LEARNING ON PARTICIPATORY APPROACHES:

A SYNTHESIS OF DFID'S RENEWABLE NATURAL RESOURCES RESEARCH STRATEGY (RNRRS) PROGRAMMES, 1995-2006

A report prepared for the

UK Department for International Development (DFID)
Fisheries Management Science Programme (FMSP)
managed by MRAG Ltd

February 2006

STUDY TEAM

Dr Arthur E. Neiland [(1)]
Dr Elizabeth Bennett [(1)]
Dr Philip Townsley [(2)]

[(1)] IDDRA Ltd
Portsmouth Technopole
Kingston Crescent
Portsmouth
Hants PO2 8FA

Tel: +44 (0)2392 658232
Fax: +44 (0)2392 658201
E-mail: neiland@iddra.org

[(2)] IMM Ltd
The Innovation Centre
University of Exeter
Rennes Drive
Exeter

E-mail: ptownsley@fastwebnet.it

EXECUTIVE SUMMARY

This report examines the experience of the RNRRS in participatory research. Although the range and type of participatory research (PR) has expanded greatly over the past 30 years, the defining characteristic remains that these techniques and approaches seek to involve relevant stakeholders (e.g. farmers, fishers, extension officers, policy-makers etc), in some way – for example, helping to define problems and issues for research, collaborating in data and information gathering and analysis, and/or applying the findings of the research. The international literature clearly shows that the world-wide experience of PR has generated much debate, analysis and subsequent refinement of these approaches. The current review was undertaken to contribute to this on-going process by drawing on more than a decade of research project experiences in a range of sectors – forestry, fisheries, agriculture, plant-breeding – implemented throughout the world under the DFID RNRRS.

The aim of participatory research is to involve the primary stakeholders or beneficiaries in the process of identifying problems, researching solutions, implementing change and evaluating the development process. The objective of such participation is to create 'ownership' of the development process so that research outputs are more appropriate to the beneficiaries and uptake will be more sustainable.

Although the RNRRS Programme was not established with a specific focus on participatory research, the subsequent evolution of the programme (different sectors worldwide) led to the initiation, development and application of a wide range of participatory research approaches. The results and outcomes provide a wealth of information and important lesson-learning to further inform and address the range of opportunities and constraints which were identified early-on in the history of participatory research.

The report finds that there are reasons why (full) participation might not be desirable and also main constraints to achieving the same. It also finds that a considerable wealth of information has been generated related to best practice and problem solving, yet much of this information remains difficult to access. The difficult relationship between research and development is explored and the report notes that new an innovative forms of research must be attempted if participatory research is to fulfil its mandate.

CONTENTS

1. INTRODUCTION

Involving local communities or stakeholders in the process of research is nothing new. Participatory Research (PR) has been in use since the 1950s when the Green Revolution used farmers to test new, improved rice strains or new, improved technologies. 'Farmer First' and 'Farmer to Farmer' approaches built upon the idea of farmers taking an active role in development and this then led to the evolution of the concept as the very nature of 'participation' (who is participating? Who is defining the process? Where is demand coming from?) expanded its horizons. The past 30 years or so have seen participation change from being an act of consulting participants as part of the process to endeavouring to ensure that participants and co-workers in the process. What is more, the notion of participation as the beneficiaries becoming the drivers of their own destiny (a philosophy that found powerful advocates in Latin America from the writings of Freire in the 1970s, for example) has also been mainstreamed into current approach on participation (if not fully implemented). As this adoption has gathered pace so the understanding of *who* is participating and *how* they are participating has changed, diverged and been extensively questioned.

As successive waves of development paradigms have been championed and discarded since the end of the Second World War, so there has been increasing awareness that developments which respond to the needs of those living in poverty are more likely to be adopted and succeed than those developments that evolve without reference to the beneficiaries. This is because a sense of 'ownership' in the process of developing a new technology, a new mode of doing something is more likely to lead to successful adoption, replication and dissemination. As the numbers living in poverty have risen – and evidence has been amassed which demonstrates that there is often a gulf of understanding between what researchers understand by 'poverty' and what the poor understand poverty to be - so the need to incorporate indigenous understanding of the nature and complexity of poverty has become ever more important. Indeed the rise in PR has also seen a keen questioning of the nature of knowledge – how it is defined and interpreted. The rise in the use of PR thus also reflects a perceived need to tackle poverty by involving poor communities in the process.

Whilst ideally the overriding ethos of PR should be that beneficiaries develop a sense of ownership of the process, this rarely happens. A more common outcome is that the nature of the role of the beneficiaries shifts from being a source of data to becoming more active partners in the research (Townsley, pers comm.. 2006).

In recent years a plethora of tools and techniques have emerged which contribute to the increased involvement of the poor in their own development (see Box 1). PRA in particular has been the focus of attention on criticism of what is and is not a participatory process. Much of this focus relates to the fact that PRA tools are frequently used to garner data without the process necessarily being participatory.

Box 1: The range of participatory research tools

Participatory Poverty Assessments: a process where the poor define their own understanding of what poverty is and engage in the monitoring of poverty (Norton, 2001) ;
Participatory mapping tools: a means of developing more nuanced GIS that relies upon local knowledge – used especially for indigenous land claims (Fox, 2002);
Participatory Monitoring and Evaluation: a process whereby local people not only engage in the M&E process but also negotiate what will be monitored and evaluated (Guijt and Gaventa, 1998);
Participatory Rural Appraisal: a means of using local knowledge and enabling communities to define their own development priorities (Chambers, 1992);
Action Research: a research process that engages directly with promoting change; where the community are the subjects of research rather than the objects (Huizer, 1997)
Participatory Project Cycle: a framework for managing project; forms an integral part of the management system and has the merit of recognising that projects pass through stages, each of which has own data requirements (Ward et al, 2001)
Micro-action Planning Process – a means of enabling and supporting communities in formalising review and action planning for development – the process greatly improves the development of Forest User Groups (R 6778).

