



Learning from the Renewable Natural Resources Research Strategy

Participatory research approaches

Participatory research (PR) was not a specific focus of the DFID-funded Renewable Natural Resources Research Strategy (RNRRS), which ran from 1995 to 2006. However, a wide range of PR processes were initiated, developed and applied within the RNRRS programmes. This experience provides a wealth of information and valuable lessons regarding the opportunities and constraints of using PR.

Key messages

- Participatory research (PR) can be very effective but is not appropriate to all situations.
- PR can raise the expectations of end-users since they are encouraged to articulate their demands and identify solutions. PR approaches should be used sensitively when there are opportunities for long-term engagement and end-users' demands are likely to be satisfied.
- Conducting PR within an appropriate research and development (R&D) framework can considerably increase its effectiveness.
- PR can promote new forms of institutional arrangements. It can also help to change attitudes and build capacity to make new institutional arrangements effective.
- Engagement with stakeholders at all levels is essential. Early PR approaches tended to focus on the relationships between primary stakeholders (e.g. farmers and fishers) and researchers. They sometimes ignored the linkages required to inform and influence policy makers regarding the new knowledge and innovations generated.
- Wider application of PR approaches in development work will have important implications for the relationship between research and development. Greater integration of R&D processes in the future is vital, with PR playing an integral role in both.

Introduction

Although the range and type of PR has expanded greatly over the past 30 years, the defining characteristic of this research process is still the involvement of relevant stakeholders (e.g. farmers, fishers, extension officers, policy makers, etc). Stakeholders, for example, may help to define problems and issues for research, collaborate in data gathering and analysis, and/or apply the research findings.

The literature shows clearly that global experience of PR has generated much debate, analysis and subsequent refinement of the approach. This review (albeit of a limited sample of projects) was

undertaken to contribute to this debate by drawing on a decade of natural resources research project experiences implemented in a variety of sectors (forestry, fisheries, agriculture, livestock farming and plant breeding) within the RNRRS. This Brief highlights and discusses the key lessons learned and identifies future challenges for PR.

Background

The function of development research is to generate new knowledge that can be used, in the context of the development process, to bring about a desirable

outcome. The RNRRS aimed to remove researchable constraints to economically and environmentally sustainable renewable natural resource development or resource management. It was well recognised from early on that the underpinning research faced a range of opportunities and constraints (see Box 1).

Making the most of participatory research

Several useful lessons can be gleaned from the work of the RNRRS:

Participatory research is not appropriate to all situations

It is important to recognise when PR is appropriate and when it is not. If ‘participation’ becomes an end in itself, it will distract those involved from the original research objective.

The degree and the purpose of participation can vary widely depending on the type of research being done. For example, research conducted by the Plant Sciences and the Crop Production Programmes argued that, while there are benefits to involving farmers in field trials, there are significant reasons why participation is necessarily limited (Blackie and Gibbon, 2003; Witcombe et al., 2005). The reasons cited include the high degree of knowledge required to conduct certain stages of plant breeding – expertise rarely possessed by farmers – and the high cost of participatory breeding. To counter the problem, the researchers introduced ‘mother and baby’ trials. Mother trials are conducted on a research station and include a full range of options, while baby trials are carried out by local farmers who select the options they are most interested in. The result was an improvement in participation levels without compromising scientific rigour or increasing costs.

Participation has been a central element in research in a number of RNRRS projects. For example, the Fisheries Management Science Programme (projects R7335 and R8292) examined adaptive learning processes in relation to fisheries co-management arrangements. The very mechanisms by which different stakeholders participated in the process were themselves a topic of the research.

Box 1. Participatory research: opportunities and constraints

Opportunities:

- Rural people generally have in-depth knowledge about their circumstances and production systems and this can be used to identify researchable constraints to development.
- Involving local people in the research process increases the relevance and applicability of research findings and improves their delivery to the end-user.
- Participation can change the nature of research, reducing the need for high levels of human and financial resources.
- PR encourages communication and the sharing of information between stakeholders and researchers which facilitates the R&D process.

Constraints:

- Some circumstances or situations can prohibit effective participation in research (and related development) processes. For example it is difficult to involve heterogeneous, highly mobile or disjointed communities.
- The governance context may severely limit the extent to which participation can be translated into meaningful outcomes. For example, even when they contribute to the provision of new knowledge, rural communities may have very little voice in decision making concerning natural resource exploitation and management.
- It is difficult to design and implement effective participatory research projects because they require new ways of working. These are often at odds with research practices pursued by conventional research institutions and funding organisations.
- Researchers and specialists may believe the process of engaging rural communities in research compromises the scientific rigour of the research process. With some research topics, this perception may be more or less justified.

However, in some situations, participatory approaches have been included in research projects for no apparent reason – other than the researchers involved perceived that PR should be a part of all projects within a development context. Another more cynical reason could be that PR ticks the right boxes with funding agencies. When this happens, the participatory elements are often inappropriate to the research objectives and can hamper the achievement of the project's scientific goals.

