interviewing, whether people are using visual techniques or not.

In the workshop setting, methods should be used to help illustrate the diverse range of perceptions of the trainees themselves. This can reveal how participatory development can be strengthened by bringing these different perspectives and insights to bear on a particular issue.

As with most methods, practice in the workshop is necessary before they are used in the field. Ranking and scoring exercises are amongst the more difficult, yet most powerful participatory methods available. Practising them first is essential to help clear up methodological questions. A well-planned practical session will provide the participants with a solid understanding of the main issues and applications of these methods, and give them more confidence to use them in their fieldwork.



Method	1	2	3	4	5
Ranking					
Scoring					
...					
...					
...					
...					
...					
...					
...					
...					



TRAINERS' CHECKLIST: PARTICIPATORY METHODS IN THE WORKSHOP

- Have you planned your programme to include sessions on semi-structured interviewing, diagramming, and ranking and scoring.
- Have you included exercises or discussions that address each of the seven components of semi-structured interviewing?
- Have you planned the use of exercises so as to limit the use of lecturing?
- Have you thought through the sequencing of different training methods on one topic so that they build on each other?
- Have you decided which exercises might be dropped from the planned schedule if an exercise takes longer than planned?
- Have you decided how many and what size groups of trainees will be need for each exercise?
- Have you decided how sub-groups will be formed for each exercise?
- Have you allowed sufficient time in the programme for feedback?
- Have you prepared any hand-outs on methods, guidelines, etc. that you might need?
- Have you prepared your debriefing questions for each session?

Next issue: The challenges of training in the field.

16

Tips for trainers: exploring evaluation through drawing

Françoise Coupal

- **Purpose**

- to share and exchange participants' experiences with evaluation;
- to illuminate through drawings participants' experiences in the area of evaluation; and,
- to form the basis of a larger discussion of some of the differences between participatory and traditional evaluations.

- **Materials and time required**

- one large piece of flipchart paper per small group;
- coloured markers; and,
- 35 minutes for discussion, 15 minutes for the drawing, 30 minutes for the plenary.

- **Instructions**

1. Place the flipchart paper in the middle of the group along with some coloured markers.
2. Organise participants in small groups of 5-6 persons.
3. Place instructions on flipchart paper so that participants can refer to them during the exercise.
4. Ask each group to discuss their experiences of evaluation (about 35 minutes). For example, what has it been like to be the object of an evaluation, to be a donor funding an evaluation or to participate in one. For the plenary, inform participants that each group will be asked to present a drawing which represents their collective experience of evaluation. This

may be one or two images placed on the flipchart paper. Few words, if any, should be used.

5. As participants discuss their relative experiences, some images will begin to emerge. These should be placed on paper. This may take up to 15 minutes.
6. Once each group has completed their drawing ask the participants to present their drawing (5 minutes per group).
7. The plenary should shed light on the varied experiences with evaluation and the different outcomes of different evaluation approaches. This can help participants to explore what type of evaluation they would foresee and its implications in terms of participation, resources and materials.

Special notes for the facilitator

Participants may need prodding to realise their drawing as they are often timid or hesitant at first. Talking is easy, but translating the image into a drawing may require encouragement by the facilitator.

- **Application**

This exercise was undertaken with 35 Haitian NGOs in April of 1997 as part of the planning phase of a larger participatory evaluation of a Canada-Haiti Humanitarian Alliance Fund to rebuild Haitian civil society¹. As the fund was coming to an end, the donor was interested in funding a participatory evaluation that could go beyond traditional evaluations and build capacity among Canadian and Haitian NGOs

¹ It was supported by the Canadian Council for International Co-operation (CCIC).

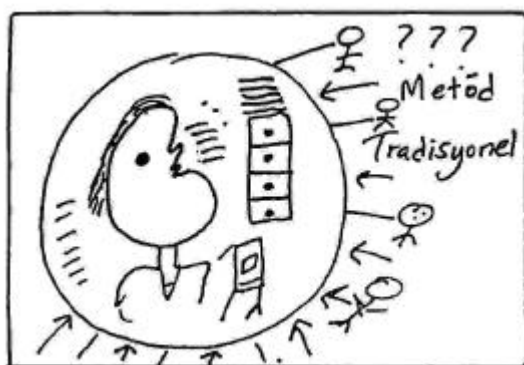
by training participants in participatory evaluation methods and approaches.

Two missions were undertaken to Haiti. The first mission consisted of a planning mission to gauge stakeholder interest in participating in a participatory evaluation and to develop an appropriate evaluation strategy and timetable with project stakeholders. The second phase involved training 30 project stakeholders in participatory evaluation methods and approaches and subsequently evaluating 15 projects.

This article focuses particularly on the results of an exercise undertaken during the preparatory phase and the final phase of the project. In small groups of six, NGO representatives and community leaders were asked to discuss their experiences with evaluation. Based on their experiences, each group was asked to crystallise their thoughts and experiences in the form of a drawing. It is important to note that no mention was made to either traditional or participatory evaluations.

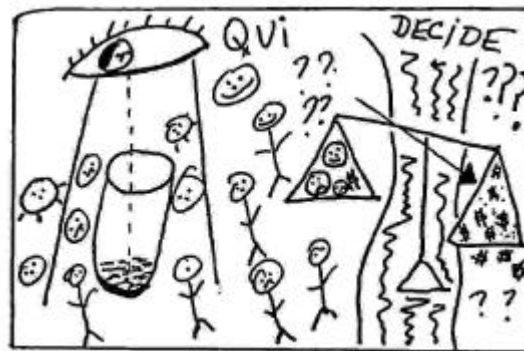
As can be seen, the drawings are revealing. Figure 1 shows an evaluator living in a bubble behind his desk surrounded by reports. Project participants surround the evaluator. The information is one way, however, from the project participants to the evaluator. Question marks loom to the side.

Figure 1



In another drawing, entitled “Who Decides?”, the eye of the donor looks from afar. Underneath the eye rests a bag of money. Off to the right side one can observe a scale that is unevenly tipped with the weight heaviest on the side of the donor, who holds the purse strings, rather than on the side of the project stakeholders (Figure 2).

Figure 2



In contrast, drawings of participatory evaluations revealed different characteristics. In Figure 3, all project stakeholders are sitting around the table to first discuss the project: community members, program officers, the NGOs staff and the facilitator. However, all these stakeholders all go out into the community to meet with project beneficiaries individually or in small groups. As one of the author's explained: in a participatory evaluation “there is an exchange of ideas, experiences and a group discussion of problems and solutions. The results of the evaluation are shared with all of the project stakeholders”.