Each of these tools occurs across the wide range of projects conducted under the RNRRS and features in the synthesis of the projects chosen for this study[1]

In order to understand the breadth of experience accumulated within DFID over the 11 years of the RNRRS in terms of participatory research, the purpose of this study is to draw together examples of where participatory research has been used, to highlight the lessons learned and the constraints to participatory research. The report is divided into a number of sections. First, we examine what is meant by participation given that the term potentially covers a wide range of experiences and expectations; then we explore who is participating in the research – and indeed how feasible participatory research is; examining documentations from a variety of projects from across the DFID RNRRS we then attempt to characterise participation by looking a number of key factors. We conclude by suggesting that whilst participatory research has been a common goal in DFID RNRRS research it has rarely been fully achieved – but we also note that there are considerable constraints to full participation and examine some means of overcoming these constraints.

2. ANALYSING PARTICIPATION

There are many definitions of what we mean by 'participation' and how we might define research as being participatory. The many definitions reflect the wide scope of contexts, conditions and purposes of PR. PR has been described as being "a means to improve the conventional technology development process […] a means of collecting local people's knowledge and needs and using this knowledge in research (Probst and

[1] Action Research is the subject of another RNRRS synthesis and as such will not be explicitly covered in this report although defining the boundaries between the two areas is notoriously difficult.

Hagmann, 2003:4). It is an approach that suggests that research is more relevant when those representing the targeted beneficiary are able to actively participate in the research process (Sutherland, 1998:1) and are thus able to establish 'ownership' of both the process and the outcomes.

PR is often described in terms of what it *does* rather than what it *is* and thus it is most useful to analyse it in terms of the processes used, the outcomes and the degree of participation.

Key Types of Participation

There are, arguably, two key types of participation (after Sutherland, 1998):

Functional participation: where participation enhances the efficiency of research, it is often carried out at a national level and conforms to higher driven priorities which limit the degree of participation of those at the local level. Although within this category we find much of the scientific research involving the development of new plant types, technologies, vaccines. Here, participation is often limited (the level of knowledge required precludes widespread participation by beneficiaries) and needs to be highly controlled (farmer seeds trials, animal health trials for example) – see Box 1 for an example. Arguably, this type of participation (where farmers are involved in testing new technologies) has been established as a fundamental part of the research process longer than empowering participation.

Box 1: An example of functional participation
The HHB67 hybrid pearl millet was a popular crop grown in India because of its high yield and very early maturity. But, it was also prone to downy mildew and reduced yield under drought stress. Using marker assisted selection these two characteristics (resistance to downy mildew and stable yields under drought stress) were tested in a breeding programme. The new versions of the hybrid were tested against the original (HHB67) on research stations in the target area – ie all having environments which closely match the abiotic stresses in farmers fields. The most promising versions were multiplied for testing in farmers fields (a key fault with plant breeding programmes in the past was that they were rarely exposed to the marginal environments farmed by most of the end-users of the seed). At the same time, to comply with Indian regulatory frameworks parallel trials were conducted on-station. Through participation with the farmers (who identified the problems with HHB67 and then tested the hybrids) pearl millet that was more resistant to disease and able to maintain stable yields was developed.
Source: Witcombe et al (2005)

Empowering participation: where the capacity to do research amongst the participants is enhanced, research tends to focus on local level issues and often in research areas which are not prioritised at the national level. Fundamentally empowering participation intends to develop capacity at the same time as conducting research – thereby creating more of a two-way process than *functional participation*. Within this category we find much of the qualitative research – understanding processes of social engagement; understanding incentive structures in markets, conflict resolution, health programmes for example (see Box 2 for an example). Here participation is often widespread and inclusive at the local level and, whilst the process of collecting

the data will be methodical (in terms of survey techniques) it will often be qualitative and use PRA techniques; the analysis of the data will also be more intuitive. This type of participation has developed most recently.

Within the category of empowering participation we might also identify participation which develops **an enabling environment for participation** (fostering institutions for participation) and participation which aims at **increasing involvement in management institutions** (capacity building for participation).

Box 2: an example of empowering participation
Many water bodies in Lao PDR are managed as community fisheries providing a vital source of income and food. But a lack of information on stocking management and the communities isolation of information networks means they are uncertain of the best stocking strategies for their water bodies. The FMSP developed an adaptive learning strategy to build a bridge between villagers, government and researchers to generate and share information to improve management. Joint meetings between all key stakeholders were held to establish the current constraints – biological and institutional. A shared learning strategy was then developed involving stakeholders from 38 villages so that the key constraints to managing their ponds and their priority research questions could be identified. Plans for the ponds were then drawn up – with contracts between the researchers and the villages establishing respective roles also drawn up for transparency and accountability (key attributes of participatory research). The research established the most effective mix of fish species for improved production and, by involving the resource users from the outset, their skills and knowledge were enhanced and the research was far more relevant to them.
Source: R8292 and R7335

There are instances of overlap between the two first-level types: in recent years technical intervention (nominally *functional* participation) has increasingly used more empowering participatory research to uncover technical problems and explore solutions to these problems. In so doing, the degree of *empowering* participation has increased as participation approaches have fostered longer-term mechanisms for involvement in management processes and decision making.

Closely linked to the issue of PR in general, and the participation of beneficiaries in particular is community based resource management (CBRM). The Forestry sector has a long history of forest users groups – these are now recognised and an integral part of national forest management plans in Nepal and India. The fisheries community has also embraced the notion of community-based resource management and the previous decade saw a proliferation of community based fisheries management (CBFM) initiatives. As a means of fostering a link between users and managers and establishing mechanisms by which users can take on some management responsibility the notion of community based management institutions is clearly participatory (Chuenpagdee, Fraga and Euán-Avila, 2004),. It is, arguably, the product of effective participatory processes and within itself serves to build capacity in participatory management. As such, this report will also examine how the RNRRS has used CBRM to promote participation (see Box 3 for examples).

