



# Beyond Appraisal: Participatory Appraisal of Needs and the Development of Action (PANDA)

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It is often useful to have a framework for guiding decisions about process when carrying out or facilitating some intervention. This paper describes such a framework, developed out of combining participatory rural appraisal (PRA) with various OR/systems methods, that we have used in work in both developing and developed countries to enable local people to obtain, share and analyse knowledge of their life and conditions and to plan and act according to that knowledge. The paper begins by examining the framework provided by PRA, indicating why we felt it necessary to develop something slightly different. This paper will then outline the approach which we refer to as PANDA (Participatory Appraisal of Needs and the Development of Action). Applications are illustrated by means of a case-study taken from a developing country context. © 1997 Elsevier Science Ltd

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## 1. INTRODUCTION

THIS PAPER describes not a methodology, but a framework linking different approaches and methods that were used in the developing countries to enable local people to obtain, share and analyse knowledge of their life and conditions, in order to plan and act according to that knowledge. We have labelled this framework as PANDA (which stands for Participatory Appraisal of Needs and the Development of Action), and as we will show, PANDA owes much to Rapid Rural Appraisal (RRA) [1, 2], its later manifestation Participatory Rural Appraisal (PRA), issue structuring methods and Community OR. PANDA was developed for a number of reasons, one important one being to enable work in situations where the aggregation of local knowledge can influence policy or development plans.

This paper will outline the development of PANDA and this will be followed by a description of a case-study of its application, in Belize, Central America. It has also been used by the authors and collaborators in Pakistan, South Africa and Nepal in the developing countries, as well as within the UK. Throughout this paper we will illustrate why we have argued elsewhere [3] that it is more helpful to think in terms of issue structuring and exploration rather than problem structuring and solution. We will also introduce the idea of issue structuring methods as a means for Appropriate Process Transfer. We will also argue that this form of analysis is timely and is in keeping with the shifts in organisational and economic life to solutions which emphasise decentralisation, locality, heterogeneity, diversity and empowerment, not only with regards to the poor in the developing countries, but also the community/voluntary sector in the UK. Thus, although it is

development that is the focus of this paper, the framework discussed is not only relevant in the developing countries. The first part of this paper will explore participation as a necessary preamble to considering RRA and PRA. The critique offered of RRA and PRA illustrates the need for developing a rather different approach to build on their strengths, while also addressing their limitations. We have approached this through the use of different OR/systems methods.

## 2. PARTICIPATORY APPRAISAL OF NEEDS

One view, current among development workers, is that while the language of development changes very quickly, the reality of development practice lags behind. Sometimes the language recedes into history as with the notion of 'partnership for development'. In other cases, concepts persist and spread, whatever happens in the real world situation. Participation is one such word. However, given its durability, establishing a definition of what participation is, or should be, is not an easy matter. Firstly, this is because the word participation has historically acquired a wide variety of specific meanings which can be drawn upon at any time, with the possibility of slippage from one to another. Secondly, while participation is used rhetorically today, with the best intentions, to mean empowering the weakest and poorest, in reality or practice, institutional constraints may result in different outcomes. Also, in any contemporary context, participation is imbued with different ideologies, or given particular meanings by people situated differently within any situation. The rationale for participation is often couched in terms of calls for participatory democracy invoking particular notions of citizenship or the restoration of a 'proper' balance of power between the government and the people. This is linked in some cases with the 'new right' and desires to reduce the role of the state in social policy. In other cases it is associated with a variety of ideologies of the left, in particular with the emergence of organisations concerned with rights, self-advocacy and self-help for development beneficiaries. Croft and Beresford [4], writing in the western context, label this as the distinction between 'consumerist' and 'democratic' approaches to user-involvement; in the

context of development it would be more appropriate to talk about beneficiary involvement. Other rationales for participation are improving the quality of decisions and increasing commitment to implementation. Consumerist perspectives argue from a basis of concern about the cost of development policy, dislike of the 'nanny' welfare state (which is perceived as creating and perpetuating dependency), and public disquiet about poor quality, paternalism and lack of response of government. In contrast, democratic perspectives arise from equal opportunities struggles, voluntary and community sector initiatives and the development of philosophies of involvement by marginalised groups. The fact that participation has such wide currency amongst different political positions is one of the factors supporting its proliferation in common usage.

