CGIAR Systemwide Program on Participatory Research and Gender Analysis for Technology Development and Institutional Innovations (PRGA)

Assessing the Benefits of Rural Women's Participation in Natural Resource Management

Proceedings of the Natural Resource Management (NRM)
Small Grants End-of-Project Workshop

Cali, Colombia 13-17 November 2001

Compiled by Pascal Sanginga, Nina Lilja and Barun Gurung

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ACKNOWLEDGEMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

AHI	African Highlands Initiative (ICRAF – Uganda)
ARF	Adaptive Research Farmers
BBM	Broad Bed Maker
BMZ	Der Bundesminister für Wirtschafliche Zusammenarbeit (German Federal Ministry for Economic Cooperation and Development)
CARE	Cooperative for American Relief Everywhere
CG	CGIAR
CGIAR	Consultative Group on International Agricultural Research
CIAT	Centro International de Agricultura Tropical (Colombia)
CIFOR	Center for International Forestry Research (Indonesia)
CIMMYT	Centro Internacional de Mejoramiento de Maiz y Trigo (Brazil)
CIP	Centro Internacional de la Papa (Peru)
DfID	Department for International Development (UK)
FFS	Farmer Field School
FRG	Farmer Research Groups
GA	Gender Analysis
GRP	Group Resource Persons
GRP	Group Resources Persons
GSA	Gender and Stakeholder Analysis
IA	Impact Analysis
ICRAF	International Centre for Research in Agroforestry (Kenya)
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics (India)
IES	Institute of Environmental Studies (Zimbabwe)
ILRI	International Livestock Research Institute (Ethiopia)
IPM	Integrated pest management
ISNAR	International Service for National Agricultural Research
KARI	Kenya Agricultural Research Institute
LB	Late blight
LMC	Locational Management Committee
M&E	Monitoring and evaluation
MoALD	Ministry of Agriculture and Livestock Development
NARC	Nepal Agricultural Research Council
NARO	National Agricultural Research Organization (Uganda)
NARS	National Agricultural Research Systems
NGO	Non-governmental organization
NRM	Natural Resource Management
PA	Peasant Association
PM&E	Participatory Monitoring and Evaluation
PR	Participatory research
PRA	Participatory Rural Appraisal
PRGA	Participatory Research and Gender Analysis
R&D	Research and Development
SSC	Site stakeholders Committees
VDB	Village Development Board

1. WORKSHOP OBJECTIVES AND PROCESS

1.1. Background

In 1998, The CGIAR Systemwide Program on Participatory Research and Gender Analysis for Technology Development and Institutional Innovation (PRGA) awarded six competitive small grants to conduct collaborative research to assess the benefits of participation and gender analysis in natural resources management (NRM) research and development. The six small grant projects were used as learning cases for empirical research on the impacts of participation and gender on research costs, rates of technology adoption, technology design and gender-differentiated access to technologies in formal-led research. The grants were designed to enable the recipient institution: <u>EITHER</u> to introduce gender analysis and the participation of rural women for the first time into an ongoing process involving research to improve natural resource management, and to monitor and evaluate its usefulness; <u>OR</u> to strengthen an ongoing effort involving rural women, and to add to the institution's capacity to monitor and evaluate the usefulness of the approach; <u>OR</u> to support an effort to innovate in an ongoing approach, and monitor its effects.

These small grants were part of a larger grant from BMZ to PRGA on "Assessing the benefits of rural women participation in natural resource management research and capacity building". Its overall goal was to improve the ability of the CGIAR System and other collaborating institutions to develop technology which alleviates poverty, improves food security and protects the environment with greater equity. Its purpose is to help make agricultural research more responsible to farmers' demand, and to increase the access of poor rural women to appropriate technology by improving the application of participatory methods and gender analysis in natural resource management (NRM) research.

The specific objectives of the were:
1. To develop a typology of approaches to using gender analysis, participatory methods and organizational innovations, for involving rural women in NRM research.
2. To assess methods and indicators for determining the impact of different approaches.
3. To monitor and assess impact together with participants in a select number of cases (sites) to build their capacity through action-research and training.
4. To provide systematic assessment of the payoff, including costs and benefits of different approaches to involving poor rural women in participatory NRM.
5. To stimulate methodology development and organizational change by identifying method gaps, prioritizing areas for refining and developing methodology, and opportunities for innovation.

1.2. Workshop objectives

This workshop was the third and final workshop in a series of three workshops organized by the PRGA program for the NRM small grant recipients. The first workshop was held in 1998 in Quito at the inception phase of the small grants. The second was held in Nairobi in 2000 to assess progress made and exchange experiences and methodologies as well as refine the impact assessment plan. The purpose of this end-of-project workshop was to continue the exchange of experiences, methodologies and findings of empirical studies of the NRM small grants and other invited research cases.

The objectives of the workshop were to:

- Share and synthesis empirical results, experiences and lessons learnt in applying participatory research and gender analysis approaches in natural resources management research and development
- Reflect on methodologies and experiences in using participatory research, gender analysis approaches and
- Discuss future strategies and direction for future research for the PRGA program

1.3. Workshop process and structure

1.3.1. Pre-workshop activities

This workshop was planned after the second workshop held in conjunction with the PRGA 3rd International Seminar on "Uniting Science and Participation in Research" held in November 2000 in Nairobi, Kenya. Prior to the workshop, we facilitated consultations and interactions with the small grants to determine the content and process of the workshop. We then developed and circulated suggested guidelines for report writing and self-assessment to help reflect and articulate their findings, achievements and impact assessment results in a more systematic and integrated manner.

To help reflect on the progress, achievements, challenges and impacts, the small grant recipients were encouraged to use the following questions ;

- What types of participation and participatory research are being implemented in your small grant project, and with what results?
- Who is the target stakeholder group of the project? How were participants selected?
- How were different types of stakeholders identified, selected and involved in NRM research? What is the involvement of poor rural women in your various activities?
- What approaches have been used to facilitate stakeholders' participation in your small grant research project?
- What specific participatory tools and methods are used (e.g., participatory rural appraisal, community resource mapping, focus groups, farmers evaluation, etc) What did you want to achieve, influence or change? How did you go about it (tools, methods and processes)

- What constraints have been encountered to the participation of different user groups (especially women) in your small grant project and how have these been overcome?
- What are the big picture lessons or insights that can be extracted or identified from your small grants projects?
- What are the major insights about doing participatory research and gender analysis in NRM research and development?
- What are the major challenges in this kind of work? How would you suggest that people go about PRGA approaches now?

1.3.2. Review Process:

In addition to this self-assessment, it was decided during the Nairobi workshop to facilitate a peer review or external review process of the small grants to help improve the quality of the final reports and better articulate their findings. The reports of the six small grants were sent to four reviewers selected on the basis of their experience and knowledge in the field of PRGA approaches and their willingness to serve as resource persons during the workshop. The terms of reference and profile of the reviewers were developed by the small grant recipients and PRGA program at the small grants workshop in Nairobi, November 2000. These included:
- Assess the appropriateness/ relevance of hypotheses and methodologies to the intervention: i.e. if hypotheses and PRGA methodologies are appropriate to the intervention
- Assess to what extent the project has benefited rural women and other different categories of stakeholders
- Assess progress against proposal and workplans
- Assess the objectives of using PRGA, their impacts and contribution to BMZ proposal (see above)
- Assess the changes in the types of participation, extent of participation of stakeholders and the impacts of using PRGA methods
- Assess the extent to which gender and stakeholder analysis have been fully integrated into the small grants
- Assess the extent of institutionalization of PRGA in small grants institutions, uptake of PRGA methodologies in recipient institutions, including extent of co-financing of small grants by recipient institution
- Recommend areas for improvement

Three resource persons: Gordon Prain (CIP and CG representative in the PRGA Planning Group), Helen Hembly Odame (ISNAR), Christine Okali (University of East Anglia, Overseas Development Group) and Janice Jiggins (Consultant) were invited to review the reports and facilitate the workshop. Their review reports, comments and constructive criticisms helped to improve on the reports, and articulate the results and findings of the small grants. An "open clinic" was organized to maximize interactions and discussions between resource persons and small grant projects. The role of the resources persons was to facilitate a better understanding, articulation, analysis and synthesis of the findings and results on the types and processes of participation, gender analysis and impact assessment in order to create a richer and systematic picture of what has been learnt from the six small grant projects.

The following are the kinds of questions that guided the resources persons in reviewing the small grants report and presentation during the workshop:

- What were the objectives of including participation in the research process? Were the objectives and hypotheses clearly stated?
- Does the project use gender analysis? What were the objectives of including gender analysis? Which type of gender analysis?
- What is the length of time of the different stages of the research process, and what stage is the project in?
- What/how have the beneficiary groups developed and benefit from the project?
- Are the tools and methods consistent with the objectives and hypothesis?
- Is there any evidence on the impact of participation, or of applying gender analysis on the way NRM research for technology design is conducted, or on its results? Has there been an internal learning process, and changes as a result?
- How has the small grant influenced the co-financing project? The IARC and partners?
- To what extent has gender been considered and what difference has this made to the research process and to the beneficiaries/participants?
- How has the small grants project contributed to the overall goal of the PRGA and goals of the recipient's institutions?
- Are there any environmental impacts?
- What are the best practices in participatory research and what criteria can be used to assess the quality of participation?

1.4. **WORSKHOP PROGRAM**

DAY 1: Tuesday, November 13, 2001
The focus was on:
• *State-of the art of participatory research in NRM*
• *Impact of participatory research in NRM*
• *Self-assessment of the small grant projects*

TIME	TOPIC	Presenter	Facilitator/ Rapporteur
08.00-08.30	Introductions	P. Sanginga	G.Prain/ B. Gurung
	Opening remarks	J. Ashby	
	Workshop agenda, Objectives and Process	P. Sanginga	
08.30-09.00	Overview of PRGA Program and BMZ Project	J. Ashby	
09.00-09.30	State-of-the-art in participatory research and gender analysis in natural resource management research: empirical evidence from the inventory of 76 projects	N. Johnson	
09.30-10.00	Methodology for assessing the impact of participatory research and gender analysis	Nina Lilja	
10.00-10.30	Coffee break		
10.30-11.30	Characterizing and measuring the impacts and costs of participatory research in natural resource management research: three case studies	N. Johnson	G.Prain/ B. Gurung
11.30-12.00	Empirical evidence of measuring participation in agricultural research.	N. Lilja	
12.00-12.30	Performance Evaluation of Farmer Research Groups in East Africa	P. Sanginga	
12.30-13.00	Institutional Challenges in applying PRGA in South East Asia	B. Gurung	
13.00-14.00	**LUNCH**		
14.00-15.30	Self-assessment: What did we learn? What are the gaps ? (Working group sessions)	P. Sanginga	C.Okali/ P.Sanginga
15.30-16.00	Coffee		
16.00-17.00	Working Group Session : Report and Discussion	Rapporteurs	C.Okali/ P.Sanginga
17.30-18.00	Resource persons' comments/Synthesis	H.Hambly, C.Okali, G.Prain	J.Ashby/P.Sanginga
18.00-19.00	Opening Cocktail at the Piano room		A.Velvez/P.Fajerdo