Box 3: Community Based Resource Management

Community Based Resource Management can take on many guises but a key principal is that the community of resource users or custodians play an active role in the management of the resource – hence it is often also referred to as Participatory Resource Management. This management is usually done in cooperation with government (central or regional) and may be referred to as co-management. The degree of management power that the resource users have varies greatly. CBRM is usually conducted within the institutional context of user groups. In the forestry sector these are referred to as Forest User Groups (FUGs) and in fisheries Community Based Fisheries Management (CBFM). These groups are usually established under national regulatory frameworks (this is certainly the case of forests in Nepal and fisheries in Ghana, for example) but they are useful entry-points for participatory research and research is often conducted to improve the management capacity of these groups. For example, FUGs in Nepal were formed by and large after the 1990 revolution which saw the *panchayat* system of local governance eliminated opening up the way for more participatory management of resources at the local level. Political changes also saw government departments recognise their role as serving rather than controlling the people. There are now some 9000 FUGs in Nepal with over 1 million household members. Projects R6918 and R6778 both worked to strengthen the capacity of the FUGs to engage in participatory management of their resource alongside government officers and also to better understand the nature of the relationship between FUGs and the management of common property resources.

Source: R6918, R6778 and Prakash Dev et al (2003)

Whilst PR is by definition bound to the life-time of the project, in the most valuable cases the ethos of participation is long-term. This is particularly so in those projects which seek to build empowering capacity for decision making – skills which live on in the community long after the research has been completed. Evidence from CBRM suggests that participation is something that can be fostered and achieved in the long term.

<u>'Getting to participation' some key approaches</u>

Bigg (1989…cited in Probst) identifies four modes of participation:

Contractual participation is limited: one stakeholder 'owns' the process, makes the decisions and contracts others in to 'participate' by providing services, support and information.

Consultative participation sees extensive consultation for the purpose of information gathering but one stakeholder group 'own' that information.

Collaborative participation occurs when a range of different stakeholders participate and collaborate on an equal footing – the process is innovative and decision making is shared.

Collegiate participation sees the different stakeholders working together as colleagues or partners – ownership and responsibility are equally shared and decisions are made in consensus.

Sutherland (1998) notes that (in the late 1990s) consultative and collaborative modes of PR were most in evidence in the RNRRS, mostly due to issues related to time-frames and funding.

There are arguments, however, that such a narrow band of participation fails to capture all the possible options. Catley and Leyland (2001:99) expanded on these modes of participation, drawing on the work of Pretty (1994) and Cornwall (1996). Catley and Leyland list the following:

Manipulative participation (co-option) Community participation is simply pretence, representatives on official boards are unelected and have no power;

Passive participation (compliance) Communities participate by being told what has been decided; the information belongs to external professionals only

Participation by consultation Communities participate by being consulted or by answering questions. Problems are defined by external agents.

Participation for material incentives Communities participate by contributing resources such as labour, in return for material incentives (e.g. food, cash).

Functional participation (cooperation) Community participation is seen by external agencies as a means to achieve project goals.

Interactive participation (co-learning) People participate in joint analysis, development of action plans and formation or strengthening of local institutions.

Self-mobilisation (collective action) People participate by taking initiatives (independently of external institutions) to change systems.

The Catley and Leyland framework is able to capture a much wider range of participatory possibilities – include that of self-mobilisation which is often discounted (Townsley, pers comm. 2006). Yet this framework has one draw back in that scientific research (such as that carried out by the PSP, the AFGP, the AHP for example) will almost inevitably be placed at the lower end of the scale suggesting that it is less participatory than other forms of research. This however would be misleading – there are very good reasons why scientific research engages restricted participation, as will be explained later on.

Because it is far more flexible, the Catley and Leyland framework will be used throughout this report.

Irrespective of the type of research and the degree of participation, Probst and Hagmann (2003) note that the key question is “who is participating in who’s process”.

3. WHO IS PARTICIPATING?

There are arguably 3 potential types of participant in the process: the researchers; the primary beneficiaries (those likely to be directly affected by the research outcomes: farmers, fishers, artisans, foresters etc) and secondary beneficiaries (those who are

often used to promote uptake of the outputs: extension workers, policy makers, other researchers, traders, input suppliers etc).

The ethos of participatory research is, ostensibly to improve the effectiveness of development research by responding to the needs and demands of the primary beneficiary – as perceived by that group and not as perceived by an outside source. But primary beneficiaries are often the poorest of all the groups involved in the research process, and often the most marginalised and voiceless. Ensuring that their voices are represented, heard and understood is thus critical to the process of PR.

However, involving secondary beneficiaries in the process is clearly vital. They are often the one group with the means, skills and remit to disseminate information beyond the boundaries of the project research area and have the means of supporting the community. And whilst secondary beneficiaries are often included to some degree or another in PR, policy makers are often the missing link. Without sufficient participation and ownership of the process by policy makers is it debatable whether changes at the community level will be able to have sufficient impact on policy makers to ensure that the wider institutional context (regulatory frameworks, for example) changes.

That said, there may be valid reasons to limit participation (Witcombe et al 2005; nd.). Scientific research (into animal vaccines, new plant strains) – that is functional participatory type research projects often have objectives that will define who can participate in terms of numbers, qualifications (the research often involves a degree of knowledge about genetics) and resources (participants need sufficient land to field-test new strains; sufficient stock to be able to test new vaccines).

Women and the very poor are often unable to participate because they lack the basic requirements of participants. They lack time to be able to leave their work, resources (sufficient land, sufficient capital to give over part of their crop to a new (and potentially risky) plant). Efforts to address this problem have been made by the RNRRS, as noted below.

How participants are chosen is also problematic. Volunteers and those nominated to participate tend to come from those two groups with the time and resources to give up some time or influence their nomination – that is, men and the better-off. Sutherland (1998) notes that participation often comes down to a trade-off between the poor and the willing. We need, then, to recognise that participatory approaches may be far from representative of all stakeholders and overwhelmingly representative of those with the resources to spare. The inclusion (or otherwise) of gender in participatory processes is covered in the Gender Synthesis.

4. STUDY METHODOLOGY

The goal of participation is to ensure that primary beneficiaries of development are involved in the process of development. Arguably thorough post-project monitoring and evaluation is the surest way to establish if participation was achieved throughout the project (ie both in establishing the constraint to development, developing a means of overcoming that constraint and implementing the solution), but we can also learn

much from looking at the process of participation itself. In other words, learning lessons of participatory approaches from all stages of the project lifecycle.