Given all this, the search for a satisfactory definition of participation means exploring the meanings attached to its use in any context, how these meanings are contested and deployed and who gains and loses in the process. Thus, to investigate participation we would need a mode of investigation which would be far beyond the scope of this paper to discuss. It is within this context we would like to present a specific and limited description of a version of participation with respect to planning in the developing countries.

Theories on participation in development draw on two broad sources. First, the pioneering effort to popularise participation in development has drawn on Freire's work in education, in particular, his strategy for liberation [5], also known as conscientisation. The Freirian framework applied to development is that the poor and exploited can, and should, be enabled to conduct their own analysis. Freire [44] has been widely influential in education movements in the developing countries [3] and the adult education movement in the UK, but still only corresponds to a minority view among planners interested in participation in development. There has also been a general move towards participation in the social sciences, motivated by concerns that conventional quantitative and so-called 'neutral' research methods tended to perpetuate social inequality [6–9]. Social science research began to adopt features including problem orientation, respect for people's capabilities to

produce and analyse knowledges, accepting that the researcher has a commitment to and an involvement with the community, rejecting 'value neutrality', and the adoption of the belief that research is a learning process for researcher and community [10, 11]; this framework is often referred to as action research.

The second source on which theories of participation in development draw is the discussions of the failure of 'blue-print' development programmes (which occurred at around the same time as the rejection of the 'trickle down' theory of economic development). During the 1980s, these discussions focused on why 30 years of conventional, technocratic, top-down development programmes had been unsuccessful [6, 12]. Such programmes have been characterised as a 'blue-print' for the implementation of the 'designed-in-advance' solution to an identified problem [6, 12]. It became clear that the failure of these programmes continued to occur whenever they were imposed as standard, 'top-down' programmes or projects, on diverse local realities, where they did not fit, nor meet the needs of, the recipients. We are not going to rehearse here all the criticisms of the blue-print approach, as these can be readily found in the literature (see for example Korten [13]). We summarise only some of the main points. Throughout the blue-print approach it is (implicitly) assumed that analysis can be, and is, comprehensive, in that there is a systematic attempt to take all relevant factors into account. Leaving aside questions of the desirability of such an approach, it can be questioned on the grounds of feasibility in many different ways, in particular in terms of the implicit assumptions that it involves at various stages. For example, it may not be the case that values and objectives can be uncontroversially agreed at the outset. The desired ends cannot necessarily be treated as conceptually distinct from the means by which they might be achieved. It may not be possible for all relevant factors to be identified and taken into account, since this necessitates full knowledge of all relevant cause and effect relationships, and of the consequences of all alternative courses of action. Finally, the necessary resources of time and effort to carry out all relevant analyses may not be available. The consensus among the commentators is that the failure of traditional 'blue-print' pro-

grammes can also be traced to the alienation of the beneficiaries, leading to suggestions for beneficiary involvement [14].

This led to three main ways in which the participation of the beneficiaries could be conceived [15] (a more detailed classification of different types of participation, into eight categories, is given by Arnstein [16]). First, it can be conceived as a cosmetic label, to make whatever was proposed look good. Second, it can describe a co-opting practice, i.e. '*they* participate in *our* project'. Third, it can be used to describe an empowering process which enables local people to do their own analysis, to take command, to gain in confidence and to make their own decisions. It is with this third meaning and use that we are mainly concerned here.

The shift in emphasis (paradigm shift according to some [17]) resulted in the proliferation of alternative participatory or process approaches [13], even though the top-down paradigm remained dominant. An analysis of these was provided by Pretty and Chambers [18]. It seems that most of these approaches share the same key features [13, 18] and these are: flexibility, continuous information gathering at the micro-level, experimentation and iterative learning. Most of the approaches include a strategy for mobilising local people to identify problems and develop tentative solutions. The key to the process is participation and the process is 'bottom-up' [1, 13]. This has been taken to mean that the process is usually seen as 'people oriented', and it seeks to build coalitions that can steer the design and implementation of responses to locally identified development problems. These approaches are spreading rapidly among non-governmental organisations, some are even spreading into government organisations. The latter is little researched and not so well documented [17-20].