Participatory approaches can raise end-users' expectations

Many development projects using PR encounter the problem of unrealistic expectations. This is because the act of asking stakeholders to define their problems and participate in finding a solution can raise expectations about the possible outcomes. The Post Harvest Fisheries Programme came up against just such a problem (see Box 2).

Participatory research needs an appropriate R&D framework

Establishing an appropriate R&D framework can enhance the management, communication and application of knowledge derived from PR. The Farmer Field Schools (FFS) model is a good illustration. The Food and Agriculture Organization of the United Nations (FAO) developed the FFS model in Southeast Asia during the 1980s to help small-scale rice farmers understand the benefits of and learn the skills required for adopting integrated pest management practices.

The FFS model encourages participation and uses facilitators rather than trainers to create conditions for farmers to learn through observation, experimentation and discussion. It therefore demands a major paradigm shift for traditional extension workers who are more used to a 'top-down' approach. Within the FFS framework, research, communication and application of research findings can be carried out with close collaboration between managers and end-users.

As experience of FFS has grown, the model has been adapted to many different environments. For example, the Animal Health Programme (and FAO) supported an R&D project for livestock production systems (Minjauw, 2001). FFS helped livestock

Box 2. Testing the feasibility of participants' expectations

The Post Harvest Fisheries Programme used a participatory interventions approach to define a menu of possible technical and economic interventions that would help fishery workers improve their livelihoods.

The project used an open forum to identify possible interventions. While this was successful in helping the fishery workers produce a list of possibilities, some of these were inappropriate because they were too expensive or not technically feasible. This led to some disappointment as the open forum had raised participants expectations that their ideas would be put into practice. The project team then revised the list, producing a more workable set of solutions, and these were fed back to the participants for further input. The team stressed that field-testing was necessary before the feasibility of each intervention could be established.

Learning why the fishery workers considered a particular intervention acceptable or not was important for the researchers, since this helped them focus on the most acceptable and appropriate solutions.

Source: Ward et al. (2001).

farmers to examine problems they had identified themselves, giving them control over the process of investigation and adaptation.

Participatory research helps create new institutional arrangements

The RNRRS demonstrated that an appropriate institutional base is essential for engaging in PR and for promoting the benefits of participation after a project has finished. For example, in Nepal and India, Forest User Groups (FUGs) have long been a part of the national forest management process. Some are more mature than others, having broad and effective stakeholder involvement. However, all have proved to be vital entry points for introducing

PR into common pool resources in the Himalayas. Recent RNRRS work has focused on strengthening the management capacity of the FUGs, for example by encouraging more equal sharing of resources and giving the poor and marginalised a greater voice in the management process (see R6778 for more).

Other RNRRS projects have established institutions to promote participation, co-operation and co-management of resources. A good example is the establishment of Local Resource Users Groups (LRUGs) by a project in Bangladesh (R7917) that explored the role of self-recruiting fish species (fish that can be harvested from farmer-managed aquatic systems without regular stocking). LRUGs were set up to encourage knowledge sharing between stakeholders living on floodplains where the sustainability of livelihoods and resources are closely interlinked.

Lack of land, capital, tools, labour or time often prevents rural stakeholders participating in R&D interventions. The self-help groups established as part of the Natural Resources Systems Programme work on rural service delivery increased the participation of the poor by giving them access to credit through small revolving loan schemes. These groups have proven to be very successful and have been maintained well beyond the completion of the project (see R7830 and R7839).

These examples show that institutional arrangements established initially for the research process have acquired a life of their own, continuing when the research phase has ended. The emphasis on participation has ensured such arrangements suit the needs and capacities of stakeholders and develop relevance beyond their original research function.

Engagement with stakeholders at all levels is essential

Participatory approaches may be criticised for being too localised and non-replicable. This can be true, since PR is a time-consuming and expensive mode of research that is unlikely to be conducted over a large area. A major drawback associated with the localised focus of PR is that it rarely involves or is able to influence policy makers. Thus, while PR may influence improvement in the uptake of research outputs and the sustainability of research on a small scale, it is rarely able to effect significant policy change.

When decision-making mechanisms are more decentralised, there may be more opportunities to influence local-level policy making. Indeed, PR processes can bring the poor together with decision makers for dialogue, a process that might otherwise not occur. Such meetings can have a positive effect on attitudes and perceptions on both sides.

Many projects attempt to include a wide range of stakeholders in their research, yet the very act of participation may be hampered by the presence of more senior and powerful figures, especially where patron–client relations inhibit the participation of the poor and marginalised.

It is clear that the mechanisms and pathways by which the outputs of PR are likely to influence the policy and decision-making process have to be thought through carefully – as in the case of more traditional research approaches.

Greater integration of R&D processes is needed

As the debate on participation has progressed and matured over the past 30 years, so the relationship between researcher and subject has been constantly reassessed. Many researchers (e.g. Chambers, 1997) have commented on the way in which the institutional, political, economic and cultural priorities of the non-poor (urban elites, political leaders, donors or extension agents) continue to dominate the development agenda and the research programmes that contribute to that agenda.