Neef and Neubert (2004) identify 6 key dimensions for investigation:

(I) Project type (scientific or social science? Functional or empowering?)
(II) Research approach
(III) Researchers' characteristics
(IV) Interaction between researchers and (other) stakeholders (what was the key participatory process used)
(V) Stakeholders' characteristics (who was participating?)
(VI) Stakeholders' benefits

With limited time available to compile a synthesis of the 10 programmes across the RNRRS over a span of 11 years, it was decided to use a paired down Neef and Neubert framework limiting ourselves to dimensions I, II, IV and V

In addition, we were interested in what evidence of learning is there? (has evaluation been conducted, how has it been done, what evidence is there of adaptive learning?)

Thus the dimensions for investigation in this study were:

1. Mode of participation (manipulative – self-mobilisation) used in the project?
2. Purpose of participation.
3. What was the Participatory process (linear/iterative) and was it time-bound?
4. What evidence is there of lesson learning/iterative process?
5. What constraints to participation were identified?

In order to be able to synthesise the information currently available from across the RNRRS a two stage process will be used. First, a simple questionnaire will collect information on a number of projects (see table 1) which represent the range of work undertaken across the 10 programmes[2]. These outputs were identified by Programme Managers as representative of the type of participatory mechanisms being used within their research remits. The results of the questionnaires will be used to characterise participation across the RNRRS.

[2] Not all programmes are represented; however, the wide range of natural resource systems is covered – particularly by NRSP projects which best exemplify the use of participation in project processes across a variety of systems.

Table 1: Projects to be reviewed

PROGRAMME	PROJECT TITLE AND REF
NRSP	R6778 – Community forestry in Nepal: sustainability and impacts on common and private resources
FRP	R6918 Forest user Groups Forest Management
FRP	ZF0118 Research and participatory forest management: comparing the priorities of resource users and development professionals
PHFP	R8111 Poverty and Post Harvest Fish Utilisation in Ghana
PSP	R8071/ R8099: participatory plant breeding
NRSP	R7830 Integrated management of land and water resources for enhancing productivity in Bihar and Eastern Uttar Pradesh R7839 Improved livelihoods-Bihar and Uttar Pradesh R8083 Strengthened rural services for improved livelihoods in Bangladesh R8362 Validation and communication of a community-led mechanism for livelihood improvement of remote communities in Bolivia
AHP	R7164 Indigenous knowledge, participatory appraisal and animal health information systems
AHP	R7986 Development of Farm Field School methodology for smallholder dairy farmers
AFGP/FMSP	R7917 Self-Recruiting Species In Aquaculture – Their Role In Rural Livelihoods
PHFP	R6817 Wet season post-harvest fish losses in the traditional fish processing sector of India - generating an understanding and defining interventions

Second, a review of the various reviews/synthesis/workshops already undertaken will be conducted (see table 2) – the purpose of this review is build upon previous cross-programme research and to set the context for participatory research outside the orbit of the RNRRS.

Table 2: Publications to be reviewed

PROGRAMME	PROJECT TITLE AND REF
CPP	Blackie and Gibbon (2003) Enhancing Impact
FMSP	Arthur (2005) *Co-management: a synthesis of the lessons learned from the DFID Fisheries Management Science Programme*

5. PARTICIPATION CHARACTERISED —THE RNRRS PROGRAMMES

Mode and degree of Participation

A significant component of the RNRRS strategy is dedicated to scientific research and would be defined as *functional participation*. The PSP defines participation in terms of client orientation – that is the ability to meet client needs. In the case of plant research, of course, this means producing improved varieties that are more pest resistant, or produce higher yields or crop earlier or perhaps command a better market price (through improved quality). The bulk of the work conducted by the PSP falls within this category (developing improved varieties), as does much of the initial work undertaken in the CPP (investigating pest management strategies) and the AFGP (fish genetics). Although it should be noted that as these programmes evolved over time, there was a balance of both functional and empowering participation within projects. The AHP and LPP also engage in scientific investigations related to vaccine development and disease diagnosis.

The outcomes of projects R8071 and R8099 (Participatory Plant Breeding) were written up in two peer-reviewed journals (Witcombe 2005; nd). The interesting aspect of these two projects is the time taken to analyse the nature of participation in scientific research. The research undertaken by the projects is exclusively functional (empowerment was not a stated objective of the research process) and fits into the Catley and Leyland framework somewhere between Participation for material incentives (farmers contributed time, labour and land) and cooperation (farmers participation was an integral means of testing varieties) although there is increased dialogue between farmers and scientists – particularly at the segregating generations stage of research. Witcombe et al (2005) note that in some cases increased farmer participation at this stage "can more effectively produce appropriate varieties than less collaborative research".

R7164 (Indigenous knowledge, participatory appraisal and animal health information systems, Options for complementary methods in public and private veterinary services in Africa) provides us with an interesting example of research that was ostensibly functional (validating IK on animal health information) but at the same time was able to engage with, and address problems with, participation – particularly participation by women (who often own small livestock) thus being empowering too. R7164 fits neatly within the category of interactive participation (farmers jointly analysing the value of IK).

Technology development also figures within the RNRRS: post-harvest techniques and storage technologies (the PHFP and the CPHP) – these projects are most usefully defined as *functional participation* (in so far as their purpose is intervention rather than empowerment) although increasingly participatory capacity beyond the life-time of the project is being introduced. A key output of R6817: Wet season post-harvest fish losses in the traditional fish processing sector of India - generating an understanding and defining interventions was a guidebook on Participatory Intervention Approaches. This output lays out the rationale for interventions on post harvest fisheries and discusses best practice in establishing demand for interventions, choosing interventions and then implementing and evaluating them. The overall purpose is intervention rather than empowerment per se, although it is hoped that

through the process of intervention stakeholders will gain skills at articulating demand. This research can be defined as consultative participation in so far as fish post-harvest workers were not driving the research but offering their opinions on it.

The greater majority of projects fall within *empowering participation* – that is projects that aimed to build up the capacity of communities to articulate needs and act upon those needs.

A synthesis of co-management experience within the FMSP (R8470) highlighted many examples of research of this type notably R7334 and R8294 which generated research to further the management of conflict in tropical fisheries; R7042, R8285 and R8462 which together researched the relationship between information and participation – and in so doing bolstered the empowerment of communities to manage their resources. The modes of participation identifiable in these projects range from participation by consultation through cooperation.