Figure 3

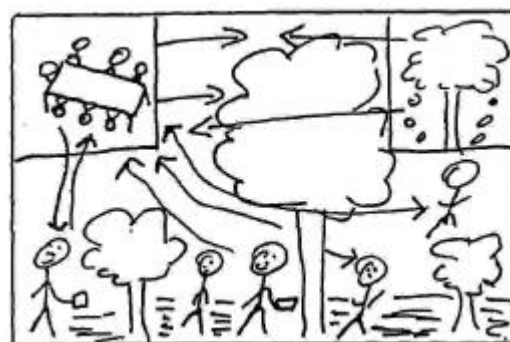
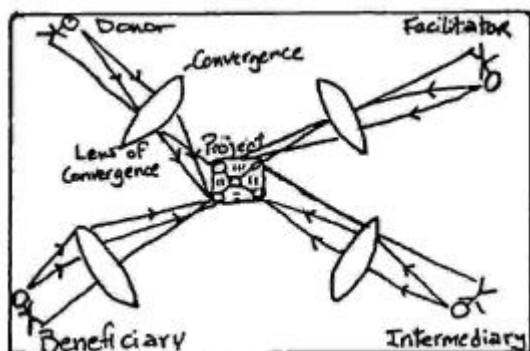


Figure 4 was drawn at the end of the participatory evaluation process. It represents the four key stakeholders: the facilitator, the intermediary (NGO), the project beneficiaries and the donor. As noted one author “a project is the convergence of different stakeholder visions”. A sense of equity, balance and convergence is seen as part of the participatory evaluation process.

Figure 4

• Reflections

The drawings provided for a rich discussion and debate about the type of evaluations the NGOs wanted and some of the weaknesses of traditional evaluations. Some of the following points were made by NGO representatives and community leaders with regard to traditional evaluations:

- “There is no dialogue or flexibility”
- “Traditional evaluations do not take into account the reality in the field”
- “Evaluation tools are not adapted to the context”
- “Ignorance by evaluators of the project realities and challenges”
- “Determines the financial future of the project”
- “Predominance of institutional interests versus the field”
- “Lack of follow-up”.

Based on the drawings and discussion, the NGOs decided they wanted a more participatory evaluation. This led to the design of a participatory evaluation process involving NGO representatives in the evaluation process as participatory evaluation facilitators.

The drawings are powerful and illuminating testimony of the experience of project stakeholders. This exercise has been repeated a number of times with similar features being recounted. Traditional evaluations are seen as an extractive exercise with the community providing the information, but receiving little in exchange. The traditional evaluator is usually an outsider that knows little of the “real” dynamics of the community and is the one person that presents the report card of the project. In contrast, in the participatory

evaluation undertaken in Haiti, the participatory evaluation facilitators were drawn from the Haitian NGO community funded through the programme. Trained in PRA methods, the participatory evaluation facilitators lived in the community and worked with the project stakeholders to reflect on the project’s impact.

This drawing exercise can help project stakeholders determine the type of evaluation they would like and their level of participation and commitment. In particular, drawings can help project stakeholders to think through the advantages and disadvantages of different evaluation approaches and to design an evaluation framework that responds to participant’s experiences and needs.

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NOTES

Françoise Coupal co-authored a UNDP publication entitled: “Who are the Question-makers? A Participatory Evaluation Handbook”. Copies of the Haiti evaluation report can be requested at the above address or by downloading it from the following web site: <http://www.mosaic-net-intl.ca>

2

Participatory assessment and the twenty points of progress program: the experience from Mexico

Gary M. Woller and James B. Mayfield

• Introduction

This paper describes the field-test of the Twenty Points of Progress Program (20PPP) presently being implemented by an NGO called choiceHumanitarian in Guanajuato, Mexico. The 20PPP is a participatory methodology for systematically measuring and assessing the impact of village development programs. The 20PPP differs in a number of important ways from other methods of monitoring village development.

- It is participatory in nature, encouraging village communities to assess their own level of development and quality of life.
- Through an explicit commitment to community action planning, it encourages village communities to develop and implement strategies (action plans) to improve the quality of life in their communities and to measure the extent to which they are successful.
- It encourages network development and information sharing among rural communities and with outside government and non-government organisations.

• Developing the 20PPP

While billions of dollars have been allocated for village development by many different organisations over the past fifty years, there is no widely accepted methodology for measuring whether progress is in fact being made. Most methodologies aiming to measure village progress have failed either because they were too complicated for the villagers to understand and appreciate, so expensive that

few government or non-government organisations were willing to fund them, or so time-consuming that villagers lost interest in participating. For all of the same reasons, most methodologies also have had little impact either on programme performance or village development.

One of us (JM) developed the 20PPP at the request of UNICEF. The purpose was to devise a village monitoring system that was short, simple, and inexpensive. After field-testing over 100 development indicators in nearly 50 villages in Bolivia, Mexico, Kenya, India, and Egypt, it was found that about 95 percent of villagers' concerns fell into five broad categories (Table 1):

- education and literacy;
- availability of health services;
- income generation and the alleviation of poverty;
- community environment and infrastructure; and,
- community unity and cultural enhancement.

Once these five categories were identified, and after reviewing the aggregate data on the different dimensions of each, it became fairly easy to select the most widely mentioned indicators in each category to make a total of twenty indicators. The 20PPP entails measuring village progress according to these twenty indicators. However, rather than relying on outsiders or 'experts' to carry out the evaluation, the 20PPP asks rural villagers to rate their village on each of the twenty indicators.

Table 1. The twenty points of progress survey

Indicator	How the Indicator is Defined
1. Attendance in village schools	The number of children 5-15 years of age who regularly attend school.
2. Adult literacy	The number of adults age 18 and over who possess basic reading, writing, and arithmetic skills.
3. Diversification of the school curriculum and the % of children completing school	The number of children who actually graduate from the village school as one indication of the quality of teachers and relevancy of the curriculum.
4. Parent-teacher collaboration	The number of parents who meet on a regular basis with teachers to discuss student attendance and progress, curriculum, educational costs, etc.
5. Vaccination of children	The number of children immunised for the most common diseases in the village.
6. Health awareness of parents	The number of parents who understand and use oral rehydration techniques when their children have diarrhoea, who are aware of indicators of malnutrition, and who seek to provide their children with a nutritious diet.
7. Availability and use of family latrines	The number of families who have and use a properly constructed latrine.
8. Establishment of a sustainable system of village health care	The number of families willing to pay some fee for services or contribute to a village health fund to support village health workers.
9. Food security/family vegetable gardens	The number of families who have adequate food security (enough surplus to live through short-term food shortages) measured by number of families who have vegetable gardens and awareness of organic farming.
10. Existence of savings and loan-giving groups	The number of families who belong to and actively participate in savings and loan-giving groups.
11. Existence of non-farming sources of income	The number of families who participate in supplemental income-generating activities outside of their own farming.
12. Family income status	The number of families living close to the subsistence level of income (i.e., 70-80 percent of their income spent just on food or malnutrition among the children is common).
13. Quality of houses	The number of families who have permanent, quality homes.
14. Quality of sanitation	The number of families participating in some type of sanitation program to reduce the flies and mosquitoes, remove stagnant pools, remove human and animal waste from areas close to people's homes, and establish some type of garbage collection system.
15. Existence of a functioning environmental committee	The number of families aware of environmental problems (i.e., soil erosion, deforestation, and water and sewage pollution) and participating in a program to reduce them.
16. Village infrastructure (potable water systems, roads, marketing facility)	The number of families who have access to potable water, good access roads to nearby towns, and a good transportation system for marketing and travel.
17. Quality of local leadership measured by extent of local resource mobilisation.	The number of families who have donated money, labour, or materials to complete a number of village-level projects.
18. Community cultural activities	The number of families willing to organise and participate in cultural activities, such as dance and singing groups, traditional cultural and religious festivals, the preservation of traditional arts and crafts, etc.
19. Youth programs and activities (youth ages 15-25)	The number of families willing to support the youth in sports, cultural and social activities, employment training, and income-generating project development.
20. Level of community participation in the Twenty Points Program and a broader inter-village networking program	The number of families in the village who are aware of the Twenty Points Program and have participated in meetings to determine how their village might work with other nearby villages to improve the quality of life in all the villages in their area.