DAY 2: Wednesday, November 14, 2001			
Today's focus is indvidual project results, and specifically on • Use of stakholder/gender analysis • Use of participatory research methods • Use of participatory monitoring and evaluation • Impacts achieved and Lessons learnt			
8.00- 8.30	Opening remarks, framework for today's presentations and discussion	N.Lilja	H.Hambley/ N.Lilja
8.30-9.00	Impact evaluation or participatory development of integrated insect & disease management for the potato crop in San Miguel, Peru (CIP)	O. Oritz and R.Orrego	
9.00-9.30	Discussion about the CIP project		
9.30-10.00	Development & dissemination of integrated *Striga* control practices for the small-scale farmers of Western Kenya (CIMMYT-KARI)	J.Agunda and G.Odhiambo	
10.00-10.30	Discussion about the CIMMYT-KARI project		
10.30-11.00	Coffee break		
11.00-11.30	Assessment of the impacts of stakeholder participation in the diffusion of a vertisol management technology package in highland Ethiopia (ILRI)	A.Astatke and M.Jabbar	G.Prain/ N.Lilja
11.30-12.00	Discussion about the ILRI project		
12.00-12.30	Evaluating the impact of farmer participatory research & extension in NRM in Zimbabwe (IES)	E. Chuma	
12.30-13.00	Discussion about the IES project		
13.00-14.00	**LUNCH**		
14.00-14.30	Local people, devolution & adaptive co-management of forests (CIFOR)	L. Yulani	C.Okali/ B.Gurung
14.30-15.00	Discussion about the CIFOR project		
15.00-15.30	Impact of using participatory methods to solve NRM issues in the East African Highlands (AHI-ICRAF)	P.Sanginga	
15.30-16.00	Discussion about the AHI-ICRAF project		
16.00-16.30	Coffee		
16.30-17.00	NAGALAND Environment protection & economic development (through peoples' action) project (NEPAD)	C. Kikhi	C.Okali/ B.Gurung
17.00-17.30	Discussion about the Nagaland project		
17.30-18.00	Gender and Gender Analysis in Agricultural Research	H.Hambly, C.Okali, G.Prain	J.Ashby/P.Sanginga
19.00-	Dinner at the CIAT restaurant		

DAY 3, Thursday, November 15, 2001			
Today's focus is on *comparative analysis:*			
• *Use of stakeholder/gender analysis and participatory research methods*			
• *Use of participatory monitoring and evaluation* **Impacts achieved**			
08.00-09.00	Stakeholder and Stakeholder Analysis: Identifying stakeholders	H.Hambley, C.Okali, G.Prain	G.Prain/ P.Sanginga
08.30-10.00		B.Gurung	
10.00-10.30	Coffee break		
10.30-12.00	Challenges and discoveries in technology hardware and software for NRM Effects of NRM Technologies on PRR interventions	To be determined by the group	C.Okali/ P.Sanginga
12.00-13.30	LUNCH		
13.00-15.30	Comparing Outcomes and Impacts of Participatory Research: Working groups	N.Lilja and P.Sanginga	H.Hambley/ N.Lilja
14.30-15.30	Working Group discussions	To be determined by the group	
15.30-16.00		J.Ashby	
16.00-16.30	Coffee		
16.30-17.00	Working Group reports and discussion	J.Ashby	J.Ashby / N.Lilja
17.00-17.30		H.Hambly, C.Okali, G.Prain	
19.00-	Dinner at the CIAT restaurant		

DAY 4, Friday, November 16, 2001			
Today's focus is on: *Institutionalizing PRGA approaches: looking ahead*			
8.00-10.00	Open clinic: resource persons and PRGA staff are available for individual questions regarding the written analysis of the project, or time to be used for working on individual revisions on the written report	H.Hambly, C.Okali, G.Prain	---
10.00-10.30	Coffee break		
10.30-11.00	Analysis of gender differentiated social capital development and improvements in NRM	Olaf Westermann	C.Okali/ P.Sanginga
11.00-11.30	Looking ahead: next steps in proposal development	J.Ashby	
11.30-12.30	Future Lines of work	B.Gurung	
12.30-13.30	LUNCH		
13.30-15.00	Institutionalizing the use of participatory research and gender analysis	B.Gurung	G.Prain/J.Gurung
15.00-16.00	Institutionalizing the use of PRGA approach: Working Group on organizational analysis	To be determined by the group	
16.00-16.30	Coffee		
16.30-17.30	Working Group Reports and discussion	J. Ashby	J.Ashby/B.Gurung
18.00-21.00	Closing Dinner		A.F. Velvez/ P.Faderjo

DAY 5, Saturday, November 17, 2001			
Today's focus is on: Looking ahead, future directions			
08.00-12.00	Future lines of work		
12.00-13. 00	Workshop Evaluation	J.Ashby B.Gurung	J.Ashby / B.Gurung
12.00-13.00	LUNCH		
14.00-18.00	Guided visit to Cali		A.F. Velvez/P. Faderjo

1.5. Expectations and Fears

Participants divided into pairs to indicate
- Two or three things that I would like to see happening in this workshop **(Expectations)**
- Two or three things that should not happen in this workshop **(Fears)**

The expectations or things that participants wanted to see happening in the workshop were:
- Exchange of experiences across projects.
- Communicate beyond the workshop
- People should feel comfortable to articulate findings and generate the big picture
- Enjoy the workshop
- Get feedback on project experiences and findings
- Learn more about the practicality of ideas
- Active sharing of practical experience
- Develop effective participatory research methods
- Know more about PRGA program
- **Get o**pinions and feed back of people on respective projects
- Results will inform future activities
- Fruitful discussions
- Building on experience
- Gain experiences on reducing women's drudgery, especially dealing with cultural practices
- Very open and constructive discussions
- Small grants leave with ideas of what to do in future, what would happen with or without PRGA support
- PRGA has a clear sense of what to do in the complex area of NRM research

Conversely, fears or things that needed to be avoided were:
- Raise expectations that cannot be fulfilled
- Technical blinders: have open-mind
- Focusing only on mistakes and failures but learning from mistakes
- Feelings of frustrations
- Lack of focus or little direction given
- Too conceptual, theoretic and rhetoric
- Gender and stakeholder analysis not integrated in the discussion

- High expectations from home institutions, needs concrete examples showing differences
- Showing only positive results, good success, leaving challenges and gaps
- Destructive comments
- Dishonest discussion

2. SELF ASSESSMENT OF LESSONS AND GAPS IN THE SMALL GRANT PROJECTS

Prior to the workshop, and as part of the workshop preparation activities, small grant recipients were encouraged to conduct a self-assessment of their projects to identify lessons learnt in implementing the small grant project and gaps or issues that they would like to discuss in more details during the workshop. This self-assessment was shared during the workshop by answering three questions:

- What have we learnt? (Not research outputs necessarily)
- What are the gaps?
- What issues would we like to talk about in more detail during the rest of the workshop?

Institutions	What we have learnt	Gaps/questions
IES (Zimbabwe)	Focus must be livelihoods and technology. Stakeholder analysis is a tool that can be used effectively for understanding more about participation e.g. Farmer selection (processes clarified through practice)	How to bring gender and stakeholder analysis together? When, why and what do you do in gender analysis
CYMMIT /KARI / CARE	-FPR is effective for technology adoption -Partnerships of different organizations	-How to conduct an evaluation of costs and benefits -Sustainability especially for Ministry
CIP	[Farmer Field Schools] FFS -Researchers learnt and recognized that farmers had a contribution to make -Farmers' participation reduced time to prepare technology -Difficult to form farmer groups	-Lack of CARE staff trained in organizing FFS -Sustainability of activities implemented in project framework
Nagaland	-We were very participatory -We learnt how to do it	-Problems of sustainability due to staff turnover -Gender is still focusing on women only in the Programme and organization
PRGA	-Inventories and case studies were important to us – but we need to 'de-theorise' the process	-'The approach' is time consuming. Is it that complicated?

	-We do have some examples of 'research' benefits -We learnt from ICRISAT mistakes – too much control by researchers limits benefits and learning	-What is the minimum we need to do to assess impact -Gender analysis questions not addressed in depth

Other gaps included:
- How to include community indicators in evaluations
- Capacity of researchers to move beyond defined parameters of "research"
- How do we move beyond mere counting of number of women to a more rigorous gender and social analysis, including analysis of power relations

Subjects for further discussion/clarification:
- How do we deal with the fact that FPR is often 'personalised' – in terms of how it is done and implemented, and in terms of researchers' skills. How do we convince others?
- 'Methodology' issues especially with regard to NRM characteristics – assessment and evaluation methodologies with respect to technical issues. There are limitations to participation and participatory research – some research required on station experiments, etc.
- Group dynamics: how to deal with 'Group think': Influence of group dynamics over personal needs and perceptions of individual farmers
- Technology adoption: What is the relation between technology and adoption? Innovation not dependent on outside source – rest on individual creativity
  - Learning curve is different from adoption curve
  - Assessment of adoption does not capture the fluid complexity of NRM technologies
  - Method: problem solving exercises help to assess farmers' knowledge of principles of disease control
- Participatory Monitoring and Evaluation and impact assessment.

  - Definition of terms: Need more clarity on differences and relationships between Impacts / Outcomes, Processes and Effects.
  - Difficulty of reconciling different interests of multiple stakeholders in impact assessment
  - Evaluation: There are two types of evaluation: for accountability purpose or for learning. Evaluation for learning is essentially participatory evaluation designed and done by stakeholders with the aim of learning from their experiences and take corrective actions.
  - What is the value of an 'early' assessment of 'impact'?
  - Sustainability is an issue to be addressed very seriously. This has to be related to the kind of technology we are talking about. It is not just about social and economic analysis.
  - Concrete methods proposal for addressing NRM impacts

Similarities in lessons / gaps
1. There is need for appropriate methods for assessment of technology impacts and social impacts
2. Interests of different stakeholders should be taken into consideration when evaluating impacts
3. Indicators over time: Some indicators are dynamic and evolve, change over time
4. Institutional impacts: How do we measure and capture them?
5. Approaches for reconciling the need for simplification while at the same time capturing social complexity
6. Methods and tools for PM&E are needed.
7. A good technology needs to be backed up by a good approach and vice- versa

3. state-of-the-art in Participatory Research and Gender Analysis in Natural Resources Management: Overview Papers

3.1. Overview papers

The first day of the workshop featured presentations by PRGA scientific staff on their recent research and findings in developing and testing methodologies for characterizing, assessing and monitoring the impacts of participatory research and gender analysis approaches in NRM. Four of such papers were presented and discussed. Copies of these papers were distributed to the small grant recipients before and during the workshop and were also available at the PRGA website (www.prgaprogram.org) and can be accessed and downloaded.

Papers presented included:

1. State-of-the-art in participatory research and gender analysis in natural resource management research: empirical evidence from the inventory of 76 projects based on PRGA Working Document no 10 (Johnson, N., N. Lilja and J. A. Ashby. 2000. "Using Participatory Research and Gender Analysis in Natural Resource Management Research: A Preliminary Analysis of the PRGA Inventory." CIAT, Cali, PRGA Working Document 10) and McKee, M., N. Johnson, N. Lilja and J. A. Ashby (eds). "Inventory of Participatory Research and Gender Analysis Projects in Natural Resource Management Research." Database. 2001.

2. Characterizing and measuring the impacts and costs of participatory research in natural resource management research: three case studies based on PRGA working Document 17 (Johnson, N., N. Lilja and J.A Ashby. "Characterizing and measuring the effects of incorporating stakeholder participation in natural resource management research: analysis of research benefits and costs in three case studies." CIAT, Cali, PRGA Working Document no 17)

3. *Methodology for assessing the impact of participatory research and gender analysis: Empirical evidence of measuring participation in agricultural research.*

4. *Performance Evaluation of Farmer Research Groups in East Africa based on PRGA Working Document 19 (Sanginga, P., J. Tumwine and N. Lilja 2001. Assessing the Quality of Participation in Farmer Research Groups in the Highlands of Kabale, Uganda. CIAT, Cali, PRGA Working Document no 19)*

3.2. Conceptual Framework for Impact Analysis of Participatory Research: Types of Participation and Their Implications for Impact

3.2.1. Types of Participatory Research

The expected impacts of incorporating stakeholder participation in research are contingent upon the nature of approach used (type of participatory research). Lilja and Ashby (1999) develop a typology of participation based on who makes decisions that permits analysis at different stages of the research process. However, the research process is understood as being iterative rather than linear. The typology defines decision makers as scientists and other stakeholders, a category that includes farmers and other resource users. Underlying this typology is the assumption that differences in who makes a decision will result in differences in what decision is made. This need not be the case; however, cases where the assumption holds are the most appropriate for participatory research methods. The following is extracted from the framework.

Stages of innovation

The innovation process can be divided into three stages – design, testing, and diffusion.