The AHP (R7986: Development of Farm Field School methodology for smallholder dairy farmers in particular) has also conducted extensive work on empowering communities. In R7986 the establishment of Farmer Field Schools (FFS) (see Box 4) has enabled dairy farmers to learn from each other and also to articulate demand for their specific needs appropriate to their livestock and context. Through FFS a wide range of dairy farmers are able to participate in the development process through an institution which is indigenous rather than exogenous. The FFS philosophy is notably that they are about empowerment and not technology. Although less participatory during the set-up process, once established FFS are clearly interactive in that they foster co-learning.

Box 4: Farmer Field Schools

The notion of Farmer Field Schools (FFS) was developed by FAO in SE Asia as a way for small-scale rice farmers to investigate and learn for themselves the skills required for and the benefits to be obtained from adopting integrated pest management practices in their paddy fields. The aim is to build capacity to analyse production systems and identify main constraints, to test possible solutions, eventually identifying and adopting the practices most suitable to their farming system. This concept has since been adopted by the livestock sector with excellent results (Groeneweg et al (2005)

The RNRRS is also able to provide examples of empowering participation where the participatory goal is long term and where significant institutional support and formation is involved in the project. Examples include support to Forest User Groups (FUG) conducted under R6778 (Community Forestry in Nepal: sustainability and impacts on common and private resources) and R6918 (Forest User Groups Forest Management). These projects engaged in PR which ranged from interactive (building capacity for micro-action planning within FUG through a participatory process of identifying management areas that needed attention) through to collective participation (where FUG were an integral part of the process of improving management and addressing equity issues).

The NRSP funded research into improved rural service delivery through R7830 (Integrated management of land and water resources for enhancing productivity in Bihar and Eastern Uttar Pradesh) and R7839 (Improved livelihoods-Bihar and Uttar Pradesh). Here, PR is best defined as cooperative to begin with (participation being an integral rationale for the project), rising to collective where Self Help Groups (SHG) were established and were able to develop a dynamic of their own within and beyond the project.

Finally R7917 (Self-recruiting species in aquaculture –their role in rural livelihoods) spanned a wide range of participatory modes: from consultative participation (gathering data) through to collective participation with the formation of Local Resource User Groups (LRUG) established to test the hypothesis that cooperation between users of farmer managed aquatic systems (FMAS). It also encompassed functional participation in terms of the quantitative and scientific aspects of some of the project activities.

Purpose of participation

The purpose of using PR in the research varied across the programmes from participation for data collection, for field testing through to participation in order to promote change within communities.

We can identify PR for the purpose of improved client orientation (R8071 and R8099) where Participatory Plant Breeding and Participatory Varietal Selection were used to promote cost effectiveness in plant breeding – particularly in atypical and marginal environments. Projects reviewed Blackie and Gibbon (2003) for the CPP often had a remit to use participatory approaches to improve farmer input to the process of crop development in order to alleviate poverty on marginal, poor farms and, crucially, to establish farmer demand where farmers were unable to articulate this through the market place.

PR to promote empowerment featured in many programmes: notably we find R7986 where the purpose of participation was to "empower local poor small-holder dairy farmers to take decisions regarding the health and management of their stock"; ZF0118 where PR was used to empower the custodians of CPR forests; R7830 where PR was used to inform the strengthening of grassroots organisations; R8294 (Management of Conflict in Tropical Fisheries) where communities were empowered to be able to better manage conflict and R7917 where stakeholder knowledge on self-recruiting species was enhanced through the project.

In some cases PR was used to develop learning tools so that participatory techniques could be disseminated. R7164 developed animal health strategies relevant to the needs of farmers based upon indigenous knowledge; R6918 developed participatory action learning (PAL) training manuals on the basis of its PR; R8083 developed a database of integrated crop management (ICM) techniques whilst R7986 promoted the use of FFS for livestock farmers through a training manual.

PR was also used to gain new information on how social dynamics worked. Generally, this aspect of PR is found in the many projects which, in the past 5 years have used livelihoods analysis in their research. Livelihoods analysis is inherently

participatory in terms of how data is gathered. More specifically we find R6778 and ZF0118 which were both able to gain a better understanding of issues in community forestry – particularly the lack of decision making skills within many FUGs. The FMSP was also able to offer improved knowledge on social dynamics as a result of using PR in its research in R6438 (Customary Marine Tenure) and R7334 (The Management of Conflict in Tropical Fisheries).

The Participatory Process

Ideally, the participatory process has to be flexible and iterative to allow maximum participation of the primary beneficiaries in the articulation of their needs, development of the solutions and evaluation of those solutions. In practice, this is rarely achieved. Whilst linear, top-down processes can be extractive (the stakeholders are simply 'mined' for data) in nearly all cases across the 10 programmes this was rarely the case. The norm was for the process of participation to be somewhat linear, top-down (in so far as a research agenda needed to be carried out) yet the need to feedback information to the participants was understood.

For many of the projects, the participatory process was linear or at best notionally iterative. For example Ward, Salagrama and Joseph (2001) (an output of R6817) describe the process of devising a menu of interventions for post-harvest fisheries. Whilst post-harvest workers are clearly involved in providing information on socio-economic and technical aspects of their livelihoods the initial menu of interventions (designed to address technical and/or institutional constraints) is devised by development practitioners, filtered by development practitioner peers and only then returned back to the primary beneficiaries (the post-harvest workers) for them to go through the process of choosing interventions, trialling and evaluating those interventions. R8464, R7947, R8397 (The Application and Promotion of ParFish) were notionally iterative in so far as they field tested the system for the collection and analysis of fisheries data to promote co-management. R8111 (Poverty and post harvest fisheries utilisation in Ghana) uses standard participatory data collection techniques which utilise feedback but often suffer from being 'extractive'.

There were few examples of iterative processes that truly allowed the participants to be the driving force behind the decisions being taken. However, the adaptive learning research projects (R7335, R8292) funded through the FMSP provide us with some insight into this process as they used continually iterative feedback processes to collect, analyse and disseminate information. The FFS activities of R7986 also fulfil a remit of continually engaging the beneficiaries in the process of research, as does R6918 which reports regular feedback to the FUGs.