Scoring system: 1=few; 2=some; 3=roughly half; 4=most but not all; 5=all or nearly

The evaluation results are then shared with the entire village to be used as a basis for community-consciousness raising, action planning, and resource mobilisation. Finally, the survey is to be repeated at least once a year over several years, and the scores of each indicator and the overall village score are to be tracked over this time to measure village progress, as perceived by the villagers themselves.

In order to keep the measurement instrument as simple and short as possible (no more than 40 to 60 minutes), a survey was developed in which each indicator was operationalised on an ordinal five point scale. Participants were asked to indicate how many villagers engage in different activities corresponding with the twenty indicators. A score of 1 means that only a few members of the community engage in the activity; a score of 2 means some, but less than half, of villagers; a score of 3 means roughly half of villagers; a score of 4 means most, but not all, villagers; and a score of 5 means all or nearly all villagers.

An initial field-test of the 20PPP in Egypt, found that two pairs of field-testers appeared to be much more successful in administering the survey than were the other field-testers. It was later learned that both pairs had received formal training in participatory methods, and in each case they had spent significant time explaining the importance and process of participation to the villagers before they introduced the 20PPP survey. As a result of this finding, choiceHumanitarian decided to develop and field-test a more participatory method for administering the 20PPP.

For the field-test site, choiceHumanitarian selected Guanajuato, Mexico, where it operates a village development program in a cluster of rural villages near the city of Irapuato. This site was chosen for two reasons. First, choiceHumanitarian employs a full-time Rural Development Facilitator in Mexico who is well-known, trusted, and widely respected in these villages. Because the 20PPP would be carried out by North Americans, it was essential that there be a contact in each village who could legitimise the exercise and help the outsiders gain rapid acceptance. Second, a PRA exercise had already been planned for

these villages, and it was decided to piggyback the 20PPP on this exercise.

Implementation of the 20PPP in Mexico

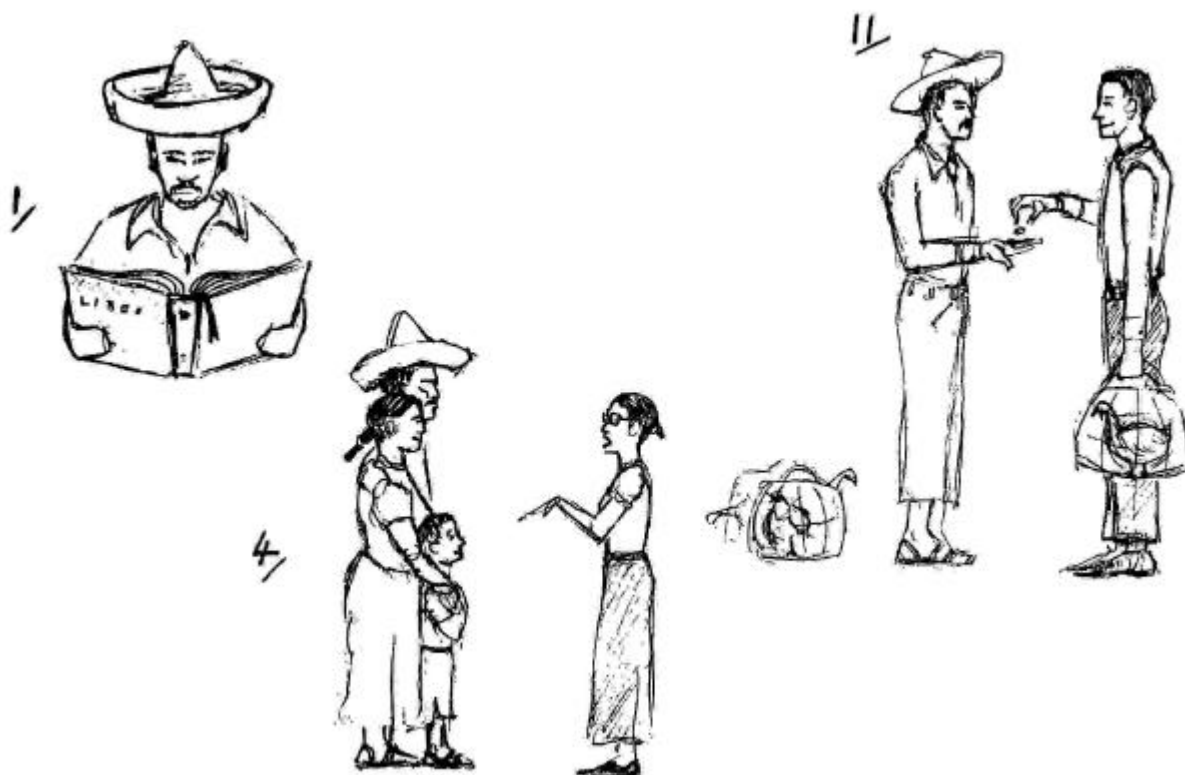
The implementation team consisted of one of us (GW) and six graduate students from Brigham Young University. None of the students had experience in development fieldwork, but each had previously lived in Latin America and spoke Spanish well. Before leaving for Mexico, the students attended an intensive two-day training workshop conducted on the 20PPP and participatory evaluation methods. Once in Mexico, the students were divided into three teams of two (one male and one female), and each team was assigned to live and work in two villages for one week each. The students worked with little direct supervision.

The first night in each village, the student teams facilitated a village-wide meeting, in which the students introduced themselves, explained the purpose for the visit, and fielded questions¹. After completing this stage of the meeting, the students facilitated the drawing of village maps and arranged a transect walk for the following day. Over the next week, the students administered the 20PPP survey to the following individuals and groups:

- formal village leaders;
- informal village leaders as identified by the Rural Development Facilitator;
- women and women's groups;
- men;
- persons living on the periphery of the villages;
- persons from different socio-economic classes as identified by village members; and,
- randomly visited households.