Rapid Rural Appraisal (RRA) is one of the many attempts at bringing participation into development planning. Its sources were farming systems research, participatory research and social anthropology. RRA has three main origins: the first was dissatisfaction with biases of traditional rural development practices; the second was disillusionment with the normal processes of questionnaire surveys and their results and, finally, more cost effective methods

of learning were sought [18]. Although RRA developed from different sources [21], the principal exponent of the approach is Chambers [1, 22]. He describes RRA as a semi-structured way of learning quickly from local people about key problems and opportunities for the alleviation of problems. Others have called it an “approach and methods for learning about rural life and conditions from, with and by local (rural) people” [23]. RRA has come under fire from many practitioners claiming that the approach is too restrictive for rural development planning [17, 19, 20]. In particular, it is claimed that RRA is elicitive, extractive and is mainly for the benefit of outsiders. Given this, Chambers has noted the emergence of a modification of RRA which he calls Participatory Rural Appraisal (PRA) [19], and which addresses the critique of RRA. Here, one important difference (and we find this to be the only one), is that PRA sees the outsiders as facilitators, who should work with the local people to enable empowerment and sustainability. The emphasis is on the process, and the leadership is supposed to shift from the outsiders to the local participants. According to Chambers, PRA problematises the behaviour and attitude of outsiders [20]. PRA aims to go beyond learning about issues for outsiders, and to ensure that there is participation in planning, by putting local people’s priorities first, facilitating their analysis and supporting their experiments or experience [19, 20].

The principles of RRA/PRA are as follows:

- *learning rapidly and progressively*: with conscious exploration, flexible use of methods, improvisation, iteration and cross-checking, not following a blueprint programme but being adaptable in a learning process;
- *offsetting biases*: especially those of the ‘rural development tourist’, by being relaxed and not rushing, listening and not lecturing, probing instead of passing on to the next topic, being unimposing instead of important, and seeking out the marginalised and disempowered groups, and learning their concerns and priorities;
- *optimising trade-offs*: that is, relating the costs of learning to the perceived value of information, with trade-offs between quantity, quality, relevance, accuracy and timeliness. This includes the principles of optimal ignorance,

knowing what is not worth knowing, and of appropriate imprecision—and not measuring more than needed, i.e. ‘better to be approximately right than precisely wrong’;

- *triangulation*: meaning using a range of methods of analysis, informants, types of information, investigators and/or disciplines to cross-check;

- *seeking diversity*: that is, maximising the diversity and richness of information. Chambers describes this as deliberately looking for, noticing and investigating contradictions, anomalies and ‘differentness’;

- *facilitating—they do it*: facilitating investigation, analysis, presentation and learning by rural people themselves, so that they present and own the outcomes, and also learn. This often entails the outsiders starting the process and then sitting back and not interrupting;

- *critical self-awareness*: meaning that facilitators are continuously examining their behaviour, and trying to do better.

### 3. BEYOND APPRAISAL: TOWARDS PARTICIPATORY PLANNING

Elsewhere, certain weaknesses of the RRA approach [2] for planning have been described. In particular, it has been pointed out that it cannot be used beyond appraisal, i.e. towards analysis, planning, choice and action. RRA may be a good approach/tool for data collection but it takes as ‘matter of fact’, or unproblematic, the transition from the extraction of the data, to the exploration of issues, the development, assessment and comparison of different options, and the choice of a course of actions. Little regard is given to the inherent problems associated with decision-making or planning such as conflict, group interaction and so on [24]. In fact many of the published reports on the use of RRA for planning amount to ranking the options (once elicited) according to four given criteria [23]. No exploration of the inherent uncertainties is taken into account, neither is any conflict of opinions, nor the effects of the interaction of other parties pursuing their own interests [13]. PRA has not improved on this weakness. It may have a different emphasis towards participation, but it still uses the same tools for the investigation [20].