- In the **design stage**, problems or opportunities for research are identified and prioritized, and potential solutions to priority problems are determined. The outcome of the decisions made at this stage is an array of potential solutions. They can be any of the following: a completely new solution is invented and needs to be tested; a new application of an existing solution is identified as having potential, but needs to be tested; or an existing solution can be used, but needs to be promoted.
- The **testing stage** is when potential solutions chosen for testing are evaluated. Decisions are made about who does the testing, and about where and how it is done. This stage results in recommendations to intended users about the innovation or technology for mass distribution.
- The **diffusion stage** involves building the awareness of recommended solutions among future users. It involves decisions about when, to whom, and in what way to build awareness, supply new inputs, and teach new skills to future users. The outcome of decisions made at this stage is full or partial adoption, or no adoption.

Farmer participation at different stages of innovation can have different impact on the technology or innovation design, as well as on the potential adoption or acceptance among the intended users. Farmer participation early in the design stage helps reduce the likelihood that the technologies being developed are ultimately unacceptable to farmers. Their participation in planning and setting goals may help steer the research in a more focused fashion and more directly towards farmers' priority needs. Commonly, farmer participation steers research into completely unanticipated directions. Similarly, who participates at different design stages may lead to different priorities being identified for different beneficiaries.

3.2.2. Who makes the key decisions in the participatory process?

In characterizing the participation in an innovation process we are concerned with organized communication between or among the groups. By organized communication we mean a well-defined procedure (such as informal surveys, group interviews, transect walks, and formal surveys). Organized communication is not an ad-hoc opportunistic event. We also differentiate between **one-way communication**, which is always scientist initiated and where farmers respond to scientists' inquiries, and **two-way communication**, which may be scientist- or farmer-initiated, and scientists make sure that farmers understand their opinions and ideas or their proposals and objectives, and vice versa.

"Who makes decisions" is one way of deciding the balance of power in a participatory process. We define five different types of participatory approach depending on who makes the decision at various stages in the innovation process. A different type of participation is possible at each of the three stages of innovation (Biggs 1989.).

(1) **Conventional**: Scientists make the decisions alone without organized communication with farmers.
(2) **Consultative**: Scientists make the decisions alone, but with organized communication with farmers. Scientists know about farmers' opinions, preferences, and priorities through organized one-way communication with them. Scientists may or may not let this information affect their decision. The decision is not made with farmers nor is it delegated to them.
(3) **Collaborative**: The decision is shared between farmers and scientists, and involves organized communication among them. Scientists and farmers know about one another's opinions, preferences, and priorities through organized two-way communication. The decisions are made jointly; neither scientists nor farmers make them on their own. No party has a right to revoke the shared decision.
(4) **Collegial**: Farmers make the decisions collectively in a group process or through individual farmers who are involved in organized communication with scientists. Farmers know about scientists' opinions, preferences, proposals, and priorities through organized two-way communication. Farmers may or may not let this information affect their decision. When this type of participatory research is initiated, a scientist may be facilitating the collective or individual decision making of farmers or may have already built the ability of farmers to make the decision without outsider involvement. Farmers have a right to revoke the decision.
(5) **Farmer experimentation**: Farmers make the decisions individually or in a group without organized communication with scientists.

Why does it matter who makes the decisions in the participatory process? If outsiders or scientists make all the key decisions without farmer participation in the early stage of an innovation process, farmers cannot influence many features of the innovation that are fixed by those decisions. The outcome of the participatory research is different when scientists and farmers plan together in the early stage and share key decisions, hence increasing the likelihood that the farmers' top priority is addressed. Participatory

research has a very different outcome if farmers make all the planning decisions and only consult scientists late in the process when problems arise.

3.3.3. Implications for Impact

The expected impacts of incorporating participatory research approaches at different stages of the innovation process are described in this section. Again, we are interested in the impact of stakeholder participation on economic benefits from technology adoption; the impacts of human and social capital benefits from participation; and feedback to research and the cost of research. The second and third impacts are examples of **process** impacts that occur as a result of the participation itself rather than as a result of the technologies developed via participatory research methods. In the case of process impacts, the type of interaction between scientists and farmers directly affects the kinds of impacts that occur. Therefore, the hypotheses related to these impacts vary by type as well as by stage.

1) Adoption and economic impact of technology

The economic benefits associated with technologies developed using participatory research are highly dependent on the specific technologies, agroecological environment, input supply, and farmer and household characteristics.

Hypotheses
However, some general hypotheses about how stakeholder involvement at different stages might influence the adoption are given below.

Design stage:
(H1) *The proportion of the targeted beneficiary group that could be reached by the project increases because the priority topic chosen for research is more relevant to the needs and priorities of targeted farmers.*

Testing stage:
(H2) *The number of potential adopters within the target group increases because the specific technology/ies selected for recommendation is/are more appropriate given farmers' criteria and constraints.*

Diffusion stage:
(H3) *The probability increases that potential adopters for whom the technology/ies is/are appropriate will be aware of it/them, and that adopters will be willing and able to adopt and recommend it/them to others.*

2) Social and human capital impacts among beneficiaries

It is hypothesized that through the process of interacting with researchers, the human and social capital of participating individuals and communities can be strengthened. These types of impact would only be anticipated as a result of empowering participation, meaning collaborative or collegial.

Design stage:

(H4)　*Collaborative: Farmers/communities improve their ability to interact with outsiders, to articulate and evaluate their opinions and priorities, and to negotiate joint solutions with other stakeholders who may have different opinions.*

(H5)　*Collegial: Farmers/communities improve their ability to interact with outsiders, particularly their ability to attract the interest and support of researchers for farmers' problems and priorities.*

Testing stage:

(H6)　*Collaborative: Farmers/communities enhance their own testing and evaluation skills with an increased knowledge of scientific methods of experimentation and evaluation, and improve their ability to negotiate joint recommendations with other stakeholders who may have different opinions.*

(H7)　*Collegial: Farmers/communities enhance their own testing and evaluation skills with an increased knowledge of scientific methods of experimentation and evaluation, and improve their ability to convince researchers of the validity and relevance of farmers' results.*

Diffusion stage:

(H8)　*Collaborative/collegial: Farmers/communities learn what is involved in mass diffusion of technology, particularly the complexity of adoption decisions and the importance of complementary inputs such as seed, credit, or information.*

A final hypothesis relates to the fact that, in many cases, participatory projects involve farmers working together with other farmers as well as with researchers.

(H9)　*The increased communication among farmers may result in better information and in information sharing among farmers and within the broader community, strengthening community social capital.*

3) Feedback to formal research

The previous section looked at the process impacts of participation on the beneficiaries. In this section, we look at the benefits for the research process, specifically on researchers' access to information about farmers. These impacts can occur with any type of participatory research, either functional or empowering.

Design stage:

(H10)　*Consultative: Researchers learn about farmers' priorities and solutions.*

(H11)　*Collaborative: Researchers understand farmer priorities and solutions — including any new shared priorities or solutions that farmers and researchers identify as a result of working together — and incorporate them into their work.*

(H12) *Collegial: Researchers learn about farmers' priority problems and solutions by observing their decisions about problems, solutions, and innovations.*

Testing stage:
(H13) *Consultative: Researchers learn farmer criteria for evaluating technologies.*

(H14) *Collaborative: Researchers understand farmer criteria and methods for testing and evaluation of technology – including any new shared criteria or methods that farmers and researchers identify as a result of working together.*

(H15) *Collegial: Researchers learn about farmers' testing and evaluation methods and criteria by observing their actions.*

Diffusion stage:
(H16) *Consultative: Researchers learn about the factors that affect farmers' adoption decisions and what this implies for the diffusion process.*

(H17) *Collaborative: Researchers learn about farmer-to-farmer diffusion practices and about what kinds of information and skills both farmers and extension workers need to support this spontaneous diffusion.*

(H18) *Collegial: Researchers may learn about spontaneous farmer-to-farmer diffusion through observation of farmer activities.*

Finally, a general hypothesis that would apply at all stages is that:
(H19) *Researchers begin to understand that working with farmers may require new types of skills such as facilitation and conflict resolution that were not as important when research was carried out entirely on-station.*
This would be expected to increase as participation moves from functional to empowering.

4). Cost of research

As with the impact on economic benefits, the impact of participation on research organizations' costs is largely an empirical question. Several general hypotheses are possible, however.

(H20) *Moving from conventional to consultative or collaborative forms of participation generally increases formal research organizations' costs at the particular stage where it is incorporated; however, it may reduce cost at subsequent stages.*

(H21) *Collegial research reduces research costs to formal research organizations at the stage where it is implemented because costs are transferred to farmers.*

(H22) *Participation without compensation increases farmers' costs unless it relies exclusively on those farmers (often a small and unrepresentative group) who already experiment on their own with new technologies and practices.*

4. Presentation and Discussion of Findings and Results of the Small Grants Projects

The second day of the workshop was dedicated to presentations of the results of the six small grants projects and invited case. Each presentation took approximately 20 minutes focusing on the results and impacts achieved to-date as well as lessons learned.

4. 1. Titles of Small grants presentation

	Titles and Institutions	Presenters
1	Impact evaluation or participatory development of integrated insect & disease management for the potato crop in San Miguel, Peru (CIP)	O. Oritz
2	Development & dissemination of integrated *Striga* control practices for the small-scale farmers of Western Kenya (CIMMYT-KARI)	J. Agunda and G. Odhiambo
3	Assessment of the impacts of stakeholder participation in the diffusion of a vertisol management technology package in highland Ethiopia (ILRI)	A. Astatke
4	Evaluating the impact of farmer participatory research & extension in NRM in Zimbabwe (IES)	E. Chuma
5	Local people, devolution & adaptive co-management of forests (CIFOR)	L. Yulani
6	Impact of using participatory methods to solve NRM issues in the East African Highlands (AHI-ICRAF)	P. Sanginga
7	NAGALAND Environment protection & economic development (through peoples' action) project (NEPED)	C. Kikhi

Each presentation took about 30 minutes followed with 30 minutes of questions, discussions and comments. The focus of the presentations was on individual project results, and specifically on :
- Use of stakeholder/gender analysis
- Use of participatory research methods
- Use of participatory monitoring and evaluation
- Impacts achieved and
- Lessons learnt

4.2. Structure of Presentations

Most presentations followed some agreed upon guidelines for paper presentation and report writing to allow systematisation and comparative analysis. As it may be expected modifications of these guidelines reflected the differences between projects and focus, as

well as introduced interesting results/data that could be lost by standardisation of presentation and reporting.

1. Introduction

- *The problem statement*. Clearly state what is the problem your research is addressing.

- *The setting*. Describe <u>briefly</u> the important aspects of the setting or the project that affect your case. Include <u>only</u> the most relevant physical features of the environment of the case study; relevant social and political features (farm size, annual income, language and culture, social groups, gender roles, ethnicity, conflicts, local institutions), division of labor and property rights and roles in the agricultural system.

2. Methodology

- *The PRGA approach*. State your "type" of participation and gender analysis in a one brief paragraph. You may find the attached document titled "methodology" useful, as it gives you one classification of the types of participation and gender analysis. Try to articulate and summarize what type of PRGA approach you had used in your project and at what stages in your research. (If you find it more useful, please use an alternative typology.)

     <u>One example of the description of a types of participation approach by ICRISAT case:</u>
     The ICRISAT participatory "Mother-Baby" trial methodology as used in this project is essentially *consultative participation at the testing stage*; while individual farmers do in some sense manage the baby trails, they receive and are expected to adhere to, detailed trial protocols designed to ensure comparability of results across sites. Nonetheless, farmers were able to provide input into the design of trials and evaluation of technologies. For example, when farmers identified that some technologies were associated with weed suppression, the protocol was modified to include collection of data on weed counts. Because of this opportunity for input, the mother baby trials are considered consultative participation.

- *User differentiation*. Describe the criteria used to select participants for involvement in the research in relation to for example their knowledge or technical expertise, gender, wealth, ethnicity and why these criteria were chosen. Did criteria for selection vary at different stages in the process and if so, why? What method(s) did you use to select participants– was there a purposive selection, was there any kind of sampling used, was it self-selection? If applicable, it may be useful to compare different selection methods with respect to their kind of information obtained, input by or roles of the farmers in the research process (a summary table would be ideal).