Another aspect to consider in terms of the participation process is the time scale involved. Most of the projects were necessarily time-bound – participation was a function of the project and whilst the act of participation may have encouraged an appetite for articulating need within the community, this was never the stated objective of the research. Those projects where participation arguably went beyond the life-time of the project were inevitably those that engaged in considerable levels of empowerment and capacity building – often leaving behind participatory institutional structures. The strengthening of FUGs, the establishment of SHGs are

key examples of how the mechanisms for participation are able to live on beyond the end date of the project.

Lesson Learning

In recent years there has been considerably movement in the production of post-project analysis of the participation process. This has lead to a number of manuals outlining best practice to be produced: for example *Livestock Farmer Field Schools – Guidelines for Facilitation and Technical Manual,* an output of the AHP and *Participation and Post-harvest Fisheries: An Approach to identifying appropriate interventions,* an output of the PHFP. Syntheses of lesson learned have been prepared by the CPP (*Enhancing Impact*) and the FMSP (*Co-management: a synthesis of the lessons learned from the DFID Fisheries Management Science Programme).* R7064 (Aquaculture in Small-scale farmer-managed irrigation systems) has documented the process for using more quantitative research in a participatory setting. Until now, participatory research techniques tended to rely upon qualitative research (with all the inherent problems of measurement and comparison involved with such data). R6918 has produced a set of guidebooks entitled: *Participatory Action and Learning: a field workers guidebook for supporting community forest management planning* which builds upon their research into micro-action planning to help FUG strengthen their management functions.

A number of projects have been established where the remit was to promote lesson learning – again the adaptive learning projects funded by the FMSP are the best example of this (see Arthur and Howard, 2005).

Increased interest in the role of and limits to participation has also generated outputs from a number of programmes. The PSP in particular has addressed the role of participation in plant research in marginal and poor farming environments (Witcombe et al 2005; nd); the role of participation and its impact on animal health programmes was addressed by Catley and Leyland (2001); ZF0118 has addressed the issue of lesson learning on Community Forestry. It finds that those countries new to the concept of community forestry (Bolivia and Tanzania, for example) are now tackling problems which have been addressed by Nepal and India (where Community Forestry has been in existence for a number of decades) – yet there is little evidence of lessons learned from Asia being disseminated to Africa and Latin America.

Constraints to PR

A number of key constraints were highlighted across the 10 research programmes.

Blackie and Gibbon (2003) identify a number of constraints to the work of the CPP. They note that the articulation of IK is often dependent upon indigenous leadership and vision – in other words it can be very difficult to involve participants to share their IK if there is no institutional means of mobilising participations. The dichotomy between participation and science is also highlighted (this echoes many of the points raised by Witcombe et al (2005)), that is that science often needs significant levels of data – yet there are still not satisfactory means of data extraction at this level which work with the ethos of participatory research. Lack of resources – time, land, investment capital, labour for example - was identified as an important constraint to

participation (similar constraints were noted by all programmes) and the ability of groups to articulate demand was also noted – specifically were the demands implicit or explicit (something addressed in the next section).

R6817 notes that one of the pitfalls of participation is that expectations of the outcome are raised – often beyond the means of the project to deliver. In terms of technology intervention, the project noted that beneficiaries needed to be reminded that interventions that they helped to identify may not work. The project also noted that there was often a problem identifying suitable facilitators with a sufficient understanding of the ethos of participation (they tended to be technical staff with a top-down, didactic view on intervention). This problem was also identified by the AHP through R7164 where it noted that there was often a failure by extension workers to base interventions on a wider social context, often because professionals who were often technically trained had little understanding of the participatory process. Finally, the problem of identifying suitable candidates to field-test interventions was noted. This is a problem shared by many participatory projects as already mentioned.

The review of co-management lessons by the FMSP highlighted the problem of the lack of information to support participation (in the form of co-management) – this was a particular goal of the suite of research projects which aimed to improve IK on fish stock assessment. In terms of the benefits of participation, the FMSP exercise also remarked upon the fact that increased participation in fisheries management (through the decentralisation of management, for example) was not necessarily of benefit to the resource custodians – particularly if they lacked the skills and knowledge to fully understand the limiting conditions of their resource.

There is a long history of participation in forestry research and much literature on the topic. To this end ZF0118 conducted an in-depth review of research and participation and found that research flexibility (a key component of participatory research) is often hampered by rigid donor funding. They also noted that whilst considerable banks of data on participatory forestry existed, the means of communicating this knowledge (and thus supporting further participation) were weak. The barrier to achieving representative participation in heterogeneous communities (again, a problem common to all resource sectors) was also noted – including the need for tools to enable pluralistic M&E of such communities. In terms of the role of FUGs – often the key entry point of participatory research – it is understood that they are often not representative of their communities. R6918 and R6778 note that FUGs may be hastily composed, heterogeneous, suffer from elite capture, many of them reduced to 'committee management' of the resource and many of them exhibit debatable distribution of goods (one of the remits of the FUG is to ensure the equitable distribution of benefits from the resource). Finally, echoing the problems experienced in other science programmes, the FRP notes that there is a scarcity of appropriate methods of participatory silviculture research.

Lack of sufficient skills to engage in participation were noted by a number of programmes. The PSP, as already identified in this section, notes the lack of farmer genetic knowledge in early stages of participatory breeding as a barrier to increasing PR in this area. Whilst the AHP, through its work with FFS notes that illiteracy is often a major constraint to participation of small-holder dairy farmers in FFS. To this

end a range of manuals based on graphics have been developed. The NRSP funded project R7064 notes that the complexity of participatory data collection techniques can often baffle and alienate participants. For example, they remark that rather than using ranking and scoring methods in the villages concerned in the research, only scoring methods were used because the combination of methods was too time consuming. However participants struggled to understand the scoring method – undermining the degree of participation in the entire process.

6. DISCUSSION

A brief review of a number of projects that employed participatory approaches under the RNRRS highlights some important issues and problems. Key amongst these is the culture of research, how participation is used, learning lessons from the process and building capacity so that participatory lessons can move forward.