There are many ways to address these issues, ranging from the radical reshaping of the whole institutional and political framework within which development and development research take place, to attempts to adapt research (carried out within existing frameworks) to be more participatory, collaborative and empowering. In the context of the RNRRS, the focus has tended to be on the generation of research programmes that are more closely related to the realities of the poor in the field and better able to accommodate the diverse knowledge and experience of different stakeholders, including the poor, in the research process.

The understanding of PR has clearly gone beyond the early interpretation of participation as simply co-opting village people into activities conceived and designed by outsiders. Understanding is now more advanced and recognises the advantages

of close relationships between stakeholders at different levels of society (partnerships) and the common identification and solution of problems over time (research). The benefits of establishing structures and mechanisms (institutions/processes) that capitalise on these new relationships and share the knowledge derived from them are also better understood. In other words, there is an awareness of the need for multi-stakeholder engagement in the research process in order to link it more closely with the overall process of development.

In the future, the development and adoption of new approaches to PR will require the relationships between formal researchers and target stakeholders in developing countries to change. All actors will need to consider different views and possibilities related to the way in which knowledge systems are created, owned and used. Institutional resistance to change will be encountered, but in the long run, if the value of appropriate PR for natural resource management and development can be demonstrated, then the necessary changes are likely to follow.

Future challenges

The study highlights three challenges that need to be addressed if PR is to make an effective and valuable contribution to natural resource management and development in the future.

Firstly, it is important to build upon the success and experience of the last 10 years concerning the development and application of PR approaches. There is a need to undertake a critical assessment of when and where different forms of PR are appropriate, and to establish a framework and mechanism (e.g. PR database, new tool books and kits) whereby lesson-learning and best practice in the use of PR can be disseminated and shared by different stakeholders.

Secondly, it is important to identify and assess the options for developing new types of research projects and initiatives that link and integrate PR and development processes. Particular emphasis should be placed on linking the micro-level (the usual domain of participatory work) with the macro-level (where participatory policy work remains to be fully explored). It is also worth considering the 'success stories' within past RNRRS initiatives, which could

form the basis of new strategies and approaches for overcoming institutional and other constraints.

Thirdly, in order to accomplish the above, it will be necessary to invest time and resources in building partnerships for undertaking these new forms of research activity, both in developed and developing countries. However, the creation of effective partnerships often requires a significant amount of time and patience.

Additional resources

- Blackie, M. and Gibbon, D. (2003). *Enhancing impact: Strategies for the promotion of research technologies to smallholders of eastern and southern Africa*. NR International: Aylesford, UK.
- Campbell, J. and Salagrama, V. (2001). *New approaches to participation in fisheries research* FAO Fisheries Circular No. 965. FAO: Rome, Italy.
- Chambers, R. (1997). *Whose reality counts? Putting the last first*. ITDG Publishing: London, UK.
- DFID (1998). *Research and the sustainable rural livelihoods approach*. In: Carney, D. (ed.) *Sustainable rural livelihoods: What contribution can we make?* Department for International Development: London, UK.
- Minjauw, B. (2001). *Training of trainers manual for livestock farmer field schools*. Based on a participatory workshop held 17–29 September 2001, Bungoma, Kenya. FAO: Rome, Italy.
- Ward, A., Salagrama, V. and Joseph, M. (2001). *Participation and post-harvest fisheries: An approach to identifying appropriate interventions*. NRI: Chatham, UK.
- Witcombe, J.R., Gyawali, S., Sunwar, S., Sthapit, B.R. and Joshi, K.D. (2005). *Participatory plant breeding is better described as highly client-oriented plant breeding*. 1. Four indicators of client orientation in plant breeding. *Experimental Agriculture* 41: 299.

RNRRS projects

- R6778 *Community Forestry in Nepal: Sustainability and Impacts on Common and Private Resources*
- R7335 *Adaptive Learning Approaches*
- R7830 *Integrated Management of Land and Water*

Resources for Enhancing Productivity in Bihar and Eastern Uttar Pradesh

R7839 Improved Livelihoods – Bihar and Uttar Pradesh

R7917 Self-recruiting Species in Aquaculture – Their Role in Rural Livelihoods

R8292 Uptake of Adaptive Learning Approaches for Enhancement Fisheries

For further information see <http://www.research4development.info/projectsandprogrammes.asp>

About this Brief

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About the Renewable Natural Resources Research Strategy (1995–2006)

The objective of DFID's Renewable Natural Resources Research Strategy (RNRRS) was to generate new knowledge and to promote its uptake and application such that the livelihoods of poor people are improved through better management of renewable natural resources. Through its ten research programmes it addressed the knowledge needs of poor people whose livelihoods are dependent on natural resources production systems in semi-arid areas, high potential areas, hillsides, tropical moist forests, and at the forest/agriculture interface, the land/water interface and the peri-urban interface. The breadth of the strategy programme reflected the wide variety of environments in which poor people live in poorer countries and the multiple routes by which research can reduce poverty.

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