- *Expected Outcomes.* Briefly summarize the "research results" and "development impacts" you <u>expected </u>to achieve from the PRGA process presented in this project. Also, explain why and how the approach to PRGA you are using was designed to achieve these results and impact.

Note: For the purposes of this analysis "Research results" (also be called "*process impacts*") are the result of the participation itself rather than a result of the technologies developed via participatory research methods. Research results also consist of the information (or rather the feedback of information to research) and product or changes in research organization and costs obtained by doing participatory research and gender analysis, or other approach to management with users participating. "Development impact" is the benefits obtained by the end-users of these products, eg. (1) economic benefits from new technology or innovation such increased production, productivity or incomes; higher wages or returns to labor; more stable production systems, and (2) human and social capital benefits impacts from participation such as new skills and knowledge; more effective institutions etc.

3. Research Process

- *Activities*. A brief description of activities (or process) that were carried out. You may want to describe this in terms of steps or stages in the process. Also, induced any significant changes, if any, to planned activities if some plans changed due to the PRGA approach and input from the participants.

  One possible way to summarize this was to prepare a simple table that has a chronogram of the most important activities:

Example of timeline of project activities (or "process")

Point in time	Activity or Significant Event	Outcome / Impact / Change
June 1999	Begun designing the participatory trials on farmers' fields, no farmers were consulted at this design stage.	Researchers selected technologies chosen for testing, and given their knowledge of the local farming practices they believed that these technologies would be well suitable to local conditions.
August 1999	Started trials on farmers fields, selected 20 farmers on 3 sites by asking the chief of each village to nominate the participants.	No attempt has yet been made to assess how representative they are of the general local farming community.
December 1999	At the meeting in the villages during the harvest, the women farmers approached the project scientists and asked why they had been excluded from the project.	Project scientist realized that they had not sufficiently assessed in the beginning the importance of women in crop production and decided that a gender diagnostic appraisal was needed to better understand the role of women.
May 2000	A gender diagnostic study was conducted	Results of the gender diagnostic study indicated the importance of women as decision-makers in certain activities of the sweet potato production. A second year of trials was planned and in each location, women farmers were included as participants.

June 2000	First year's results indicated that none of the technologies tested were well received by the farmers.	In designing the second year trials, farmers were consulted about the choice of technologies to be included to trials.
…	…	…

- *Monitoring and evaluation.*
  Describe how your research process was monitored at evaluated. Which stakeholders, if nay, participated in the project monitoring and evaluation. If you wish you could modify the table suggested above to include the project monitoring and evaluation.

4. Impact assessment methodology.
- Explain your impact assessment plan, how did you measure the research outcomes and development benefits of your project? Do not present your impact assessment plan, but describe how and what type of assessment was actually done. What were your specific impact questions? How did you measure them? This section and the following 2 sections are probably the most interesting contributions of your project to benefit other projects.

5. Results and Impacts
- *Achieved Outcomes.* Present which expected results and impacts have been achieved, comment on any failures, indicators of likely success and failure in the past, present or expected in the future. You may want to present results achieved at different stages in the process, and/or by different types of outcomes, ie "research results" (don't forget cost impacts!) and "development impacts." Attached is a document called "Impact assessment-ICRISAT" which might give you some ideas how to present some of your results. Remember, this is only an example, not necessary the model case!
- *Gender impacts.* Please pay specific attention to discussing the "gender impacts" of your research. For example, have you achieved the participation of different kinds of people, including poor farmers, ethnic groups or women? What was the effect of this differentiation of participants in the research process to the results and benefits of the research.

6. Lessons learned
- *Lessons learned.* What conclusions can be drawn from your project about how to involve and differentiate users in research in NRM and what difference does it make to do so? Please give concrete examples and experiences from your project, but also try to be reflective beyond the scope of your project. Use examples (positive and negative) from your project to illustrate your conclusions. (As an example, see the attached file called: "Lessons learned-ICRISAT.")
  At the minimum, please consider the following questions:
    - Did participation and gender differentiation change project objectives or priorities with respect to technology development and transfer for NRM?
    - What difference did participation make to the cost or impact of the research?

- • Did participation and gender differentiation or new organizational strategies affect the number of beneficiaries, the type of beneficiaries adopting new technology, or the speed at which they adopted?
  - • Was local experimentation with new practices strengthened?
  - • Did capacity building improve local skills, problem-solving ability, and ability to initiate and sustain participation without external facilitators?
  - • Was there feedback to NARS or IARC research that changed their research priorities or practices beyond the scope of the specific project?

- • *Towards institutionalization.* When writing this "lessons learned" section, think about it as your statement to your colleagues in your own institute who want to know, "so what?" --- What can you tell me about usefulness of the approach and what evidence do you have that it works? Given your experience, what are some of the key issues or strategies if we want to try to "institutionalize" the PRGA approach? (or maybe you have examples how this project helped to catalyze the PRGA research in your institute?)

4.3. Discussions

The following reflect some of the questions and discussions that followed presentations of small grants learning cases:

- • Men and women are interested in different activities, do you think a project like yours should support this type of specialization by gender or try to make women and men be involved in same activities?
- • Did you ask farmers how much experimentation they do on their own, or did they take principles of Farmer Fields School and apply?
- • How do female-headed household deal with this Farmer Fields School approach?
- • Were there any female-headed households involved?
- • Which use of practices increased, new or new use of local practices?
- • You had differentiation between men and women, what about between poor and richer, or with farmers who had more capacity to be involved in the project?
- • What are the implications of this project to poverty?
- • Is there added value to research to include gender? Your use of non-parametric tools was very clever. You mentioned the need for more tools. Could you develop them?
- • How do you get response with just asking "how do you innovate?" We have two on tools how to do this. Titles: Farmers' Experiments creating Local Knowledge by James Sumberg and Christine Okali. 1997.
- • These other groups that stakeholder analysis showed, did they offer opportunity for cross-cutting work?
- • About the cost of intervention, what is the cost of methods, what is the cost of availability of resources ie. CARE and Ministry of Agriculture (MoAg) resources?
- • You were looking of number of interventions brought forwarded by farmers, what types of suggestions farmers have brought forward and what type of adaptations have you seen?
- • What are the criteria for selecting Group resource persons?

- You said women would be better evaluators and men better dissemination. How much difference did you find within the groups? Did you find variability? Some men for example may or may not be good disseminations?
- About the problem involving everyone in the community. Sometimes it is not important that everyone is involved. How do we assess when everyone needs to be involved? Families who do practice intercropping (ie often the poor) the problem of striga is not so bad, it is more of a problem to monocropping households.
- Without explaining the principles of striga control to the farmers, we would not have had success. Just explaining the practice would not have worked, but they needed to understand the principles. Different to CIP project is that farmers were able to communicate the principles to others.
- Did the farmers use the new or the modified machinery because it was cheaper? Did they also plant earlier when they use the implement?
- How do we make the existing systems' services more functional?
- SSC is striking; there is even a strong government presence. Did the SSC see that in the future there is a need to make alliances with other local institutions, particularly in attempt to increase number of women? There is resistance to increasing participation of women in SSC, maybe making strategic alliances would solve this problems?
- What are your thoughts about how this could be institutionalized?
- Are your impact indicators sensitive enough to measure impact?
- Who sees the impact is important. If you take any initiative to a community, it is important to assess if you share the same vision with the community. If you do, find what would be the community indicators for that success. Because development is for the people and to make sure people are satisfied, so one should use the indicators farmers define in the community.
- More and more steps were started in this project. Are you not going to lose the flexibility? How big must the project be so that this expansion gives added value to the project?
- One of the major problems we often encounter, is that sometime there is a over simplistic view of how things are done, for example something was done in a very participatory way, but when you really examine it, it is not participatory, so how do you operationalize in a way that is very participatory, you really have to go to the details level in the operationalizing plan.
- When we look at the participation, there are two ways, framers take more the decision-making or the scientists do it. What I see here is that there are some many groups. Where do you stop, how do you do it in practical way?
- I am interested that Andreas sees this very complicated and detailed. If you would sit down and trace down all the steps you have done, and you would find out that you probably have done it also
- Now that we are comparing different types of projects, have you confronted any other projects with these results?
- Back to the issue of planning.. The need for this detail plan is to be able capacitate. So that they could plan a detail interaction. If you look from the end point back, all these processes are very complex. You come across to different situations and people respond various ways, they use principles, in order to adjust to those situations. In my opinion training needs to concentrate on these "tricks of the trade" to be able to

allow people to respond to those situations. Rather than trying to pinpoint exactly how we react to all kinds of possible situations.

- We had a workshop evaluation of different approaches, we need to make sure that it is the method that makes a difference, not the resources that are put in.
- One of the projects mentioned "phase out" which is concept as if "this is it" donor. There is different thinking about project cycle. This "something" should have a life of it is own, and independent of office etc. Rather use "phase over."
- Is it resource or methods that matters? Could somebody put together a table thinking about this? You cannot just transfer a method for one institution to other and get the same results. Eg organization X reached number of farmers and other institution Y reached another number of farmers, what is the difference, you could not complete?
- Most small grants belong to CG system, but most questions are in the development field, so what is the implications of our results to our centers?
- How has this for example influence the impact on centers, and universities, institutions widely?

5: GENDER & GENDER ANALYSIS

One of the gaps identified through the self-assessment exercise was using and integrating a more systematic gender analysis in the small grant; i.e. moving beyond mere counting of number of women and sex desegregation of data. This session was meant to address this gap by reflecting on participants' experiences in the use of gender and gender analysis in their respective small grants projects.

In a brainstorming fashion using cards and charts, participants were requested to indicate and discuss : (1) three things you did in gender analysis and (2) tree gender outcomes. The following categories summarized participants' experiences and challenges in using gender analysis in their small grant projects.

Tools for Gender Analysis
- Gender resource mapping (access & control)
- Focus group discussions, community meetings and workshops
- Separate men's and women's perceptions, needs
- Comparing preferences of women vs. men (e.g. clone evaluation)
- Perception of striga problem by gender
- Daily activity schedule (men and women)
- Diagnostic of social capital: different types and levels of social capital
- Social organisation analysis: Analyze the importance of gender differences to social organization in NRM

Techniques for involving women
- Women included in site stakeholder committee
- Work separately with men and women groups
- Address gender balance in recruitment of committees
- Selection of women as participating farmers
- Have facilitator who works specifically on gender and be part of the community
- Action plans development
- Gender Awareness training
- Determine participation in Peasant Association by gender
- Understanding factors that limit women participation
- Clone evaluation

Gender Roles & Responsibilities: Gender roles are reflected in the accepted tasks and responsibilities allocated to and performed by men and women which influence the division of labour
- Identify levels of contribution by men and women
- Decisions, roles, and benefits
- Decision-making processes in male, female; *de facto* and *de jure* female headed households

- ➢ Identifying comparative advantages of women specialization
- ➢ Differentiate and classify household types
- ➢ Identify distribution of benefits between men and women
- ➢ Determination of roles in farming activities by gender

Gender Practical Needs: refer to the immediate, material circumstances in which men and women carry out their responsibilities, and relate to basic needs arising from gender roles and responsibilities, division of labour and access to resources. These are material needs and concern short terms and felt immediate needs. In general they are relatively easy to identify as they relate to the condition of women and men. When addressed, men and women can perform their gender roles and responsibilities more efficiently and easily. Practical needs relate to the condition, roles and responsibilities of men and women.

Gender Practical Needs
- ➢ Transfer of technology in their own field
- ➢ Marginalised groups are more actively engaged in FM (independently)
- ➢ Women participated in decision making about selecting potato clones
- ➢ Women added value to the evaluation process of new clones
- ➢ Men were found to be better trainers, while women were better demonstrators or adaptive research farmers
- ➢ 31 gender 'Awareness' technology options
- ➢ Collective action through labour exchange
- ➢ Sharing the analysed data with both men and women to increase level of gender awareness
- ➢ Different options and solutions developed for men and women, and for different groups of women

Gender Practical Needs refer to the immediate, material circumstances in which men and women carry out their responsibilities, and relate to basic needs arising from gender roles and responsibilities, division of labour and access to resources. These are material needs and concern short terms and felt immediate needs. In general they are relatively easy to identify as they relate to the condition of women and men. When addressed, men and women can perform their gender roles and responsibilities more efficiently and easily. Practical needs relate to the condition, roles and responsibilities of men and women.