¹ Before the students arrived in the village, the Rural Development Facilitator arranged the meeting with village leaders. On arriving in the village, the student teams visited residents to invite them to attend the meeting.

Figure 1. Examples of drawings illustrating indicators as shown to villagers: indicator 1 - adult literacy; indicator 4 - parent/teacher collaboration; and indicator 11 - non-farming sources of income



Given time constraints, it was not possible to survey all village members in each village². Thus the selection of persons to interview was driven by the desire to provide a reasonably representative cross-section of all village members. In most cases, the students worked with focus groups (usually of 4 to 6 people), although they also conducted household interviews. Most focus groups were of a single gender. The focus groups were either arranged ahead of time by inviting persons to attend, or they were conducted on an informal basis with small groups that had congregated at different locations in the villages at different times during the day. The students also attended the weekly meeting of the women's savings group that existed in each village, at which they administered the survey to the women in attendance divided into small groups. To conduct household surveys, the students either arranged the interviews ahead of time, or they dropped by houses unannounced. The student facilitators began the survey by explaining to

each participant the methods and purpose of the 20PPP. Only when they were certain that this was understood did they begin the survey.

For each question in the survey, the students displayed a small drawing³ that represented the relevant indicator and depicted typical village life and dress (see Figure 1). While holding the drawing up for all to see, the students explained its meaning; then on placing the drawing on the ground or table, they asked the person or group to rate the village according to that indicator. To rate the village, the participants were asked to place on the card the number of rocks or beans (from a nearby pile) corresponding to their answer. Thus, if the answer to the question 'What is the percentage of children between the ages of 5 and 15 regularly attending village schools?'

² A couple of villages, however, were small enough that students were able to survey most village members.

³ These drawings were done by an art student from Brigham Young University. He was requested to make very simple drawings that depicted each of the 20 indicators. Being Mexican, he based his drawings on his familiarity with rural life in Mexico, thus depicting 'typical' rural village dress, architecture, culture etc.

was 'Most, but not everybody,' the participants would place four rocks or beans on the drawing. The students then recorded each response on a separate sheet of paper.

The villagers frequently asked for help in deciding what score to assign, in which case the students reminded them that it was the villagers' knowledge that mattered. When working with groups, the students encouraged group members to discuss their answers and then place the beans or rocks on the card only after the group had reached a consensus. If the students observed that certain individuals were either unwilling to voice an opinion or their views were disregarded by other group members, they encouraged the group to consider all points of view before reaching their decision. In some cases, villagers gave

hasty and unreflective answers, but in most cases, the villagers placed the beans or rocks on the card only after some reflection or discussion among group members. The survey typically took less than one hour to complete.

At the end of the week in each village, the students held a final village meeting, in which they shared the results of the 20PPP and the PRA exercise. To present the results of the 20PPP, the students arranged the drawings of the twenty indicators according to their score, taped them onto large sheets of flipchart paper, wrote a short description of each indicator and the average village score next to the drawing, and then hung the papers on the walls at the meeting site (see Figure 2).

Figure 2. Children observing the presentation of the 20PPP at the final village meeting (Photo: Gary Woller)



The students then briefly reviewed the village scores for each of the indicators and invited comments from those in attendance. After reviewing the results of the survey, the students discussed with the villagers those indicators in which the village gave itself the lowest scores. The students then encouraged the villagers to prioritise from among these indicators those that they would most like to resolve. Once these issues were identified, the students and the Rural Development Facilitator spent the remainder of the meeting facilitating the creation of village action plan to address the prioritised issues. At the conclusion of this meeting, the students formally presented the survey results to the delegado (mayor) of each village and secured a commitment from him that he would make the results of the 20PPP publicly available.

• Outcomes and lessons learned

Like many development programs, the 20PPP is long-term in nature. Raising villagers' consciousness, creating a desire to improve village scores on the 20PPP, establishing cause-effect linkages surrounding crucial issues, and mobilising communities' energy to address the many problems they face is a continual process. Thus it is not unexpected that repeated administration of the 20PPP may be necessary before it begins to yield progress in these areas and to produce higher survey scores. Nonetheless, from the field-test in Mexico and from subsequent field tests in Bolivia, Egypt, Kenya, and India, we have observed that the 20PPP can be an effective tool in raising community consciousness and in encouraging community action planning, resource mobilisation, and networking with external entities, as the following examples demonstrate.

In Mexico one village formulated an action plan to reconnect its potable water system (item 16 in the survey) and deal with saboteurs (someone in the village had been sabotaging the water system for fear of running out of water). In another village, the members formulated an action plan to build a new kindergarten (item 1 in the survey). Finally, in another village, the members committed to a plan to begin building, and to teach each other to build, family latrines (item 7 in the survey). In all three cases, the action plans were a direct

outcome of the 20PPP. A follow-up evaluation is now being planned for Mexico with the intent to extend the program to other villages in the area.

Similar outcomes were observed in field-tests in other countries. In a village in Egypt that participated in the 20PPP, village leaders contacted the local director of health to ask that their children be vaccinated (item 5 in the survey). The director agreed to organise a medical team to vaccinate all of the village children after the village leaders offered to pay for the gas of the medical vehicle and to provide the health team with a full-course meal as payment. On seeing how their village scores on the 20PPP compared with another village in their area, one group of villagers in Egypt decided to visit the other village to see how it had been able to improve its scores during the previous year. In a village in India, villagers organised a health committee as a direct result of the 20PPP decision-making process, which then proceeded to raise the needed money to send a local midwife for a six-week training program in modern medicine at a nearby hospital (item 8 in the survey).

Regarding the implementation of the 20PPP, we learned the following from the field-test in Mexico:

- Both men and women are able to discuss and prioritise the twenty indicators with little difficulty.
- Most participants have little difficulty intuitively understanding the five-point scale used in the survey. In fact, in many cases, it becomes unnecessary part way through the survey to continue to prompt the participants on the scoring procedure. What we lost in preciseness using this scoring system we gained in understanding and ease of administration.
- The use of drawings to explain the indicator and beans or rocks to indicate responses is a highly effective method of eliciting active villager participation in the survey. This method enables the villagers to see what they have answered on each question and to reflect on their responses. Moreover, this method is effective in involving children in the survey, which helps in administering the survey in households where children are present.