Besides the above, it is surprising to find that there is a lack of critical reflection on the

practice of PRA/RRA from the field workers. As Mosse [25] asserts, the information for planning drawn out by PRA is shaped by social relationships (i.e. between the locals themselves and between the locals and the investigators), and so certain kinds of knowledge can often be excluded or not raised. He goes on to say that to prevent this from happening, PRA needs to be complemented by other methods which can generate the conditions necessary for locally controlled innovation and change. The next section explores some methods as possible candidates for complementing PRA.

Another problem with the RRA/PRA approach is that the issues and problems normally elicited are seen in isolation from one another. The inter-relationships are only tentatively examined. Different perceptions of the situation are rarely considered explicitly. This is so, even though within the toolbox of methods there are approaches such as drawing up influence diagrams to explore perceptions of causality. A casual glance over the published reports on the use of RRA set out in the series of RRA notes and its later continuation as Participatory Learning Approach (PLA) notes published by the IIED (International Institute for Environment and Development) shows that this method (influence diagrams) is rarely used.

#### 4. BEYOND APPRAISAL: COMPLEMENTING PRA WITH METHODS FROM THE MANAGEMENT SCIENCES

It is no coincidence that the call for participation in management decisions coincided with the call for participation in development planning. Even though the history of both these claims have descended from different paths or have different traces, it is suggested here that, in spite of this, it may be fruitful to examine how the approaches may complement each other. Chambers [17] has also alluded to this, professing that there has been a paradigmatic shift in many fields from mathematics and science, to management and development, and many of these fields now share the following in their discourses: decentralisation, empowerment, personal responsibility and change. Also, PRA resonates with this new paradigm in much the same way as the management discourses. Therefore it should not appear too problematic to explore the synergy

between PRA and the management discourses, to see what can be borrowed from each or how they can be used together, with, of course, some caution. Some planning tools from the management sciences will be described below and we will show how they can be used with PRA.

There have been several participatory planning tools developed in the US and the UK. During the 1970s a set of planning tools was developed under the name 'strategic choice approach' that the authors argue found a compromise between rational comprehensive planning and incrementalist planning [26]. The approach was conceptualised after a study on decision-making in a few English county councils by the Institute of Operational Research (IOR) at the Tavistock Institute. Since then, the approach has had many applications, mainly in Europe and Canada. Apart from a couple of cases [27, 28] there has been a dearth of applications of the approach in the developing countries. Even so, its proponents have claimed that the approach can lend itself to planning in the developing countries because:

- it can tackle messy, open-sided problems in a structured manner, where the concepts are easy to grasp, and where the use of diagrams allows everyone to participate in the process
- it minimises survey data collection efforts by formulating the scope of these activities in an advanced stage of the planning process, instead of starting with it, as is done with most planning methods
- it allows inter-connections to be seen and causal relations to be examined
- it allows triangulation [28]

When one compares this to RRA/PRA one can see some obvious similarities.

It can be further argued that the advantage of the strategic choice approach is that it helps to identify the uncertainties that need to be recognised before one scenario out of all others can be chosen. The uncertainties are of different kinds, for example—uncertainties about political priorities, gaps in the knowledge of subject matter and lack of information on what is going to happen in related concerns. The product of the process is a 'commitment package' [29] which is believed to be an innovation in planning. Generally, when planning with a group, the simple assumption made is that the aim is to arrive at a set of final decisions to

which all members of the group are equally and fully committed. In the strategic choice approach, decisions are seen as milestones rather than something that is final. The 'commitment package' is a package of incremental steps in a continuing decision process, in which immediate action is balanced with other more exploratory steps designed to work progressively towards future commitments. Hence, there is a re-orientation of the decision as a single agreement to a more realistic view of decision-making 'in progress'.

In an earlier paper it was suggested that perhaps the issue structuring methods (ISMs) or at least parts of them may be able to make up for this lack of analysis and exploration of options [2]. Parts of strategic choice were used after an RRA survey with some success. However, we think it is fairly apparent that one has to be cautious in using ISMs for planning in development. The methodologies are quite complex and sophisticated. Even though there have been claims that the ISMs lend themselves to be applied in the context of the developing countries [12], there is little to help would-be users since there have been very few published applications of the methodologies in the developing countries. There has been a number of reports: one was on the use of the strategic choice approach in Brazil [27]; another was of the use of the same approach in Indonesia with representatives of a government planning bureau [28]; another was an example using soft systems methodology in development planning [17].