Gender Strategic needs
- ➢ Some women demanding their share under village development fund (VDB)
- ➢ Women purchasing land of their own
- ➢ Gender by-laws initiated
- ➢ Women taking "over" leadership roles
- ➢ Women become more effectively involved in decision-making
- ➢ Women demanded their representation to be increased in site stakeholder committees (SSC)
- ➢ Men become more involved working with women

Gender strategic needs arise from unequal relations and control over resources. They are less visible and more difficult to identify. They require more long term, innovative and radical actions as changes are required in attitudes, behaviours, values, positions and power relations for empowering women. The strategic needs relate to the position of men and women relative to each other, and their status in the society.

Neither categories: These are some of the strategies that can be placed in either of the practical needs or strategic needs categories depending on the context.

> ➢ Weaker participation of women in public fora
> ➢ The development of training material and content was not affected by gender
> ➢ Women had less interest than men in being actively involved in project activities
> ➢ Different adoption trends by gender (technology preferences)
> ➢ Extension agents realized the importance of women headed households, and the importance of women participation.

To sum up…

Gender analysis should be differentiated from sex segregation and division of roles by sex and should address important questions of

- Status and position: refer to place of women in relation to men in the society
- Gender relations, power relations between men and women , capabilities of men and women to influence the process

Gender analysis is the systematic effort to understand the roles, tasks and responsibilities, relationships between men and women within a given context in relation to their position and status and their relationships. Gender roles and responsibilities are reflected in the tasks and responsibilities allocated to men and women according to accepted patterns of work

6. STAKEHOLDERS AND STAKEHOLDER ANALYSIS

6.1. Who should be involved in Participatory Research and Development? Stakeholders and Stakeholder Analysis.

This session started with an overview presentation by Pascal Sanginga (PRGA) on some conceptual understandings and examples of tools for stakeholder analysis on "Who should be involved in Participatory R&D? Stakeholders and Stakeholder Analysis"

Why do Stakeholder Analysis?

- Communities, Farmers and other stakeholders groups are not Homogenous. Different interest groups exist.
- Researchers and Development Agents need to:
- Be aware of differentiation between and within communities, between farmers and within farmers' groups, and other stakeholders.
- Be capable of differentiating farmers according to relevant criteria (gender, wealth, farm type…)
- Take those differences seriously in diagnostic, planning, design, testing and evaluation of technologies

Why is stakeholder analysis important in FPR?

- Strategic entry point for participatory research and development because it gives answers to who we are dealing with, who we should be dealing with and their problems and interests.
- Empirically to make sure we work with the "right people"
- Analytically to improve interventions
- To know who will be affected and benefit from our technologies

Who are the stakeholders?...Stakeholders are people, groups, or institutions which are likely to be affected by a particular resource or project (either negatively or positively), or affect the outcomes of the intervention

- Types of Stakeholders
  - ✔ Direct-Indirect stakeholders
  - ✔ Primary/ Secondary Stakeholders
  - ✔ Local/ External stakeholders
  - ✔ Beneficiaries- Supporting stakeholders
  - ✔ Affected- Affecting
  - ✔ Hidden stakeholders (non traditional stakeholders)
  - ✔ Individual/group- institutions

Stakeholder Analysis (SA) is

..An approach or procedure for identifying the key actors who (are) should be involved, their interests, roles and how they relate to each other in a particular system

Stakeholder Analysis: A Five-Step Process

☞ Step 1: Identify key actors (institutions, groups and individuals) involved in the project/intervention
☞ Step 2: Identify their characteristics, interests, and potential impacts
☞ Step 3: Assess their patterns of relationships between and within stakeholders' groups
☞ Step 4: Outline how they will participate in the project
☞ Step 5: Sustain their participation and manage potential conflicts

Tools for Stakeholder Analysis

Venn Diagrams
✔ Simple tool for identifying stakeholders, their relative importance and relationships.

Stakeholder Analysis Matrix
✔ Identifying stakeholders, their characteristics, interests and roles in the project

Identification of Stakeholders in the Small grant Projects

After the presentation and discussion on the concepts, participants discussed the following questions in a card-and chart session;

1. Which stakeholders did you involve in your project?
2. List those that were either
   - forgotten / unknown / neglected
   - now seen as less relevant
3. Which stakeholders would you involve now that you have completed some/all of your projects?

Results

ILRI-Ethiopia:

Stakeholders involved
- Researchers ???
- Seed & Fertilizer suppliers / Service cooperatives
- District agricultural officers
- Farmers

Forgotten / unknown / neglected or now seen as less relevant
- Private implement supplier
- Zonal agricultural officers
- Private seed & fertilizer suppliers

CIFOR-Indonesia
- Local community
- Nomadic ethnic group
- Local migrants (spontaneous)
- Illegal loggers
- Site : Village forest system
- Concession company
- Trans-migrants (government program)
- NGO ICDP
- Environmental Impact Management Agency
- Forestry authority
- District planning agency

Forgotten / unknown / neglected stakeholders or now seen as less relevant
   a) None
   b) Concession company

CIMMYT-KARI-CARE Kenya
- Farmer groups
- Striga – Working Group
- KARI
- Administration
- Schools
- Locational Management Committees
- Farmers
- ICRAF
- ICIPE
- PRGA Program
- CIMMYT
- NGO Lagrotec
- University of Hohenheim
- GTZ/BMZ

- CARE
- Extension: Ministry of Agriculture
- Opinion leaders

Forgotten / unknown / neglected or now seen as less relevant
- ICRAF
- University of Hohenheim
- Lagrotec (NGOs)
- ICIPE
- Church Organisations
- Fertilizer dealers / stockists

NEPED-Nagaland India
- ICEF (Donor)
- Government of Nagaland
- Village Council /Village Development Board
- Farmers - men nad women

CIP-Peru
- Farmers: FFS - group
- Farmers: Andino – group
- Farmers: Faba-bean group
- Farmers: Soil conservation group
- Farmers: Disciplinary – group
- Farmers: Milk producing – group
- Farmers: Women groups (3)
- Farmers: Poorest farmers
- CARE: Facilitators
- CARE: Management
- CIP: Researchers
- CIP: Management
- Donors: IFAD
- Donor: PRGA
- Donor: SESAL (Spanish Cooperation)

Forgotten / unknown / neglected or now seen as less relevant
- Soil conservation project
- Existing women groups
- Local municipalities
- Local university
- Wealthier farmers

IES Zimbabwe
- Department of Agriculture Extension
  - Institute of Agricultural Engineering
  - Field Extension Officers in District sites
- Department of Research

- o Cotton Research Institute
- o Farming Systems Research Unit
- University of Zimbabwe
  - o Institute of Environmental Studies (IES)
  - o Department of Soil Science
- Farmers
  - o Members of Farmers organizations
  - o Leaders of Farmers organizations
  - o Non-members
- Male an Female Farmers
- Resource and non resource endowed
- Village Development Committees
- Councilors
- Traditional leaders
- NGOs: ITDG
- GTZ

Forgotten / unknown / neglected or now seen as less relevant
- Department of Social Studies (University of Zimbabwe)
- NGOs
- CARE

7. Challenges and Discoveries on Technology Hardware and Software for NRM

7.1. Characteristics of NRM technologies used in the Small grants

One of the gaps identified by the review team and resource persons was the relative invisibility of technology in the different reports. Less emphasis was given to sufficient description of the different NRM technologies. The importance of technology was emphasised as the outcomes and impacts of participatory research also depend to a great extent to the nature, type and complexity of technology being tested and promoted. The specificity and complexity of NRM technologies need to be emphasised when assessing the impacts of participatory research in NRM.

The table below was constructed to elicit the characteristics of the NRM technologies tested and their effects on participatory research interventions.

Case	Technologies/ Principles or processes	Outcomes	Reasons for outcomes	Diffusion
CIMMYT-KARI-CARE Kenya	Striga biology and control methods: -Soil fertility improvement -Weed control -Agronomic practices (intercrop and rotation) -Crop variety screening	Maize-soybean intercrop and rotation selected Selection of early maturing varieties Striga biology understood and able to be communicated	Farmer selection of a wider menu of options for weed control, market acceptance and nutritive value	Successful diffusion of striga technologies and control principles
ILRI/IDR Ethiopia	Broad-bed maker technology packages High yielding varieties Agronomic practices Fertilizer regimes	Refinement of BBM package: -adaptation of local plough -combine traditional BBM seeding technology	Overcome high cost, non availability of BBM	
CIP-CARE Peru	IPM principles and components: Resistant varieties Improved spraying	Expansion of IPM principles to include insect pest mangement and research on pea and faba bean	Address wider set of male farmer priorities, different women priorities	Successful diffusion of technologies (varieties), but very low diffusion of principles
NEPED-	Tree crop for	Tree crops on	Overcome	

Nagaland	culitvation by women in upland fallow	purchased land Tree nurseries	customary land restrictions; short term land utilisation	

7.2. Major Challenges in NRM technology

Major Challenges in NRM technology testing
- How to make compatible late blight control with insect control?
- Researchers interests for classical experimental designs made farmers experimentation more difficult
- To what extent it is possible to have replicable control for late blight ?
- Number of on-farm trials depend on available resources
- How to design decision support systems for farmers to control LB?
- Striga biology is difficult to understand as seed bank in soils are not visible, and take time to be depleted
- Farmers have different parameters of evaluation (from researcher)
- Getting and offering more technology options to farmers
- Number of external factors affecting on-farm testing
- Dynamism in the change of farmer conditions and relevance of technologies
- Farmer would pick specific technology components
- Hardware (BBM) has given an idea for the modification of the technology
- Poor farmers couldn't get access to new technology. This forced innovation
- Continuous adaptation of technologies to suit farmers' specific conditions, resources and objectives
- Maintain trustful relationship and collaboration with all parties involved in PR activities
- Climate (erratic) leads to prolonged testing
- Involving non-group members, non compliant stakeholders
- Sustaining farmers interests in technology testing
- Moving from plot to landscape scales for NRM research
- Long-term nature of striga control
- How to make the community aware and accept that the direct benefits are not in term of economic long term
- At preliminary/early stages, there are no immediate benefits to the community
- Matching technological options to the socio-economic conditions of farmers within a given timeframe
- It was difficult to do PR and see benefits of insect control in PR trials

Challenges in technology dissemination
- Farmer field schools (FFS) were not of a natural interest to farmers
- Long-term nature of striga control
- How to make technology and principles diffuse to non-participating farmers
- How to create effective learning activities for farmers?
- How to facilitate learning when the cause (L.B.) is invisible?

- ➢ Farmers cannot adopt some technologies when the land is limited
- ➢ Land policy is a challenge (private vs. just having users right)
- ➢ How to sustain the involvement of extension service
- ➢ Adjustment required to deal with changes in the components involved (High turn over of government staff, changes of polices, etc.)
- ➢ How to convince other institutions about the advantages of FFS-PR?
- ➢ Activity agenda and period of funding doesn't always fit with condition in the field
- ➢ Sustain the ability of stakeholders (especially community) in dealing with dynamic complexity & uncertainty
- ➢ Institutional arrangements required for successful diffusion of technologies
- ➢ Should it be only poor farmers engaged in NRM? What about other categoreis of farmers?