- Focus groups need to be kept small (six or less) and, if possible, of a single gender. In large groups, participants tend to lose interest more quickly, allowing dominant personalities to take over. Also, in mixed gender groups, women tend to defer to the men.
- It is possible to implement the 20PPP even with relatively little training or field experience. (In a subsequent field-test in Bolivia, villagers were trained in the administration of the 20PPP, and they helped implement it in their villages).
- The presence of a Rural Development Facilitator or an in-country staff member who is well known and trusted by the villagers is crucial to the action planning stage of the 20PPP. The Rural Development Facilitator either did not attend or did not take an active role in the action planning stage in three of the Mexican villages. In each of these villages, the student teams were unable to get the villagers to commit to a plan of action. However, the Rural Development Facilitator took an active role in the action planning stage in the other villages. In these villages the villagers committed to an action plan to address crucial issues identified in the 20PPP.
- The administration of the 20PPP is not demanding of villagers' time. In Mexico, it involved two village meetings (on the first and last night) and one hour or less of a villager's time to respond to the survey. Working primarily with focus groups and women's organisations permitted the student teams to survey a relatively large sample of villagers in a short period of time.
- The action planning stage of the 20PPP, particularly in combination with the results of the PRA exercise, is effective in establishing the cause-effect linkages surrounding the important issues identified.

• Conclusion

While the 20PPP uses only twenty indicators, field-tests have shown that villagers can and often do raise additional issues (such as gender-related issues) and add their own indicators to the original twenty. This flexibility allows each community to develop additional (or delete other) measures of progress if they desire. The potential advantages of an approach to measure village progress and mobilise community action that is short, simple, inexpensive, and flexible are apparent to many organisations working in the developing world. Already, several NGOs in Latin America, Asia, and Africa, in addition to several international NGOs, have expressed an interest in incorporating the 20PPP into their development programs.

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3

Public participation and GIS: report back

Gavin Jordan

• Introduction

Participatory Geographic Information Systems (GIS) has become an increasingly common subject (see *PLA Notes* 33, October 1998, p27-34), and raises both interest and strong feelings in the GIS and participatory development communities. At the moment, the use of GIS in a truly participatory context is in its infancy, and many would argue that participatory GIS is not a realistic possibility. However, key issues were identified at a recent workshop at the University of Durham, which was discussed in *PLA Notes* 33. These included:

- Defining a role for participatory GIS;
- How best to achieve a participatory GIS;
- Identifying constraints (e.g. capturing power relations in a GIS); and,
- Determining the added value of participatory GIS.

Participatory GIS was also discussed at a workshop in the USA run by the National Centre of Geographic Information Analysis. The specialist meeting in Santa Barbara in October 1998 aimed to explore these issues in detail, determine research priorities, and examine existing case studies of using public participation GIS, identifying their strengths, weaknesses and best practice. The Santa Barbara meeting was chaired by two of the participants at the Durham workshop, allowing for progression in the debate rather than replication.

The meeting was attended by about forty delegates, with backgrounds in the social sciences, natural resource management, urban planning and community support. The delegates were a healthy mixture of academics, NGO representatives, planners and information services professionals. What was less healthy, and may be indicative of the

problems associated with using this type of technology in a participatory capacity, was that virtually all delegates were from the north.

It was pleasing that most of the participants, including those who were from a GIS rather than participatory background, appreciated that the participatory process was of overwhelming importance, and that the technical GIS issues were secondary.

A number of case studies were presented, including natural resource management issues in Australia, Canada, Hawaii, Ghana, Nepal and South Africa. Additionally, a range of urban planning case studies were presented, principally from the USA, involving different types of community action groups. It was interesting to note both the commonalities and differences between the rural, natural resource and urban case studies. Commonalities included the challenges and possible solutions to developing community representation when using GIS. The scope for the process being hijacked by an elite appears particularly great. A key difference is access to information and resources, with the availability of GIS at a community level being a serious limiting factor in southern rural areas.

What was alarming, however, was the number of case studies which purportedly presented participatory applications of GIS but just used census information or secondary data sources in a standard GIS environment. In many of these cases there was *no* active participation. It became apparent that there is a long way to go before participatory GIS can be correctly defined, understood or implemented.

On a more positive note, the meeting provided an excellent forum for dialogue between 'GIS' and 'participatory' participants. There was more common ground than disputes and a number of key issues were identified:

- the need to define, identify and adopt best practice. This will require an emphasis on the participatory process, and necessitates a detailed knowledge of participatory techniques, and considerations of how these can be used when spatial information is desired;
- an emphasis on detailed monitoring and evaluation of processes, methods, accuracy and outcomes. The use of GIS means that accuracy issues become important, which has profound implications for classic spatial participatory tools, such as participatory sketch mapping;
- the importance of determining the ‘added value’ of using GIS and the nature of participation; and,
- a questioning of whether frameworks for public participation GIS can be developed.

Additionally, a detailed research agenda was drawn up, and a number of these are now being examined, via projects initiated through seed grants and reflecting on existing projects. Projects initiated via the seed grants include: transferring knowledge obtained from work in South Africa to community work in inner cities in the USA and developing participatory GIS frameworks for community forestry based on previously separate work in Nepal in Ghana.

The papers presented at this meeting can be found at the following website: **<http://www.ncgia.ucsb.edu/varenius/ppgis/papers/index.html>**

Additionally, there is a list-server up and running, dealing with issues of public participation in GIS. To subscribe, send an e-mail to **maiser@scifac.indstate.edu** and include the following message: **Subscribe PPGIS-Conf** in the text section of the email.

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Learning from analysis

Ensuring reflection in participatory processes

Irene Guijt and Su Braden

• Introduction

This special issue of the *PLA Notes* looks at the tricky process of ‘making sense of the information’. While it is easy to generate much interesting and unusual information through participatory processes, it is often very difficult to make sense of the mountain of ‘data’ with which we are left. Where does participation in analysis begin and end? When does it happen, and how and by whom is local learning represented? Critics of participatory development often point out the superficial and descriptive nature of such work, asking how conclusions were reached and whose conclusions they are. Facilitators can get carried away with visual methods while forgetting their main purpose – critical reflection. As Mukasa and Mugisha (this issue) write, this type of work can be: ‘manipulation to make local people **feel** important without **making** them important’. How can serious analysis ensure that local people learn about the value of their lives and gain the confidence to represent their own choices?

Analysis is often a vague process in much participatory work, with steps that are rarely explicit. In these processes, some information is included but much is excluded; some people are involved while others are absent; conclusions are verified and local people recognise their own authorship of these conclusions, and sometimes they are not and local authorship is remote. Problems are prioritised, but how do we know if they are based on a thorough understanding of underlying causes? Plans are written but whose priorities are included?

The articles in this issue discuss what happens when data are ‘collected’, discussed, summarised and shared, when priorities are made, and action points are agreed. Insights are shared from community-based analysis of gender differences in Uganda, poverty assessment in the UK, and irrigation planning in Peru. Challenges are raised by experiences with the analysis of rural views for policy audiences in India and Malawi, and with municipal planning in Brazil. Facilitation-related questions are discussed by examining well-being assessment in London and training manual development in El Salvador.