However, it may be difficult to use an ISM on its own. In the developing countries, locally elicited information is full of contradictions, anomalies and differences. Some of the participants may be illiterate and uneducated and so it may be difficult to involve them in the process. But the approaches can use graphs, diagrams and other non-verbal representations. These are features they share with RRA/PRA. Non-verbal representation is an important part of these approaches, because it allows all who are present to see, point to, interrogate and alter the representations. People can cross-check and correct each other, and the information is shared and owned by the participants. It is also claimed that for those non-verbal representations that are visual, visual literacy is almost universal [20] and so to increase access to

participation, methods should use some form of 'diagramming'. Combining the modes of representation from PRA with the ISMs may help to alleviate potential problems of using the ISMs by themselves. Another common feature of the ISMs and PRA is that they both reduce information overload and the need for detailed inflexible prescriptions [30]. In PRA this is achieved by 'optimal ignorance' [23] or 'optimal trade-offs' [19].

It is not just using the ISMs with PRA that is problematic, using a whole ISM may be too time consuming (some workshops take a few days to complete), or stages of it may be irrelevant or inappropriate. It is perhaps because of the above that we find selective use of constituent parts of ISMs increasingly important [31]. Some of the parts have strengths in data-elicitation, some in option generation, some in option exploration and evaluation, others in choosing or finishing a process. In our experience in doing community OR, the ISMs were never used in their entirety. They have been disassembled and the parts spliced to bits of other methods [32, 33] and used as was seen appropriate. This view has been a subject of a number of recent papers [2, 32–35]. Here, other researchers have also been constructive in disassembling the ISM approaches and using parts in appropriate situations [34]. Therefore we thought that breaking up the methodologies and assessing their appropriateness in the development context may lead to fruitful adaptations.

A helpful guideline to what might be appropriate to use can be found from Chambers' work. In particular in what he sets down as the requirements for methods to qualify for PRA. Firstly, it needs to be recognised that rural people have a greater capacity to map, model, quantify, estimate, rank, score and diagram than outsiders have generally supposed them capable of [20]. The methods should:

- adopt multiple perspectives (i.e. seek to embrace diversity)
- be a group inquiry process (i.e. complexity is revealed through group inquiry)
- involve a mix of outsiders and insiders
- have an animateur(s)
- use transparent tools (e.g. diagrams are popular and powerful)

In the case-study it is illustrated how we have responded to the criticisms outlined above. We refer to the framework we are developing as PANDA (Participatory Appraisal of Needs and the Development of Action). It is to be taken as the use of a combination of parts of methods from PRA with parts of the ISMs. A menu of some the methods that can be used within the framework of PANDA is shown in Table 1. We argue that, using PANDA, the process can go beyond appraisal and towards action. We also argue that PANDA is relevant and suitable because it ensures:

- the affirmation of individuals and difference
- a pluralist stance is used giving voice to individuals and groups
- knowledge and technology are seen as contextual in time and space limiting their transferability
- the future is recognised as uncertain and indeterminate

We have discussed elsewhere the underlying theoretical principles on which PANDA is based [36, 37]. In the next section we illustrate PANDA in action by considering a case-study in Belize.

##### 5. BEYOND APPRAISAL AND TOWARDS PARTICIPATORY DEVELOPMENT: A CASE-STUDY

This project was carried out by one of the authors (LW) in Belize, Central America, in conjunction with a non-governmental organisation, Help for Progress (HELP). HELP was established in 1981 to respond to the various constraints to development that the rural communities in Belize face. HELP states that its mission is to "support and promote activities at

the grass-roots level through the participation of the rural poor in identification, preparation and execution of projects for their own betterment". It works with around 40 different groups or co-operatives, and its on-going programmes include agricultural production, community development projects for women, youth and refugees and training in human resource development. HELP lobbies, on behalf of its communities, the government of Belize on issues relating to rural development. It also contributes to debates on regional issues, by being an active node in several Caribbean and Central American NGO networks.