7.3. Major Discoveries in NRM Technology

Discoveries in NRM technology testing
- ➢ Farmers not easily discouraged
- ➢ The software becomes important in NRM innovations
- ➢ Discovery of multiple benefits out of technology tested to provide one solution
- ➢ Farmers re-discovered the value of resistance
- ➢ Farmers initiated to innovate not only pest control but other practices for potato management
- ➢ Apart from resistant varieties, principles were possible to replicate
- ➢ Farmers started their own independent experimentation
- ➢ Groups proved to be not very effective for NRM technologies
- ➢ Innovation was facilitated by group decision making
- ➢ Tree plantation by women in a plot not own by them
- ➢ Combining specific technological options to get maximum benefit
- ➢ Finding "Entry-points": integration NRM technologies with variety evaluation
- ➢ Exposure visits create farmers interests
- ➢ Women farmers purchased their own land
- ➢ Tree nurseries established by women
- ➢ Local knowledge & customary law should be recognized and incorporated. Implementation should be encouraged (at local level)

Discoveries in technology dissemination
- ➢ Use of local institution for farmer mobilization
- ➢ Diffusion of information to non-participants is slow
- ➢ It is not possible to have PR without participatory training
- ➢ Knowledge should be combined with learning
- ➢ Use of local institution for farmer mobilization
- ➢ Diffusion of information to non-participants is slow
- ➢ It is not possible to have PR without participatory training
- ➢ Knowledge should be combined with learning

Discoveries in technology dissemination

- ➢ Visual aids for farmer training were found very successful
- ➢ High interest of farmers in striga biology
- ➢ Indigenous (historical) knowledge of Striga facilitate dissemiantion
- ➢ Testing can be a process of learning and diffusion
- ➢ Farmers can perform as facilitators of FFS
- ➢ Understanding of Striga biology increased adoption
- ➢ Higher success rate by offering technology options
- ➢ The benefits of participation are related to self-confidence as short-term benefits
- ➢ Social learning: self ability of community to move forward
- ➢ High rate of replication

8. Outcomes and Impacts of Participatory Research and Gender Analysis

Before going into comparative analysis of the impacts of the six learning cases, it was found necessary to clarify some terms and concepts used. Such terms include outcomes, outputs, process and impacts . Nina Lilja and Pascal Sanginga (PRGA) presented an overview of the definitions of these concepts

Outputs are activities completed, processes or products made during a project. Outputs include publications, training, set of tools, guidelines, a conference, a policy document, a technology among others. An example of an output is researchers training farmers on appropriate fertilizer use or fungicide application. More often, outputs are documented because they tend to be tangible and therefore easy to measure.

Outcomes are changes in behaviour relationships, activities and actions a project or intervention is helpful in brining about.

Impact is long term intended or unintended changes which are influenced by many factors other than just a project or one actor. Examples of impact include changes in policy changes in NRM (valley bottom conservation), improved livelihood options. In impact categories include social, economic, environmental and institutional changes.

Process refers to sequences of activities in time. They are initiated, influenced, observed and described by those involved in or affected by a project. These looks at how activities are initiated, implemented and terminated over time. People involved come up with explanation of these processes that guide their actions. Process is further included in monitoring to look at selection decisions, observation, action and reflection.

For a program to achieve its goals, **inputs** such as money and staff time must result in **outputs** such as number of technologies developed, new or improved technologies, trained staff, information materials etc. If these outputs are well designed and reach the populations for which they were intended, the program is likely to have positive short-term **effects** or **outcomes**, for example increased yields, reduced striga infestation, or farmers' skills. These positive short-term outcomes should lead to changes in the longer-term **impact** of programmes.

```
┌─────────────────┐
│    INPUTS       │        What were the ingredients?
└─────────────────┘
         │
         ▼
┌─────────────────┐        What was done?  How was it done?
│    OUTPUTS      │        (activities completed)
└─────────────────┘
         │      ╲
         │       ╲──────▶   ⬭ COSTS ⬭
         ▼
┌─────────────────────────┐
│      OUTCOMES           │   What happened?
│ Process / technology /  │
│       welfare           │
└─────────────────────────┘
         │                      ┌──────────┐
         │                      │ Other    │
         │          ╱───────────│ Factors  │
         ▼        ◀              └──────────┘
┌───────────────────────────────┐
│         IMPACTS               │
│ Social and Human  capitals    │
│ Research Methods, Institutional impacts    What difference it make?
│ Technology impacts , adoption │
│ Development impacts           │
└───────────────────────────────┘
```
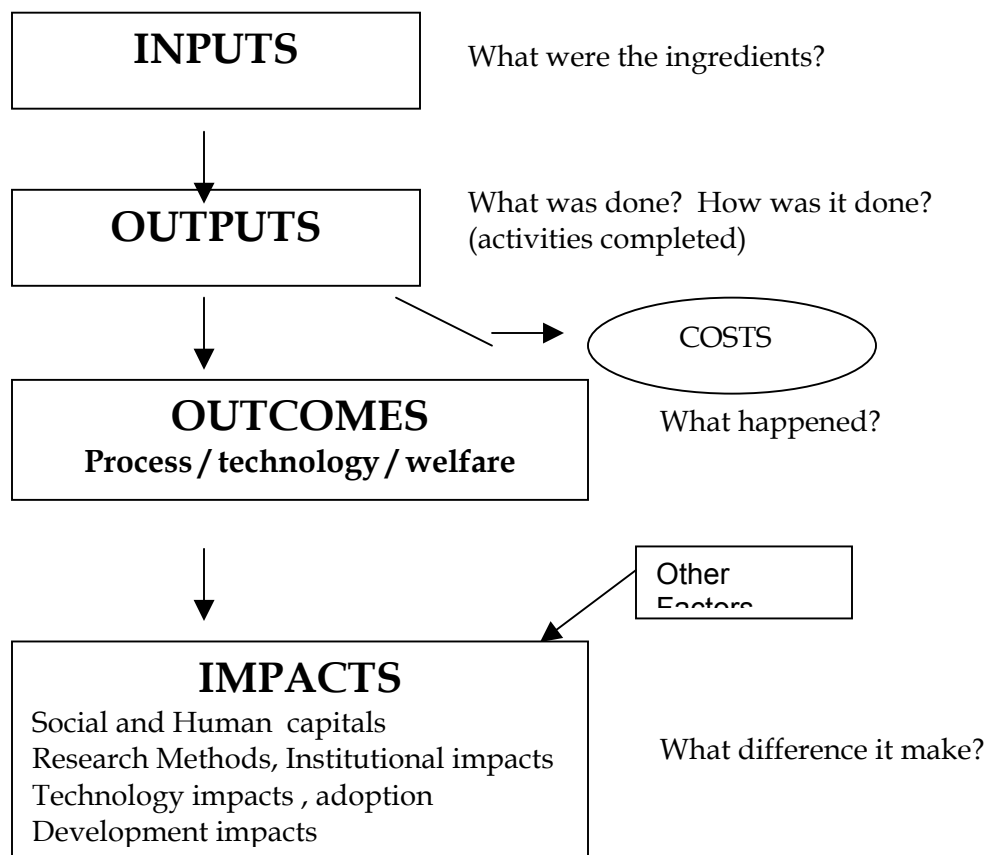
Comparing Impacts and Outcomes of Small grants

Assessing the impacts and outcomes of small grants or any project is always based on some assumptions that are made at the beginning of the project. It important to have full knowledge of such assumptions before engaging on any meaningful interpretation of the results and impacts achieved.

Two small grants projects where clear comparison were explicitly made (CIP on IPM and CIMMYT-KARI On striga control) were selected to anlyse the assumptions behind these comparisons. These projects were analysed by two working groups to address the following questions:

1. What were the assumptions behind the comparison?
2. What are the implications of your examination of "project" assumptions for your/their statement of input - output - outcome – impact

CIMMYT-KARI-CARE Small Grant project
Development & dissemination of integrated *Striga* control practices for the small-scale farmers of Western Kenya .

The overall objective of the project was therefore to develop and extend to farmers using different dissemination approaches sustainable cropping systems adapted to western Kenya that control *Striga hermonthica* and improve farm productivity. *Striga* control options were disseminated to farmers using two different dissemination methods by CARE and government extension services. In CARE approach, The Community Extension Workers (CEWs) and Adaptive Research Workers (ARWs) were first trained and they in turn trained Group Resource Persons (GRPs) who were members of the groups. The GRPs then trained group members at the demonstration plots. Demonstrations were conducted by Adaptive Research Farmers (ARFs) under the guidance of ARWs. In the control areas the extension staff used its routine approach in training farmers, i.e. contact farmers did set-up on-farm trials and demonstrations their guidance, who called farmers' meetings during the season and trained them on-site. Additionally the front line staff (FLS) used picture series on *Striga* control developed and provided by the *Striga* Working to improve training efficiency and adoption among farmers.

Assumptions made about MoALD and CARE

1.   MoALD's extension system is not as effective as CARE's Participatory extension system (<u>it works faster</u>)
2.   That by mobilizing extension staff you can create a 'level playing field' in disseminating the knowledge. The difference is in dissemination.

	CARE	**MoARD**
Structures	Need to create sustainable Structures	Already permanent
Vision		
	Training of trainers (farmers)	
Mobilization/ Diffusion		
	Resource persons selected by communities . Adaptive research Farmer trials	Selected by Ministry. Training themselves (though contact farmers were expected to train other farmer)
		Disappearing over time due to lack of resources
Capacity in striga biology		
	The same More experience in this kind of training	The same
Staff		
	High motivation	
Field staff made "equal" in term of resources (transportation-lunch)	Better salary More support High self-esteem	Low motivation Lower salary Less support

	More field staff	Low self-esteem
		Less field staff
	Higher organizational cost and effective supervision	Lack of sanction for poor performance

After analysis and comparison of the two structures, CARE and MoALD, it was concluded that there were important differences which have very important bearings on the impacts reported. These differences make it difficult to make a meaningful comparison between the two structures. Given that baseline data were collected at the initiation of the project, it would be more insightful to rather do a before and after comparison for the two structures.

CIP-Peru: Impact evaluation or participatory development of integrated insect & disease management for the potato crop in San Miguel, Peru

Assumptions
(1)   (Explicit)
   ➢ Innovation: Information + technology: IPM late blight only come through farmer field schools
   ➢ Participating and non-participating farmers were similar except in their participation in the schools.

(Implicit)
1.   Sufficient time has passed to evaluate intervention → "the NRM dilemma"
2.   "All things held constant" (political, natural disaster) or accounting for these "other" changes.
3.   Capacity development of farmers translates new knowledge and skills in new improved practice.

As in the first case of CIMMYT-CARE-KARI small grants, it proved difficult to make meaningful with and without farmer field school comparison as there was no an effective control. It was recommended to pay less attention to with and without and concentrate more on Before/After comparison.

9. Institutionalizing Participatory Research and Gender Analysis Approaches

This session was facilitated by Barun Gurung (PRGA) and involved an overview of organizational change and challenges for institutionalizing PRGA approaches based on a case study from Nepal. Then three working groups were discussed the current status of PRGA approaches in the CG centres, NARS and NGOs.

9.1. The *Dimensions* and *Characteristic*s of the Organization:

The organizational matrix is composed of rows and columns. The column is the organizational characteristics which consists of:

- the mission/mandate
- the structure
- the human resources.

The row is the organizational dimensions consisting of:

- technical dimension consisting of the essential part
- the socio-political dimension which is the process of power play
- the cultural dimension which is the personality of the organization

The rows and columns combine to produce nine elements of the organization.