• Analysis and its benefits

The Concise Oxford Dictionary describes analysis as ‘resolution into simple elements’. But in participatory processes, far more is involved. An alternative definition was developed by PRA facilitators in Uganda: ‘*a critical look to deepen, clarify and structure information (ideas, facts, impressions), understand interconnections and examine cause-effect links, identify core elements, in order to arrive at conclusions that can lead to action/solutions to a given problem*’ (Guijt 1996).

Thorough analysis, including by local participants, can make all the difference between a superficial descriptive report or simplistic feedback session, and one that is based on a deep understanding, with a broad ownership that motivates people to action, whether they are villagers, policy makers or professionals.

What other advantages does systematic and ongoing reflection bring? The articles suggest that the time and effort invested is rewarded by many significant benefits (see Box 1).

**BOX 1
BENEFITS OF REFLECTION**

- To uncover new information – by discussing basic information, people's memories can be triggered and new information and insights can emerge (see van Dijk, Braden and Nelson, Phnuyal, Guy and Inglis, Chase et al)
- To limit biases – ensuring a thorough discussion about views and information means it is cross-checked and people can point out when they feel an issue has been represented incorrectly (see Faria, Rengasamy et al, Mukasa and Mugisha)
- To build a clear picture of a situation/event/process and reach consensus – by discussing data, contradictions can emerge and be ironed out (see Cornwall, Rengasamy et al)
- To avoid a superficial action plan – simply knowing, for example, the number of people who experience food shortages does not help understand why this happens – further analysis can reveal the structural causes of problems and solutions (see Mukasa and Mugisha, Phnuyal, van Dijk, Faria)
- To facilitate action that has broad ownership - understanding the causes and extent of problems, and how solutions can benefit individuals and groups, can motivate people more to invest in making the change happen (see van Dijk, Cornwall, Mukasa and Mugisha).

These outcomes are not guaranteed for each situation - it depends on many factors, such as the purpose of analysis. As Faria describes in the case of Brazil, analysis had a different purpose at different moments: first secondary data analysis helped develop the research methodology, then analysis focused on the quality and reliability of the information and identified gaps, followed by clarity about core problems, and finally it focused on possible solutions. For van Dijk and Mukasa and Mugisha, analysis was essential to create support for women's needs - empowerment through reflection by women and men. This brings us back to an important root of participatory learning and action methods,

Paulo Freire and his concern to focus on how participants benefit. Analysis can help ensure the *exchange* of learning between facilitators and participants.

Generally speaking though, irrespective of the purpose, analysis is using discussion and reflection as a 'filter' through which many ideas and fragments of information are funnelled and consolidated. It is a constant sifting and filtering of information, to create new insights.

• **Different types of analysis**

When it occurs

Analysis is often assumed to 'happen' automatically, during the construction of a map or the ranking of problems. But there are many smaller moments when information is filtered or changed and interpretations are made that influence the final outcome (see Box 2).

**BOX 2
ANALYSIS HAPPENS WHEN...**

- reviewing secondary data to identify a checklist (e.g. Faria, Rengasamy et al);
- noting down or including only part of what is heard or filmed (e.g. Braden and Nelson);
- copying diagrams from the ground onto paper, or from large onto small version (or vice versa);
- when synthesising information at community feedback meetings (e.g. Faria and van Dijk);
- when probing one part of the discussion and not another;
- when compiling the final report (e.g. Cornwall, Rengasamy et al);
- when using one method (e.g. a questionnaire) and not another (e.g. a flow diagram).

At each step, some judgement is made, conscious or not, about what bit of information is more important than another. While it is impossible to become conscious of every act of judging and filtering of information in a complex process, it is possible to become more aware of when it is happening. Particularly for participatory development, knowing what makes 'good analysis' happen, can help to

structure the process and get the best out of the efforts.

The timing and sequence of analytical steps is also influenced by the level for which the final output is intended (see Box 3).

BOX 3
LEVELS OF ANALYSIS

- micro-level: local analysis for local solutions (e.g. van Dijk, Faria, Mukasa and Mugisha; Phnuyal)
- meso-level: local analysis with summarised conclusions that are used outside the community to secure support for local needs/solutions (e.g. Braden and Nelson, Cornwall)
- macro-level: local analysis for policy-level support and insights (e.g. Chase et al, Rengasamy et al).

The higher up the information moves, the more it will be filtered and presented in different ways to suit different audiences. Maintaining information that represents the opinions of the people becomes increasingly difficult, as Rengasamy et al warn. That is why in Brazil, many opportunities were planned to ensure that people recognised their views in the final conclusions (see Faria, this issue). So analysis becomes a continual cycle of 'construction, deconstruction, and reconstruction' of information, until it is ready for writing up as a plan.

• Who's involved?

For whom is the outcome of analysis in participatory processes intended? If it is local people and their lives, then how are they involved at each step in the analysis? If it is policy makers, then how are they linked into the learning process? Many important questions about who participates must be considered. Who sets the agenda? Who decides who to invite to meetings? Who is invited? Who is recording? Who checks the conclusions? Who writes the plan or report, or edits the video images? The articles offer different answers to these questions. They work with large community meetings or small groups of representatives, with many facilitators or with one, and with external or local facilitators.

Sometimes, the first step, the setting of the agenda, on which subsequent analysis is based, starts with community level input. Mukasa and Mugisha explain how a local agenda emerges through the use of an 'issues matrix', while in Brazil, the newly elected local council defined the core concern - a solid municipal plan. But agenda setting is not always in the hands of local people and can start with external organisations. For example, Braden and Nelson discuss how government departments and research institutes formulated the basic research problem. They explain how the research team then negotiated a broadening of this agenda to be more inclusive of local concerns. van Dijk describes a similar situation in Peru, with the external organisation initiating the contact and determining the broad natural resource management focus: *'Within the topics defined by the facilitators, the [irrigation water] users defined the bottlenecks and important issues and also decided when to have meetings and who would participate.'*

Some may jump to the hasty conclusion that this external agenda-setting is 'bad' practice. However, it is not precise agenda-setting that has taken place, but rather some limiting of the scope of the work to fit within the mandate of the external organisations that initiate the process. This offers great potential for influencing policy through participatory research and planning (see also *PLA Notes* 27, October 1996).

At the heart of participatory analysis, lies the question of who is making sense of the data. Often, work that may initially have been inclusive can shift towards analysis by facilitators or researchers. If this shift goes far, then concerns are justified. However, external people can play an important role. Rengasamy et al and Faria write that external researchers undertook the task of synthesising community information, that would have been too tedious or time-consuming for farmers. Cornwall describes another experience: *'In the first phase, with the listening survey, most of the analysis was mine and most of the learning was one-way (original emphasis)'*, but as she continues *'... the knowledge I acquired helped me to facilitate better what was to follow'*. The notion that initial analysis by facilitators, be they local or external, can help to construct a

better subsequent process for others is also illustrated clearly by Phnuyal. Therefore, analysis is rarely a process and product only of 'the people'. It inevitably involves a mix of community members, facilitators, community representatives, and others.