The project described below arose because HELP was concerned about its relationship with its groups and the communities it works with. The lead development worker thought that a study with the groups would help to improve links with the rural communities. At the same time, the organisation was concerned about rumours that claimed that aid money from international donors would be cut in the Central America region. HELP wanted to explore what options and strategies were available in order to sustain its own activities.

It was agreed that the first part of the study would use PRA, to assess the needs of, and to evaluate HELP's work with, the groups and communities. The team (which comprised LW and the HELP workers) agreed that the principles that should govern the work should be participation and inclusiveness, in that the methods used should admit a wide variety of views from a range of people and groups. The team devised a semi-structured interview schedule and, in pairs, worked in different regions within Belize. In the respective regions, each pair conducted group interviews, ranking exercises and map drawing exercises. The pairs ensured that the information and maps were

Table 1. Illustrations of methods for use within PANDA

From PRA*	From ISM
Secondary sources	AIDA (analysis on interconnected decision areas)
Semi-structured interviewing	Stages from Team Syntegrity, such as Problem Jostle and Hexadic Reduction
Transects	Comparative advantage
Trend analysis	Strategic Assumption Surfacing and Testing
Venn diagrams	Mapping and influence diagrams
Wealth ranking	Commitment packages
Analysis of difference	Action methods
Ranking	
Stories/drama	
Brainstorming/SWOT	

\*Good sources on methods and use of them are found in the RRA and PLA notes series published by the IIED (International Institute for Environment and Development).

available to the participants for further interrogation and criticism.

To give a more explicit example: LW's pair went to an area called Santa Marta in central Belize, and carried out a PRA with a number of co-operatives and groups. These included: the Indian Creek Co-operative (cattle rearing), Grupo de Mujeres Progresista de Santa Marta (women's corn mill project), White Lime Co-operative (fertiliser production) and the Bed and Breakfast group (women's eco-tourism project). The participants were interviewed by the pair; one talked with the groups while the other was taking notes. Many of the maps and diagrams were drawn up by the participants and interrogated by them. Feedback meetings were held with each group to discuss the findings for further modification. The information was organised according to whether it provided details about the composition of the community or groups, how they are organised or their capacities to act. Also, the information was arranged to provide a picture of the existence, coverage, accessibility and acceptability of the services provided by Help and other NGOs.

Some of our findings were:

- All the groups said that they needed training in organisation skills and co-operativism.

- Indian Creek Co-op have 25 head of cattle but have not secured an area for them. The co-operative members are poor and have to work on large commercial citrus farms 2–3 days a week, therefore they had no time to prepare the grazing area.

- Grupo de Mujeres said they lacked support from the men of the village. They also said that HELP is a good organisation that can help groups with funding, but they should visit the area more regularly and provide more training.

- White Lime Co-op claimed that they are having conflict over the size of the group, which is proving disruptive, they need an office and they need electricity. Threats to the group are the very long rainy season, and possibility of a government minister setting up a large commercial mill in Punta Gorda.

Each of the groups were asked to prioritise their problems and list their suggestions for change. The commonly recurring order of problems were: first, a lack of organisational

skills at the top, followed by poverty, then a lack of infrastructure.

After a week of PRA activity the pairs had gathered quite a lot of information. It is worth noting here that some of the pairs reported that during their exercises some groups felt uneasy about exploring some of the issues in depth, therefore a lot of the information was felt to be superficial. It was agreed that this was in part a weakness of the PRA approach, and that this difficulty would have to be dealt with in the next stage which was to be a workshop. For the workshop we wanted the representatives of the groups to bring with them all their concerns, problems and opportunities. It was realised that the work carried out in the villages was mainly extractive in nature, so the workshop was planned, not only to ensure that the findings were shared and validated, but also to explore what important action(s) could be taken that would be beneficial to the groups and the NGO. For the workshop, processes decided upon were elements from Syntegrity [38] and parts of the strategic choice approach [26]. The aims of the workshop were to discuss and allocate priorities to the problems identified from the PRA and to explore possible interventions. Another aim was to discuss how HELP could improve the existing services it provided and discuss new ways to meet gaps in its services. It was decided that the best way to ensure that the options and actions were shared and owned by the participants was to produce a form of commitment package.