Organizational Framework for Analysis

ORGANISAT-IONAL DIMENSIONS	ORGANISATIONAL CHARACTERISTICS		
	MISSION/MANDATE	**STRUCTURE**	**HUMAN RESOURCES**
TECHNICAL DIMENSION **The essential parts**	**POLICIES AND ACTIONS** The guiding policy and its operationalisation in action plans, strategies/approaches, and monitoring and evaluation systems.	**TASKS AND REPONSIBILITIES** The way people are positioned and the way tasks and responsibilities are allocated and related to each other through procedures, information and co-ordinating systems.	**EXPERTISE** The number of staff and the requirements and conditions to allow them to work, such as job description, appraisal, facilities, training etc.
SOCIO-POLITICAL DIMENSION **The process or power play**	**POLICY INFLUENCE** The way and extent management, people from within the organization and people from outside the organization influence policy and the running of the organization	**DECISION MAKING** The patterns of formal and informal decision making processes. The way diversity and conflicts are dealt with	**ROOM FOR MANOEUVRE** The space and incentives provided to staff to give shape to their work, such as rewards, career possibilities, variety in working styles
CULTURAL DIMENSION **The personality**	**ORGANISATIONAL CULTURE** The symbols, rituals and traditions. The norms and values underlying the running of the organization and the behavior of the staff. The social and economic standards set	**COOPERATION** The way the work relations between staff and with outsiders are organized, such as working in teams, networking. The norms and values underlying these arrangements	**ATTITUDE** The way staff feels and thinks about their work, the working environment and about other (categories of) employees. The extent to which staff stereotype other staff. The extent to which staff identifies him/herself with the culture of the organization

9.2. The Nine Analytical *Elements* of an Organization

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1. Policies and action
- policies
- action plans
- budget
- M&E systems

Questions:
- *Have participatory approaches been integrated in the organization's policy?*
- *Does a policy for participatory approaches exist in relation to its products (programmes, projects, trainings) and /or to the organization itself?*
- *Is the policy actively implemented?*
- *Is there sufficient budget for this?*
- *Does each project plan incorporate a participatory approach?*
- *Are indicators developed and used to measure the outcome of the activities related to participatory approaches?*

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2. Tasks and Responsibilities
- structure
- levels
- tasks and responsibilities
- procedures
- information system

Questions
- *have the level and position at which participatory research issues are dealt with in the organization been clearly indicated?*
- *Are tasks and responsibilities related to participatory issues clearly demarcated within the organization?*
- *Does everyone in the organization know about the tasks and responsibilities of staff concerned with participatory issues?*
- *Are information flows about participatory issues within the organization existing and operational?*

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3. Expertise
- quantity and quality
- recruitment
- appraisal
- training

Questions
- *are existing staff adequately trained in participatory approaches?*
- *Are there sufficient staff who can deal effectively with participatory approaches?*
- *Are new staff selected on the basis of their experience in participatory approaches?*
- *Are new staff members adequately familiarized with participatory approaches of the organization?*
- *Are staff members adequately trained to keep up the expertise in the field of participatory approaches?*

4. Policy Influence
- people who influence the organization from inside
- people who influence the organization from outside
- the role of management

Questions
- *are people who decide about policy formulation and implementation (eg board members, management) sensitive to address participatory approaches?*
- *Are opinions/requirements of external stakeholders (farmers, donors) taken seriously by management?*

5. Decision-making
- participation in discussion and decision-making
- conflicts

Questions
- *are participatory approaches taken into account in decision making by research directors?*
- *Are conflicts that may arise in research methodology (participatory vs conventional) adequately addressed in the organization?*
- *Is there a participatory approach taken by the organization itself in relation to its staff?*
- *Do staff at all levels have access to information? Or have a role in decision-making? Is consensus sought in decision-making or is it in the hands of a few people?*

6. Room to Innovate/manuevre
- agency

Questions
- *does the space exist for those interested in participatory approaches*
- *does working on participatory approaches have status...is it rewarded or punished?*

7. Organizational Culture
- image
- values
- standards

Questions
- *Does doing participatory research fit into the image of the organization?*
- *Are participatory approaches/ideologies reflected in the symbols of the organization?*
- *Is there an openness and appreciation to deal with participatory issues/approaches?*
- *Is high quality work also associated with participatory methodologies?*
- *Do peers share values and norms with regard to participatory approaches/principles within the organization and its programmes?*

8. Cooperation
- team
- support
- communication lines

Questions
- *do scientists support each other in work and solving common problems?*
- *Is attention paid to team building in research activities?*
- *Are new ideas such as participatory approaches communicated and integrated in the different disciplines/divisions?*
- *Is there a willingness to cooperate with external organizations that are involved in participatory approaches?*

9. Attitude
- dedication
- motivation

Questions
- *does everyone demonstrate commitment to participatory approaches?*
- *Do some staff members accept responsibility to adopt participatory approaches in their individual research activities?*
- *Do some staff members demonstrate positive attitudes towards colleagues who express concerns about gaps in research as it pertains to stakeholder absence?*

10. Organizational Methods for Participatory Research in Natural Resources Management: Analysis of Gender Differentiated Social Capital Development in NRM

One of the requirements/outputs of the BMZ Grant is to produce a working paper on organizational forms for NRM research and development. This is a proposal by Olaf Westermann, Jacqueline Ashaby and Jules Pretty to produce a working document on the analysis of gender differentiated social capital development and improvements for NRM.

Purpose:

To inquire into the key issues of social capital, gender and natural resource management and particularly their relationship in order to identify knowledge gabs and opportunities for research.

To examine the differences in social capital (e.g. networks and regularized practices as well as trust, reciprocity and solidarity) that women and men hold in NRM groups and to analyze the importance of such gender differentiated social capital to improvements in natural resource management.

The analysis would include a synopsis of different forms of formal and informal types of social organization in NRM as well as some of the key issues discussed in relation to social interaction in NRM.

Content

The paper will be divided into 4 parts:
1) Collective action and participation in natural resource management
2) Gender issues in collective action and participation for NRM
3) Social capital and social organization
4) Gender specific social capital and its role in collective NRM

1. Collective action and participation in natural resource management

The purpose of this section would be to identify and discuss different approaches and theories on collective action and participation in NRM. The objective is to be able to draw on previous understanding of social relations in NRM in the discussion of social capital, gender and NRM in section 4 (social capital is by definition relational - one of the only characteristics of social capital that there seems to be agreement upon).

2. Gender issues in collective action and participation for NRM:
Gender, defined as "the socially constructed roles and characteristics assigned to men and women in a specific culture", is a key factor shaping peoples access to, use of and control over natural resources (IDRC, 2001). As a consequence gender sensitive research

and developments that take into consideration men and women's differing roles, priorities and responsibilities becomes crucial to the outcomes of social organization in NRM.

Hence the purpose of section 2 becomes to review some of the characteristics of gender sensitive research and development with specific focus on social organization and to discuss its importance to collective action and participation. This discussion will draw on the conceptual analysis elaborated in section 1.

3. Social capital and social organization:
The purpose of section 3 is to review some of the most important discussions on social capital. These include how social capital should be defined (networks vs. social values i.e. structural vs. cognitive features), who it belongs to (individual vs. group (family) or community (regional and national) possession), how and where it is created and most useful (family vs. second order organizations; bonding vs. bridging) and how may it be use (discussion of capital aspects of social capital (or its fungibility) as well as downsides of social capital). An important discussion will be centered on the relevance of social capital as analytical concept and the opportunities for social capital formation through external intervention. This analysis will also integrate the conceptual discussion of different approaches to collective action and participation as discussed in section 1 with theories on social organization.

4. Gender specific social capital and its role in collective NRM
The paper will conclude with an analysis of the role of gender specific characteristic of social capital to collective action and participation in NRM. Some of the issues discussed would be the role of informal and formal networks to information exchange as well as the importance of different types and degrees of moral values and norms to social organization. Several studies have found that men and women's personal networks differ in composition in the sense that men tend to create more formal organizations while women develop friendship network. At the same time trust as well as solidarity may be easier to create in gender differentiated social organizations. These characteristics may be important to collective action and participation in NRM

Methodology

Framework of analysis
The framework of analysis applied in this paper builds upon ideas by Pretty and Ward (2001) and Pretty and Frank (2000) for how to analyze maturity of groups and social and human capital formation. The suggestion is to look at impacts on NRM as a function of gendered social capital at different levels of organizational capacity.
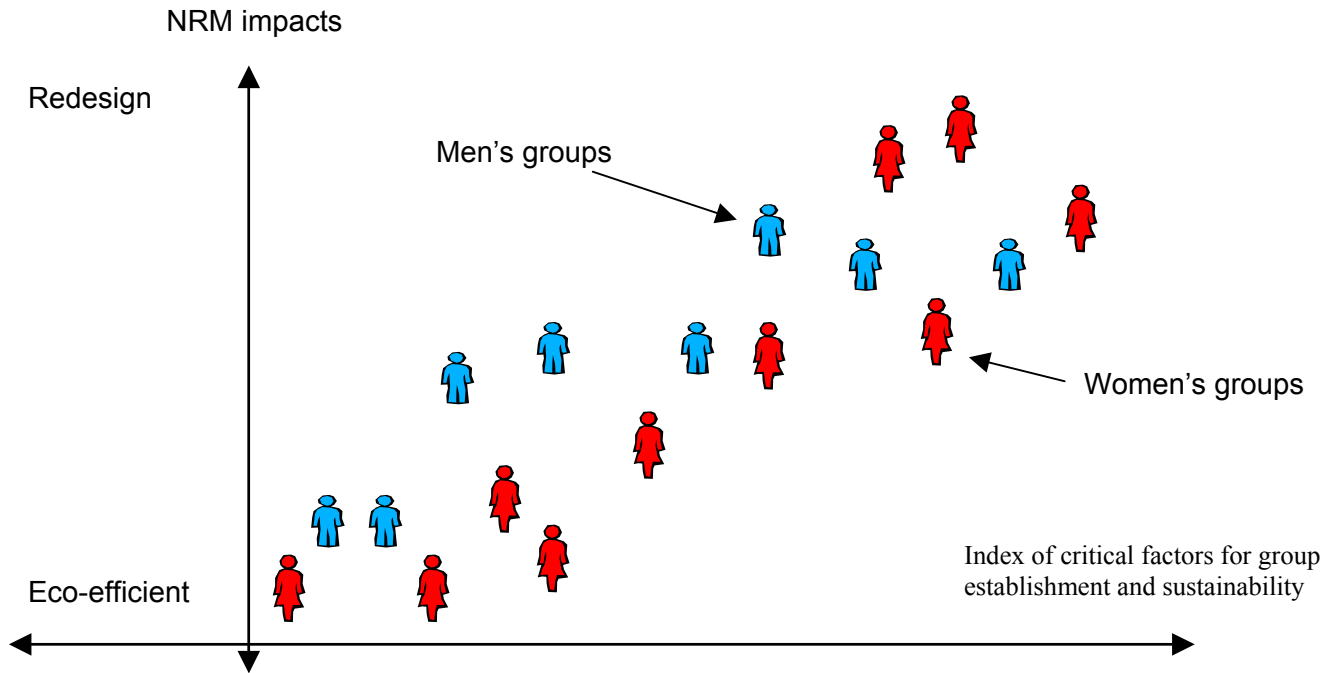
	Short term organizational capacity			Long term organizational capacity		
	Women	Men	Mixed	Women	Men	Mixed
Bonding social capital						
Bridging social capital						

On the y-axis, we suggest to measure NRM impact in terms of the management or learning approach to NRM that groups handle. We think that it is more important to measure long-term impact on NRM on basis of a learning approach (e.g. IPM) than a specific outcome (e.g. implementation of live barriers, compost, irrigation). The management approaches or environments aspects as named by Pretty and Ward (2001), are here used as a simple indicator of NRM impact. These are a) Re-active: Focused on eco-efficiency by reducing cost and damage. For example adoption of reduce-dose pesticides and targeted input or to put and end to reforestation and burning. b) Regenerative: Adoption of regenerative technologies and principles of sustainability. For example reforestation, composting, nutrient recycling etc and c) Redesign: Redesign and innovation of agricultural systems according to ecological principles, no longer adopting new technologies to fit the old system, but innovating to develop entirely new systems

On the x-axis we suggest to construct an index of critical factors for group performance based on some of the criterions proposed by Pretty and Ward (2001) (world views, technology and improvements (#2 and #3), and group life span). The index of critical factors for group performance is a tool to classify groups, so that we do not contrast groups with very different conditions and experiences. We want to compare groups with similar endowments and e.g. not compare men's groups with short term organizational capacity with women's groups with long term organizational capacity. We need to compare high levels of social capital in men's groups with high levels of social capital in women's groups in order to say something about gender differences in social capital - especially different types. The difficult part of this analysis will be to analytically separate social capital indicators for men, women and mixed groups. It is hard enough to separate indicators of group formation as the experience of Susanna Heisswolf suggests (2001).