Three aspects of local participation in analysis require some attention. First is the question of who should be involved. The presence of some and the absence of others when agendas are set, cause and effect are analysed, and priorities determined, points out consideration of gender-balanced representation and that of the poor, the young, and the less mobile. Mukasa and Mugisha offer a powerful example of how a commitment to gender-balanced development motivated their organisation to find an approach for negotiating gender and age-related differences as part of community planning. Cornwall and van Dijk worked with separate community and interest groups.

Second, is the question of who wants to be involved in what can be quite a tedious task. External organisations often assume that there is a high degree of local desire and willingness to undertake analysis. But not everyone has the time or inclination, as Rengasamy et al note. Nor should this be considered a problem, as 100% participation is neither practical nor possible. Several contributions suggest using smaller groups to synthesise information or make initial suggestions for possible action plans (Faria, van Dijk, Cornwall, Braden and Nelson). What all stress, however, is giving the opportunity to as many as possible to voice their views on priority concerns or action points.

Third is the question of who has the capacity to analyse. In participatory development, there is a tendency to romanticise the existence of the 'village analyst'. Not all community members might have that capacity. One aspect of this limitation is highlighted by van Dijk, and Mukasa and Mugisha, when discussing the involvement of women. They stress that simply offering women the opportunity to debate and reflect did not mean they grabbed that chance. In Peru, exchange visits helped women to see *'that it is possible to tackle certain problems successfully, such as overcoming the fear of public speaking, and being able to express their ideas and points of*

view in assemblies' (see van Dijk, this issue). Self-confidence is needed before participation is possible.

• Tools for analysis

If the findings from participatory research are important for local people, then by inference they should be involved in analysis, which brings us to the question of the choice of appropriate methods. A common criticism of PRA and similar approaches is that it imposes the use of certain tools and contexts (mainly groups), which are often culturally alien forms of analysis. Furthermore, as Rengasamy et al write: *'one of the very advantages of participatory methods is also a major drawback - the very wealth of information that is generated'*. How are the methods selected and applied to produce analysis? And which ones are effective at achieving the different purposes of analysis described above?

Two challenging insights about methods come from El Salvador and Peru. In El Salvador, the idea of finding good, analytical tools by opening a manual was rejected by a group of local facilitators (see Phnuyal, this issue). Instead, from their own understanding of local concerns and communication, they selected and created more appropriate methods and sequences. van Dijk takes an equally critical stance, stressing the valuing of local analytical methods: *'More important are the moments without the facilitators, when villagers are able to discuss in their own private or public space the issues raised ... and reflect'*

Unfortunately, few concrete examples exist about the link between such local forms of discussion and externally-facilitated moments and methods.

External methods are not, by definition, problematic. It lies more in how they are used. The H-form, for example, is a simple and effective tool for sharing views (see Guy and Inglis in Tips for Trainers, this issue), as are card-clusters (Schmidt, 1996). Video, too, as an external method offers potentially new ways of analysis, as shown by the 'Rivers of Life' work in Devonport (see Chase et al, this issue) and the video transect from Malawi (see Braden and Nelson, this issue). Capturing and transmitting local people's voices on film

limits the interpretation and filtering of words that inevitably happens when writing notes. However, in the editing of video images still lies the power to filter and it is, therefore, an analytical step. As Sam Swaby notes (see Chase this issue), he enjoys *'picking a jewel from miles of tape'*. It is his perception, then, of a 'jewel' that stands as a summary of 'miles of tape'.

The articles reveal some striking similarities between the methods and sequences. In south London, Brazil, and India, PRA methods were used to elicit local views and information, which were then registered on cards and grouped per topic (see Cornwall, Faria, and Rengasamy et al, this issue). In both Brazil and India, a matrix-based analysis was combined with flow diagrams to structure the data and highlight cause-effect linkages. A third similarity is the use of synthesised reports for checking and probing further in London, Brazil, and Uganda (see Mukasa and Mughisa), although the form in which these reports are presented are, of course, distinct.

When planning which method to use, the different analytical purpose of each method needs to be considered. Which tools are used for opening up and exploring the range of local agendas? These can be seen as 'process tools', which introduce topics, and break down themes. And what are the tools for defining (narrowing and agreeing specific agendas)? These are designed to produce what we call 'data', which are used as the basis for action by participants and outsiders. In the Devonport example (see Chase et al, this issue), 'Rivers of Life' was used as the former and mapping as the latter. The maps were used for hard data about the agreed boundaries of 'our patch' (or neighbourhood) and about the resources that were available within 'our patch' and those that were not. In Malawi, maps were used to open agendas, and transects and drama to focus on key problems (see Braden and Nelson, this issue). In Brazil, mapping, seasonal calendar, 'dreams' and semi-structured interviews were used to open agendas, and card clustering and a linkage matrix to narrow the focus around action priorities (see Faria, this issue).

In each of these examples, the outputs from one method determine which method is most

appropriate for the next step of analysis and synthesis. But for Rengasamy et al the tools proved multi-functional. Those that had been useful for collecting initial information, also *'proved to be useful tools to assist in disaggregating raw data, presenting it back to key informants, identifying key themes and finally identifying policy options'*.

Coming full-circle

In the quest for analytical methods, the purpose of participatory learning must remain central. How do we avoid ending up with a mass of material, which due to the sheer amount, may not get analysed either by insiders or outsiders (see Rengasamy et al)? This calls for a more careful choice of methods and planning of sequences to ensure that some meaning emerges. The use of methods should provide a series of building blocks for thinking and with which to discuss. Fewer tools, with more in-depth discussion, may be the way forward (see Braden and Nelson, this issue).

After a phase in the development of participatory methods when everyone was publishing handbooks and collecting games, tools, and diagrammatic evidence, this issue of the *PLA Notes* brings us back to the original idea - that the methods we use are only intended to help us think. Focusing on methods as carriers of information, from inside the community to the outsiders, was never the original idea behind participatory *learning*.

• The quality of analysis

The benefits that can, in theory, result from well-structured analytical processes - understanding, consensus and action - only happen after long and persistent efforts in discussing the meaning of collected data and uttered statements. Lengthy engagement is a striking feature of all the experiences described here. None happened in one session, a week or a month, stretching instead from six months to two years. Longer engagement also improved facilitation skills, and thus the depth and breadth of analysis (see van Dijk, Braden and Nelson). Perhaps then, one criterion of recognising participatory work that has been based on sound analysis is long term engagement?