### *5.1. Results from the workshop*

Using the hexadic reduction phase of Syntegrity [38] and the shaping phase of the strategic choice approach [26], clusters of major issues were brought out by the group; these are shown in Table 2 with corresponding decision areas and options.

The issues were then examined in more depth by comparing different schemes using several criteria such as employment of women and youth, and sustainability, and then trying to bring out and resolve the uncertainties. This was done using the outcome resolve stage of Syntegrity [38]. A discussion of the uncertainties then followed. A form of commitment package took shape as the uncertainties were being discussed. The final commitment package produced is shown in Table 3. It is presented in

Table 2. Outputs from the hexadic reduction and shaping phase

Issues	Decision areas	Options
Infrastructure	Lack of feeder roads to farms	<ul style="list-style-type: none"> <li>● Lobby government</li> <li>● Seek help from international NGO</li> </ul>
	Land tenure	<ul style="list-style-type: none"> <li>● Investigate</li> <li>● Not investigate</li> </ul>
Marketing	Need to improve marketing	<ul style="list-style-type: none"> <li>● Explore structure for produce (except citrus)</li> <li>● Get access to marketing information</li> </ul>
Services	Improvement of services from the agriculture, marketing and cooperative departments	<ul style="list-style-type: none"> <li>● HELP to lobby departments</li> <li>● Not lobby departments</li> </ul>
Training	More organisational building and leadership training	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>
	More motivation sessions	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>
Funding	Fund raise for income generating projects	<ul style="list-style-type: none"> <li>● With assistance by HELP</li> <li>● Do it themselves</li> </ul>
	Increase credit schemes	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>
Migration of members	Stem migration of individuals from one community to another (mainly in the south of the country)	<ul style="list-style-type: none"> <li>● HELP assist in this</li> <li>● Not assist in this</li> </ul>

a rather different form to the usual structure of a commitment package. This was used because it was the form that participants felt comfortable with.

To sum up, the workshop forged a partnership between the participants and HELP. It might appear that the commitment package is a detailed checklist for HELP. However, it should be interpreted as a document indicating HELP's commitment to work with the groups more closely and to be concerned and aware of their needs. The problem areas identified and worked on during the workshop were ones perceived as important and in some cases urgent, and in order to do something about them a joint commitment was required. It was felt that this was achieved. The arrangement was that HELP would work with the relevant groups on specific issues, and that they would use the format adopted at the workshop. They also agreed that a regular review was needed of what was going on. In this way HELP would be accountable to the groups.

One issue that was raised before the project was started was should the organisation take seriously all the evidence provided by the participants? The PRA philosophy is that local knowledge is best. During the PRA exercise it was clear that information about the participants experience had to be taken seriously.

What remains to be tested was whether the solutions to their problems could be based on their own experience and knowledge. On top of this, it was soon realised that many of the constraints to the group's and participants' problems stemmed from or at least involved the Government of Belize (GoB). It would be a major achievement if GoB did take direct local communities views on board rather than rely on outside expert's reports. However, given that things cannot change overnight, what was encouraging was the way in which the participants legitimised HELP's role in getting their views across to GoB. One of the outcomes of the workshop, therefore, was to raise HELP's advocacy role. The groups wanted HELP to represent their issues at meetings and so on, and HELP saw that the processes of PANDA could help to ensure that strong cases could be made, which reflect the views of the groups and the communities that owned the issues.