Having defined how groups relate to the index for critical factors for a group and their impact on NRM we want to look closer at features of social capital. The idea of the matrix is to help to separate different types and levels of social capital for men and women's groups at different stages of organizational capacity. Based on the work of Deepa Narayan (1999) and with inspiration from AHI (the African Highland Initiative) I find it useful to divide social capital into bonding and bridging social capital when analyzing groups. Bonding social capital is local ties, trust and moral values within the group and the community, while bridging social addresses external networks and relationships. Bonding social capital include a) experience of collaboration (type, frequency, purpose), b) structure of collaboration (formal or informal), c) proximity of networks (relational, economical, cultural etc), d) diversity of networks (group membership), e) capacity to overcome differences and conflict while bridging social capital encompass questions related to a) coordination and/or collaboration with other local groups (extent, diversity) and b) coordination and/or collaboration with external groups (extent, diversity)

Literature reviews:

The literature review will provide input into the conceptual analysis of the key issues discussed in the paper. It may also help to identify cases for more thorough studies. A major constraint will be access to the best and most relevant articles and papers.

Quick audit questionnaire

The quick audit question should present an overview of activities and approaches to gender differentiated social capital development and NRM improvements. The objective would not so much be to show a relationship between key issues through statistical analysis, but rather to conceptualize approaches to NRM, gender, social organization and social capital development (and their relationship) as well identify new ideas and successful cases.

Case studies

The purpose of the case studies, identified through the literature review and the questionnaire analysis, is to go into depths with some of the relationships found in the previous chapters of the paper and to understand the processes involved. At the same time the case studies would give a very realistic (empirical) idea of knowledge gabs and research needs.

Outputs

The result of the analysis will be a working paper on the issues and questions discussed in relation to NRM, gender and social capital as well as an analysis of what has been done and what are the gabs and opportunities to be addressed. The working paper should lead up to a larger proposal that could address questions like "what can external development and research organizations do to create the condition necessary for gender differentiated social capital formation and accumulation? How should they proceed in encouraging transformations that will lead to sustained progress?"

11. Looking Ahead-Future Lines of Work

1. NEEDS ASSESSMENT

In a card and chart session, participants were requested to answer the following questions:

What are the gaps in your and your partners knowledge to do PRGA which could not be directly addressed during the project phase? These may be research methods which need refinement or new questions raised by potential users of the planned research funding.

The following categories represent the major gaps and needs identified by the Small grants projects:

Gaps	Small Grants projects	Partners
Skills	• Lack of skills and tools for PRGA	• Understanding definition of NRM principles and technologies • Understanding of the "How to" of Research designs for PRGA • Language barriers, translation requires time and costs • Make more tools easily available • Lack of skills in PR methods by technical front line staff • Reporting (evaluation of PR and GA) • Understanding PR by different levels of staff
Participatory trials	• What are the alternatives of doing replicated trials? • What is the specific identity of NRM scientists? • Data analysis (statistics) in participatory trials on INM • Designing and analysing participatory trials for IPM research	• Is adaptive management an alternative for NRM research? • Lack of knowledge: participatory research confused with on-farm trials • How to set up participatory trials for IPM evaluation • How to design and management of PR trials • Understanding farmers experiments

Concepts and principles	• Understanding concepts and principles of PRGA • Understanding social science concepts and language • Balancing between research and development objectives • Understanding the responsibility of government in NRM; NRM should not be only the responsibility of local people • Balancing NRM at the household, the community and landscape levels • How to measure and establish links between PRGA, income generation and food security	• How to access and use local knowledge (ITK) • How to establish the link between knowledge and practice of PRGA and their effects and efficiency • Understanding the concepts of participatory research, gender and stakeholder analysis • Understanding the adaptive collective management and how PRGA fits into it
Data analysis	• Statistical methods for analysing PR data • Sythesis and generalisation of PR results from site-specific data	• Data analysis, interpretation, and presentation • Quantitative analysis of data from participatory research methods • Lack of skills in report writing, including synthesis and analysis • Analysis of data from PRGA and use for practical purposes
Economics	• How to analyse cost and benefit relationship • Methods to report costs and benefits in a meaningful way • Evaluation methods for impact assessment • How to do a cost -benefit analysis for PR&GA in NRM • What are the types of costs and how to measure them	•

Monitoring and Evaluation	• Use of M&E tools • Methods for documenting learning processes • How to deal with growing topics and dynamic situations • How to feedback the results to farmers and other stakeholders • How to measure the effects of PRGA methods on farmers' own research • Needs more measurable and farmers' evaluation indicators • Sensitivity of cost and benefits for impact assessment still being examined	• Participatory monitoring and evaluation methods
Social Analysis	• Analysis of group dynamics • Social characterisation of groups • Understandingand resolving conflicts among stakeholders • Diagnostic methods to map power relations in FPR • How to do gender analysis vs. a broader stakeholder analysis • Linking gender analysis and interventions (after gender analysis, so what?) • How to implement GSA but to restrict it to project needs • Approaches to proactively involved women and expected outcomes	•
Institutional analysis	• How to create a space for innovation in research process • Analysis of gender "agency" eg space for innovation • How to do institutional self assessment • How to institutionalize processes for PRGA	• Critical mass in PRGA is missing

2. TOPICS FOR FUTURE RESEARCH

The following topics were identified as possible future lines of work for PRGA:

1. Development of quantitative methods for use in FPR
2. Monitoring changes in local practice as result of intervention (Connect with documentation of local knowledge)
3. Gender analysis beyond sex desegregation and social analysis beyond stakeholder analysis = moving beyond mere counting number of women to a broader stakeholder analysis
4. Understanding farmers' technology evaluation processes
5. Assessing the impacts of PRGA activities: e.g. long term impact in small grant sites
6. Understanding farmers and farm intrahousehold short-term & long-term decision-making processes
7. How PRGA offers very poor farmers information that feeds into their innovation while maintaining the integrity of their own innovation process
8. Integrating participatory research and development i.e. how do we ensure results from PR & GA are fed into development to benefit a large number of people.
9. What are the policy implications of doing PR in NRM
10. Designing and conducting participatory trials for NRM evaluation
11. Define the principles of INRM
12. Cost & benefits of participation to households in large-scale NRM (landscapes) (transaction costs)
13. How do PR & GA methods work. How can we use them within a narrow research mandate (e.g. / crop)
14. How to mainstream use of PRGA approaches on local and large scale e.g. in a national program
15. Institutional assessment in the PRGA

This list of topics was used for establishing priority areas for future research by ranking different topics by their order of importance (1=first priority).

Topics	Rank (1= First priority)														Weighed score
1	10	9	6	9	10	5	10	12	12	3	6	7	13	10	8.7
2	3	2	3	3	5	4	3?	1	10	13	12	4	8	2	**5.2**
3	6	4	9	2	1	6	9	2	4	14	5	4	5	1	5.9
4	1	10	5	12	?	7	8	8	11	12	7	10	12	13	9.6
5	4	3	2	13	4	14	5	7	1	7	8	5	1	6	**5.7**
6	7	8	10	5	9	2	4	6	?	11	10	8	9	7	7.3
7	8	5	11	11	8	3	13	9	5	6	2	6	7	4	7.0

8	14	11	8	14	7	1	14	14	14	2	14	14	14	5	10.4
9	13	1	12	8		9	12	11	13	10	1	9	10	11	8.3
10	12	12	4	10		12	1	5	4	1	13	13	4	8	7.1
11	11	6	13	4		8	11	10	2	5	9	12	11	9	7.9
12	5	7	1	1	3	10	6	13	7	8	11	1	3	3	**5.6**
13	2	14	7	6	2	11	?	4	8	9	3	2	2	14	6.4
14	9	13	14	?	6	13	2	3	9	4	4	3	6	12	7.5

Matrix ranking of topics

Topic No.	Topic	Weighed score	Rank
1	Quantitative methods	8.7	12
2	**Monitoring local practice**	**5.2**	**1**
3	Integration of PR & development	5.9	4
4	Participatory trials	9.6	13
5	**Social & gender analysis**	**5.7**	**3**
6	Understanding farmers' technology Evaluation	7.3	8
7	Continue impact assessment	7.0	6
8	Define INRM principles	10.4	14
9	Cost & benefits of FPR	8.3	11
10	Farmer decision-making	7.1	7
11	Use methods in narrow mandates	7.9	10
12	**Farmer innovation**	**5.6**	**2**
13	Mainstreaming	6.4	5
14	Institutionalization	7.5	9

1. CALENDAR

Dates	Events
16 Nov	Workshop ends
17 Nov	PRGA Staff Meeting
17 December	Reports to PRGA
10 December or (15January at latest)	Call for proposals
31 December	Finish report for BMZ
15 January	New proposals in – feedback
15-29 January	Meeting of PRGA Planning Group
15 February	Finalize proposals (accepted ones)
31 March	Organise donor meeting
? April	Donor/Stakeholder meeting
31 May	New BMZ proposal deadline
1 October	BMZ decision

Donor / Stakeholder Meetings

Spring 2002

Objective:
1. Show results: What difference does involving end users make?
Results will be exctracted from:

> - NRM cases
> - Plant breeding cases
> - Inventory analysis
> - Experts' opinions (NGO committee, private sector, World bank, DfID, University

2. Consult about future directions and get input on these in the formulation of 5 year workplan for Phase II

By October 2002

3. Formulate a 5 year workplan for Phase II to be launched in January 2003

11. WORKSHOP EVALUATION

The criteria and process for workshop evaluation were decided by workshop participants in a close session without workshop organizers and resources persons

Resource persons

Usefulness: "Inputs / Outputs"
- Pointed to key issues to address
- Some comments were disciplinary/experience biased

Forms of interaction:
- Informal nature facilitated the process
- High willingness to interact

Communicability
- Good in communication, but sometimes "dominant"
- Good tendency to use examples

Organization PRGA

Arrangements:
- Good

Content:
- Clear structured partially participatory
- Improvement compared to Nairobi – However, presentation could be improved

Interactions:
- Appropriate size group
- Informal exchange
- Room for better management of time and roles

Time allocation:
- Initial presentation time more than discussions → improvement

Ourselves

Relevance for our future work
- Improvement of the report
- New contacts (strengthening network)
- We feel learning is useful

Knowledge gain
- Improvement of what we know
- Additional knowledge
- More knowledge needed

Degree of "comfortability"
- Good
- New people (2 cases) did not feel exactly in place

APPENDICES

APPENDICE 1
   List and Addresses of Participants

Names	Institution	Country	E-mail address
Agunda, Joseph	CIMMYT	Kenya	homabay@ksm.care.or.ke; tunza@ksm.care.or.ke
Ashby, Jacqueline	PRGA/CIAT	Colombia	J.ASHBY@CGIAR.ORG
Astatke, Abiye	ILRI-Ethiopia	Ethiopia	a.astatke@cgiar.org
Chuma, Edward	IES	Zimbabwe	chuma@africaonline.co.zw
Gurung, Barun	PRGA	Laos PDR	b.gurung@cgiar.org
Hambly-Odame, Hellen	ISNAR	The Netherlands	wb.waters@link-geo.de
Johnson, Nancy	PRGA	Colombia	N.JOHNSON@CGIAR.ORG
Kikhi, Chozhule /	NEPED (Nagaland)	India	rajverma@hotmail.com; ckikhi@yahoo.com
Muhirwira, Kuda / IES	IES	Zimbabwe	kmurwira@aloe.co.zw
Lilja, Nina	PRGA	USA	N.LILJA@CGIAR.ORG
Odhiambo, George	CIMMYT-KARI	Kenya	Gdodhis@yahoo.co.uk
Okali, Chirstine	University of East Anglia	United Kingdom	c.okali@uea.ac.uk
Orego, Ricardo	CIP	Peru	r.orrego@cgiar.org
Ortiz, Oscar	CIP		o.ortiz@cgiar.org
Prain, Gordon	CIP	Peru	G.Prain@cgiar.org
Westermann, Olaf	PRGA/CIAT	Colombia	O.Westermann@cgiar.org
Sanginga, Pascal	PRGA/AHI	Uganda	P.Sanginga@cgiar.org
Yuliani, Linda	CIFOR	Indonesia	L.Yuliani@cgiar.org