However, overdoing 'analysis' is easy, as Mukasa and Mugisha warn. Too much discussion and no action is a sure recipe for 'participation fatigue', with drooping motivation and dropping numbers. They stress the importance of supporting small local initiatives, while pursuing ongoing negotiation about intra-communal difference and consensus. It remains a tricky balance, though, to ensure that enough is discussed, deepened and understood, without it being stranded in a 'talk feast'.

Local motivation is also affected by the flexibility of the agenda to change as analysis progresses and new insights are gained. Fixed, externally-determined agendas from the onset may well narrow the discussions in such a way as to make it uninteresting for others. If the topics do not relate to their own lives and work, then participants, whether they are villagers or bureaucrats, will understandably be less willing to stay involved.

Not only the available time and flexibility affects the quality of analysis. The size of the area, distance between participants, and language are other practical considerations. Mukasa and Mugisha, and van Dijk, both worked in a limited number of communities, enabling them to invest much time in personal relationships and small group discussions. This would not be possible if participatory research or planning extends to cover a large geographic area. In El Salvador, however, development organisations managed to cover large areas as well as develop close relationships by working through trained local facilitators (see Phnuyal, this issue). Distance between different participating groups is another a factor. In Malawi, one village dropped out in the last stage of analysis about rural energy policies. Distance from the city, bad roads and poor weather conditions had thwarted its contribution to the last meeting (see Braden and Nelson).

Language is, of course, a well-known obstacle. It enters in the very first step. Alien concepts like 'sustainable agriculture' (Rengasamy et al) or 'well-being' (Cornwall) need to be (re)defined locally for them to be recognised and analysed. When translation is required, analysis can become particularly problematic as this creates at least two more filters through

which words pass – from facilitators to translator to participants, and back. This can sometimes totally alter the meaning or original sense of urgency.

Careful selection and sequencing of steps and methods can sustain interest and participation, thus increasing the chances of meaningful analysis. Safe ways, based on local negotiation and decision-making structures, are needed to ensure that access can be gained by those that are normally excluded. Observation is vital to understand the culturally-specific avenues through which such challenges can be made, for example drama (Braden and Nelson), formalised speech opportunities (van Dijk), symbols (Mukasa and Mugisha), local themes (Phnuyal), or polished reports (Cornwall). And all this hinges on whether the attitudes and behaviour of facilitators make people simply *feel* important for a while or *make* them and their concerns important. Good analysis requires more than a good discussion (Mukasa and Mugisha).

• Learning for improvement

By revealing the purposes, sequence of methods, and participants in analysis, the articles here offer many ideas for improving analytical processes of change. Two other aspects require further attention, that of the match between good local analysis and outside expectations, and of facilitation for analysis.

Analysis and funding agencies

Several authors have written about the role of funding agencies, organisations or agencies involved. The irony is this: many organisations increasingly seek approaches that can improve the quality and outcome of analysis, yet the parameters within which they operate also, unwittingly at times, impose conditions that limit what is possible. As van Dijk points out, when discussing the importance of allowing locally-paced discussion: *'From an intervention point of view, it is crucial to include such moments of 'non-intervention'. But the consequence is a more time-consuming process than most development organisations are willing to allow.'*

But it is not only timing, it is also their models of analysis or the focus of attention. For

example, the logframe that many funding agencies insist on for formulating projects and programmes, imposes a structure of cause-effect thinking that is quite alien in some contexts. Also, pre-determining a narrow research question that assumes certain concerns or definition of problems, will often need to be broadened to make it locally relevant and therefore, stimulate participation in analysis (see Rengasamy et al, Cornwall, and Braden and Nelson).

Does the Malawi case study (see Braden and Nelson) offer one way forward, despite taking much time? It was a participatory approach designed to find information on a predetermined agenda. Nevertheless by insisting on a multi-disciplinary approach and by including as many of the donors and partners in the process as possible, they became joint owners of the process. They began to understand 'time invested' in relation to 'benefits'.

Facilitation for analysis

Facilitators, be they local or external, also play a critical role in analysis. They suggest, they probe, they encourage, they redirect, they take notes. Yet their roles and how they learn to facilitate analytical processes are seldom documented and analysed in detail.

What is their role? As mentioned above, several authors note that the more skilled the facilitators, the more able to hand over and guide, and the more local the analysis became. Does, therefore the role shift from initiator and co-analyst to process guide? But sometimes facilitators need to help create the willingness to listen within organisations for whom these ways of working are new. *'My direct involvement helped create confidence in the methodology: ... Having laid the groundwork, I was able to build capacity and shift control to community members and local workers in subsequent work ..., limiting my input to training and advice on the process'* (see Cornwall, this issue). This implies perhaps that a much wider set of skills are needed, not only to make analysis possible within and between different groups, but also to create the space for the outcomes of analysis to be heard.

Second, how can facilitators be trained in the 'art of analysis'? Are facilitators being trained to perpetuate the use of a method, or should they understand the purpose of 'deconstructing and reconstructing' knowledge so that local people can critically review their own lives (see Phnuyal, this issue)? If it is the latter, then diagrams and videos are not so important for the descriptive outputs they produce, but rather to enable people to see choices. Facilitating analysis without sophisticated methods is possible, but not without insights about how analysis happens.

Analysis is a much more complex and culturally-specific skill than is often assumed. This raises a problematic contradiction for those organisations that expect rigorous results from facilitators of participatory processes. Fieldworkers are commonly on the bottom rung of the organisational career ladder. That is not usually a satisfying place for reflective, analytical people. If analysis through participatory process is to be scaled up into organisational learning, and into a better level of dialogue and response between the grassroots and policy makers, it is crucial that the role of the fieldwork is integrated into the career structure of organisations. Fieldworkers need to have on-going support, encouragement to publish, and to feel that what they experience in the field is integrated into organisational policy. There is a danger that, as long as fieldworkers and policy makers within development organisations are seen as working on different career scales or structures, there is little chance of upgrading and integrating critical learning from the field at the policy level of organisations. This raises the danger that the calibre of fieldworkers will be impoverished. In order to benefit fully from the potential of local level analysis, more understanding is needed about how to deal with the position of facilitators of analysis within organisations.

• Rethinking assumptions about analysis

What complexity is hidden in that one word 'analysis'? Many assumptions appear to be made that have been questioned in this issue of the *PLA Notes*. It does not happen automatically, it has to be structured; it is not contained within a method but in sequences

and debates. It does not rely on 100% participation but can still be inclusive. It is not about listing priorities after a week of methods, but about consciously and publicly filtering information until a broad consensus for future action is reached.

By discussing the detailed processes 'inside' the participatory work, the experiences here show us that analysis does not have to be superficial. They encourage us to create meaning, in more conscious and critical ways, out of the mounds of information that emerge through diagramming, videos and discussion. Analysis becomes valuable when it helps local groups to take action or seek support. Information that is not useful for anyone is, after all, a waste of time. Participatory processes without prioritising analysis is a lost opportunity for external organisations and communities alike.

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