A re-examination of the purpose of participatory (development) research

A foundation argument for the need to conduct research in a participatory manner is that this promotes ownership of the process and the results, is more likely to result in successful adoption of products or processes and is the 'correct' means of 'doing development'. Yet the RNRRS clearly demonstrates that what is desirable theoretically is rarely achieved. The culture of research (proving a hypothesis) tends to rule against a truly participatory process in which the beneficiaries are in control of the research process. Add to this is the very real problems posed by academic research agendas and budgetary constraints and the ability to fully involve beneficiaries is likely to be muted: donors, government and funding bodies are looking for results which support their purpose. It is arguable that even the term 'beneficiary' indicates someone in receipt of the largesse of another, hardly the language of equal participation. The benefits of participation are widely mentioned, yet work conducted under the RNRRS has (perhaps bravely) questioned the wisdom of assuming that participation is the best route for research. The PSP is open in its justification for limited participation (although they may, arguably, understand the term differently to many social scientists) yet even the FMSP notes that increased participation in development process is detrimental if there is insufficient capacity or information to make participation work for the poor (the suite of projects on information needs in co-management is an example, see Box 5).

A number of programmes note in their research that there is often a danger of participation being seen as an end in itself; a box to be ticked in the course of the project. This is particularly the case for 'science' research where "such a collaboration (between farmers and scientists) can give great advantages, but only under particular circumstances and that participation as an end in itself should be avoided" (Witcombe et al, 2005). Participation in research should, ideally, be the default setting for *any* research in a development context – anything else falls back to the position where the wise academic is 'teaching' the unwise poor to do things better. Just what is participation and how far we are to take the participatory process, however, is another matter.

Box 5: Participatory Fish Stock Assessment
Fisheries management decisions need to be based upon information about the state of the underlying resource. Information about the underlying resource, however, is often missing, contradictory or incomplete. Conventional methods for data collection tend to be time-consuming, data intensive, expensive and not necessarily appropriate for small-scale fisheries. In order to address this problem and make the entire process of fisheries management (from the collection of data through to the making of decisions) more participatory, the FMSP commissioned a number of projects to address the problem. The result was extensive research into how to make conventional data collection methods more effective in small-scale fisheries; and it transpired that the answer was to adapt conventional methods removing the need for long time series data and using instead Bayesian statistics to make use of IK which was collected through structured interviews. Participation in the process is integral from the beginning: the users being fully involved in defining the problem, defining the objectives of assessment (to increase catch or increase value of fish for example). Because the process relies heavily upon IK it is essential that a trusting relationship between fisher and data collector is establish – underlying the important of positive participation of the end user in the process.
Source: Fisheries management decisions with limited resources and data. Synthesis Document produced by FMSP, London (2005)

Articulating Demand

Closely related to the culture of research – particularly the concept of demand led research- is the problem of understanding demands. How do we tailor research to meet demands? How do co-participants in research articulate their demands?

Reviewing research done by the CPP Blackie and Gibbon (2003:33) identify explicit and implicit demands. Explicit demands "are those that the poor will articulate to outsiders on request (we need higher yields and better prices for the products we sell). Implicit demands are those that require a more searching collaboration between farmer and scientist (yields would be higher if nematodes were controlled and prices would be higher if quality of native potatoes could be improved and appropriate marketing strategies found)". They go on to observe that basing research on explicit demands would fail to make the most of all available knowledge on the issue (much of which is likely to be outside the world of experience of the farmers). Yet relying on research assessments of implicit demands leaves the results to the mercy of academic agendas. This problem in itself raises the question of how we ensure participation at all levels of the research – not just in the process of gathering and disseminating data but also in the process of communicating the goals of the research (see Box 6).

The ability to articulate demand and then ensure that the ensuing research fulfils that demand is of course constrained by any number of factors: the ability of the researcher and the beneficiary to understand each other is one, the need for the researcher to fulfil research goals that may be unconnected or working against the desires of the community is another. The obvious solution to this dilemma, of course, is that the final stage of Catley and Leyland's framework comes into play and self-motivation is the primary driver of research – communities approach researchers for help to find the answers. There was little real evidence of this in the RNRRS.

Box 6: Distinguishing between types of demand

Participatory research is all very well, but can lead to some confusion about who is demanding what and how those demands are arrived at. This problem was addressed directly during CPP research work on potato farming in Bolivia. A critical aim of the project was to bolster the sector in the face of increasing threats from globalisation – specifically in the form of market liberalisation from MERCOSUR (the southern cone common market). The research had discovered that there were continual problems in distinguishing between explicit and implicit demands when researchers used PRA or voting methods to evaluate productivity constraints. In order to overcome this a network of Farmer Research Committees (picking up on an idea originally promoted by CIAT in Colombia) is being established in Bolivia which will build long-term relationships for information exchange between end-users and researchers.

Source: Blackie and Gibbon (2003)

Disseminating Learning On Participatory Approaches

Generating knowledge on participatory approaches is fruitless unless there are means of disseminating such knowledge. There are many examples of how the RNRRS has achieved this.

The suite of projects looking at information for fisheries co-management (FMSP) has produced software which actively promotes participation in fisheries management through co-management arrangements. Arguing that management cannot happen in the absence of information, but that the balance of power in information is often held with the centralised governing body (different from the peripheral community), the software developed (PARFISH) allows IK, local information and simple measurements for fish-stock assessment to take place to empower communities to take an active role in the management of their resources.

From the forestry sector we have the example of Micro-Action Planning (MAP) Process where FUGs, many of whom are woefully lacking in management skills, are trained in how to plan, implement and complete activities. This sort of information lives on after the project has finished – enabling the lessons learned (the MAP process was refined in cooperation with the FUGs) to be carried on and disseminated to other FUGs.

The FFS are another good example of how participatory research led to a set of guidelines which were then refined into field manuals which then took on a momentum of their own as they were used as specific means of disseminating learning.

Whilst there has been considerable production of material that documents and disseminates learning on participatory approaches to development research there has been very little critical analysis of the process of participation itself. One valid reason for this is that the RNRRS was never designed to research this and DFID has funded research under other programmes to address this.