## 6. DISCUSSION

There have been many local successes in community based participatory planning [39]. However, there is still the issue of whether the process and its results can be 'scaled up' to larger areas and regions, and to what extent the work can be replicated elsewhere. We would

Table 3. The final commitment package

	Now important	Not so important
Infrastructure	Groups meet to organise a request to the Belize government to discuss community development programmes HELP to lobby Government on access roads to farmlands HELP assist in identifying markets HELP provide training in marketing	HELP make recommendations to the Belize Government and international NGOs regarding land tenure and drainage HELP to address health issues within communities Investigate off-season crop production HELP to join government committees
Marketing		
Services		
Training	HELP to simplify their training to reach grassroots people Training sessions on conscientisation/awareness to be held More training in post-harvest technology and marketing HELP assist in local fund-raising activities	
Funding	HELP to explore diversifying credit programme to cater for project areas such as furniture making, wicker works Explore project financing for new projects Groups to organise role playing sessions in the south (bring other groups to the area)	
Migration		

argue that it is important to see the results as remaining only locally relevant. Although it is hard for the *results* to transfer, the *process* can be replicated in other contexts, producing (possibly different) locally relevant results.

In the case-study, the needs generated from bottom-up local participatory planning were completely unconstrained. To select and implement ideas and solutions, another round of debate to introduce constraints was needed. This is where the NGO as a stakeholder might come in. A problem for PRA is that it does not deal with multi-agency planning, only with bottom-up needs assessment, so it does not help in taking this further step. As shown in the case-study, ISMs helped to facilitate this later stage of the process. One of the reasons they can be useful in this way is that some of ISMs provide ways of representing and exploring causality, networks of influence and compatibility; none of the techniques associated with PRA do this. The different modes of representation that can be utilised in the ISMs (and PRA) enable participants to interrogate the representations and to refine them progressively. The choice of mode of representation must be appropriate to the circumstances and the participants, and this may necessitate some experimentation until the most suitable mode is found. It may even be appropriate to use several different modes. The key point is that the less sophisticated the representations, the more participation will arise. A trade-off or compromise in the level of detail is necessary. However, the level of representation must be such that analysis is possible and that the majority of the participants can examine the possibilities.

The processes that were used in the case-study here we refer to as PANDA (which stands for Participatory Appraisal of Needs and the Development of Action). This moves beyond needs appraisal to deal with issues of multi-agency, and the feasibility of the options generated. PANDA seeks to emphasise the elements concerned with option formulation, evaluation and selection, i.e. the move to action, and it is in this that it is most different from PRA.

It is important to recognise that PANDA is not a methodology, but a framework within which different approaches and methods can be flexibly and creatively mixed and matched to enable local participants to obtain, share and

analyse knowledge of their life and conditions and to plan and act according to that knowledge. Within this process we have mixed and matched methods from PRA and ISM. This includes using only parts or stages of individual methods. One reason we do this is in order to create for each situation a blend of methods that the participants feel comfortable with and engage with. However, we have found selective use of different components extremely helpful, when mixed with other things. In following this approach we are not interested in the theoretical justifications for the use of particular methods, but rather in their pragmatic usefulness as judged in practice. We should also note the importance of reflecting on the 'reasons' for different choice of methods, involving a process of ongoing critical reflection by the facilitators/animateurs. In this paper, we have not dwelt on the theoretical principles underlying PANDA, as we have dealt with these elsewhere [36, 37].

The penultimate point we wish to make is the relevancy of the above for OR in the developing countries. We would first like to question the notion of a one way transfer and of a 'technology' transfer which can be found in traditional OR practice in 'developing' countries. Instead we have found it more appropriate to conceive of it in terms of two way interaction and a process transfer. In terms of the features of the process as outlined above, we find ourselves in general agreement with those features identified by Bornstein and Rosenhead [30], with the exception that we would emphasise a focus on *issue* rather than *problem* structuring. We note also that their ideas on process are similar to those of Chambers for PRA. Other examples of the use of PANDA, in both the developed and developing countries settings, can be found in the literature [32, 33, 36, 40, 41]. The framework has also been taken up by various community groups and NGOs, and, in order to facilitate its use, a manual has been produced [42].

The final point is to explicate the notion of 'appropriate process transfer'. Our practice in the community or voluntary sector in the UK, has been informed by our experience of carrying out OR in the developing countries and the literature on development, and especially participation and RRA/PRA. Thus we see a two way transfer in terms of our process of doing

OR. We label the concept 'appropriate process transfer'.

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