Recognising Constraints to Participatory Research

There are a considerable number of constraints to PR that have been identified – and given the wide range of types of PR in existence this is hardly surprising.

Often a key constraint to successful and inclusive PR is the conservatism of the target institution. Often, where the target institution is a government agency management tends to be top down, from a single discipline and not willing to engage with 'new fangled' methods of research. Where national level research institutions have had research agendas handed down to them from those attempting to meet funding criteria there may be little willingness to engage with participatory research which might throw up results that don't fit with the overall goal of the programme. The lack of capacity to engage with PR is often a key constraint as is the degree of resources available. Clearly research that aims to gather information from a wide selection of stakeholders and engage in an iterative process of problem identification is going to be most costly in terms of manpower and resources than research that only pulls information from a narrow source.

Participation often assumes that the primary beneficiaries are willing to participate in the manner devised by the researchers – but what if this is not the case? How is PR able to move forward if the beneficiaries are at best a heterogeneous group with differing agendas or worse a dysfunctional group? These issues were addressed in a workshop held by the FRP under ZF0118 to canvass opinions on the constraints to participation with the forestry sector. No clear answers to the problems were offered up and, given the evidence from other programmes, they are not problems unique to forestry or, possibly to the natural resources sector.

Accessibility of information on PR was identified by the FRP during the previously mentioned workshop. Here it was noted that plenty of grey literature exists but the ability to access that information is limited – and raises the question of the ability of others to participate in the dissemination of that research after the fact. The accessibility of information on PR is also an issue for those participating in the project. Research by the NRSP clearly demonstrates that some participatory methods are anything but when they are too complex for the beneficiaries to understand.

Building capacity for participation

The RNRRS is able to provide us with many examples of research that has (intentionally or otherwise) set out to build capacity for participation. Key examples of this are the work done with the FUGs in Nepal and India – here extant institutions for fostering co-management or participatory management were strengthened. The Micro-action planning mechanism enabled FUG planning of aims and objectives to be refined. By strengthening the FUGs their ability to participate more fully in the management of their resources when the project was over was enabled. Likewise the establishment of Local Resource User Groups (LRUGs) by R7917. Here, LRUGs were formed to help farmers identify interconnections and explore joint management issues amongst themselves – this is particularly important where the aquatic resources used by farmers extend from their own land to neighbouring land and out into open water – a common occurrence on the floodplains of Bangladesh, for example. LRUGs had a mandate to encourage resource users to share their knowledge, improve

participatory decision making amongst households and to support accountability between themselves and the broader community. The SHGs established under research conducted by the NRSP also provide stable institutions whose remit goes far beyond the scope of the original pieces of research.

7. CONCLUSIONS

Participatory research should be about co-operative development; it should be about re-examining the very nature of the relationship between researcher and the source of information. It is supposed to be flexible, reflective and innovative yet interpretations of levels of participation across the breadth of research undertaken by the RNRRS indicate that participatory research rarely meets these ideals.

All too often the term 'participation' is inserted into RNRRS projects to indicate that consultation is part of the methodology without a complete understanding of what participation can do and how it relates to development. There are a number of explanations for this. First, truly participatory research is beyond the budget and time-frames of much of the RNRRS research. Second, there is insufficient knowledge of participatory techniques amongst research staff. Third, the goals and objectives of the RNRRS are not flexible enough to allow local resource users to do more than participate in an agenda set by outsiders. Fourth, assuming that participation will be inclusive of everyone is a dangerous assumption – the marginalised (women, the old, ethnic minorities, the very poor) rarely achieve full participation. Finally local contexts are very important in establishing constraints to full participation. Work on FUGs noted that client-patron relationships internal to the village often dictated the degree to which everyone was able to voice their opinions in meetings. At the macro-level the notion of communities taking action on the management of their resources may be perceived as a threat to the governance *status quo*.

But, are we asking too much of the RNRRS when we measure it against ideal participatory standards and find it wanting? The RNRRS was never designed to explore participatory research – this was simply a mode of operation that has evolved and shaped the strategy's remit. Often, the research of the RNRRS militated against truly participatory research (example of the scientific research as mentioned above) and was designed to provide knowledge on development issues rather than to 'do development' per se.

It is perhaps more useful and positive to analyse the RNRRS in terms of what was feasible and what advances have been made.

There is clearly plenty of research which has explored participatory methods – some of them more inclusive than others – and the sophistication of participatory techniques has evolved over time. With increasing emphasis in the more mature projects on applying knowledge we have more evidence of capacity building for long-term participation in development processes.

A vast body of literature detailing participation has been produced through the lifetime of the RNRRS, although much of this is likely to be grey-literature whose existence is not known of outside individual programmes (this was a particular problem identified in the forestry sector).

There is, however a lacunae of evidence on participation at the macro-level. Many of the research projects which have focussed on participation have done so at the micro-level – with resource custodians and immediate end-users of technology. Conducting participatory research at higher levels is necessarily more complex and expensive – yet little appears to have been done on the degree of participation at the policy making level. How are we to ensure better participation of stakeholders in policy making, integrating the views of stakeholders up through the layers of influence to the policy level.

Learning lessons from participatory approaches necessitates some means of evaluating the process and drawing on information about what worked and what didn't work. Just as participatory techniques can be used to design and implement projects, so they can be used to evaluate the same. To this end Participatory Monitoring and Evaluation (PM&E) was developed. Different from M&E, Guijt and Gaventa (1998) argue that it "radically rethink[s] who initiates and undertakes the process, and who learns or benefits from the findings". PM&E has four key components: the participation of the primary beneficiaries are involved in designing the process and analysing the data; the negotiation of what is to be monitored/evaluated, how data is to be shared and actions taken; learning lessons and making corrections and flexibility to cope with very different contexts. Extensive PM&E to establish what the added value of participation is would be beneficial. There is an assumption that 'participation is a good thing' yet little means, currently, of effectively evaluating that statement.

Possibly the hardest questions to address are related to the dichotomies between research needs and development needs, between building empirical knowledge bases and avoiding 'data extraction', between fulfilling research agendas and encouraging self-motivated development.

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