

## **Project SN-3**

**Participatory Research Approaches to  
Reduce Poverty and Natural Resource  
Degradation through the Creation of  
Market Links and Social Control of  
Community Projects**

## **Project SN-3: Participatory Research Approaches to Reduce Poverty and Natural Resource Degradation through the Creation of Market Links and Social Control of Community Projects**

### **Project Description**

#### ***Goal***

To contribute to the socioeconomic improvement of rural communities through strengthening local and institutional capacities by means of participatory design, application and dissemination of approaches, methodologies and tools, emphasizing gender and equity issues

#### ***Objective***

To develop and disseminate participatory research (PR) principles, approaches, analytical tools, indigenous knowledge and organizational principles that strengthen the capacity of R&D institutions to respond to the demands of stakeholder groups for improved levels of human well-being and agroecosystem health

#### ***Purpose***

Participatory research methodologies for organizational and technological innovation in agriculture, co-developed, tested and widely disseminated, to benefit poor farmer groups and their organizations, particularly ethnic minorities and women

#### ***Assumptions***

Institutional economic stability, Participatory research approaches remain a priority in the CG. Donors allocate sufficient resources to participatory research approaches. NARS and other stakeholders remain supportive and receptive to participatory research approaches.

#### ***Beneficiaries and End Users***

This work will benefit small scale resource-poor farmers, processors, traders and consumers in rural areas, especially in fragile environments IPRA has a strong focus on supporting rural women and the poor build their capacity to generate and use agricultural technologies to their own advantage. Research and development service providers will receive more accurate and timely feedback from users about acceptability of production technologies and conservation practices. Researchers and development planners will profit from methods for conducting adaptive research and implementing policies on natural resource conservation at the micro level. Sounds good. The national agricultural innovation systems are in focus of the Project's activities. Strengthening their capacity to link local demands with service providers is a task being undertaken by our project in Bolivia.

## **Collaborators**

**Outside CIAT:** In **Latin America:** **Honduras:** Escuela Agrícola Panamericana-El Zamorano (EAP), Fundación para la Investigación Participativa con Agricultores en Honduras (FIPAH), Programa de Reconstrucción Rural (PRR), Centro Universitario del Atlántico (CURLA); **Nicaragua:** Instituto Nacional de Investigaciones (INIA), U. Campesina (UNICAM); **Ecuador:** Instituto Internacional para la Reconstrucción Rural (IIRR), Instituto Nacional de Investigaciones Agropecuarias (INIAP)-Programa FAO, Fundación Antisana, Proyecto MANRECUR; **Venezuela:** Instituto Nacional de Investigaciones Agropecuarias (INIA). **Bolivia:** Ministerio de Asuntos Campesinos y Agropecuarios (MACA), U. Mayor de San Simón (UMSS), Fundación PROINPA, Sistema Boliviano de Tecnología Agropecuario (SIBTA), FDTA-Valles, FDTA-Altiplano, FDTA-Chaco, FDTA-Trópico Húmedo, FDTA-Chaco, Proyecto INNOVA, Agua y Tierra Campesina (ATICA), Programa Nacional de Semillas (PNS), Centro de Investigación Agrícola Tropical (CIAT-Bolivia), Servicio de Desarrollo Agropecuario de Tarija (SEDAJ), Coordinadora de Integración de Organizaciones Económicas Campesinas (CIOEC), Programa de Desarrollo Integral Interdisciplinario (PRODII), Centro de Apoyo al Desarrollo (CAD), Comunidad de Estudios Jaina, eight grassroots groups; **Colombia:** Corporación Colombiana de Investigación Agropecuaria (CORPOICA), organizaciones campesinas, U. Nacional de Colombia, Corporación para el Fomento de los CIAL, CORFOCIAL, Fundación para la Investigación y el Desarrollo Agroindustrial Rural (FIDAR). In **Africa:** **Uganda:** National Agricultural Research Organization (NARO), Africare; National Agricultural Advisory Services (NAADS); African Highlands Initiative (AHI); Africa2000 Network, Vision for Rural Development Initiative (VIRUDI); Local government; INSPIRE Consortium; Network of Farmer Field Schools (FFS); Makerere U. **Malawi:** Dept. of Agricultural Research Services (DARS); Lilongwe Agricultural Development Division (LADD); Plan International Malawi. **Tanzania:** District Agricultural and Livestock Dept. Office (DALDO), Traditional Irrigation and Environment Protection Program (TIP), World Vision Sanya Agricultural Development Program, Africa Highlands Initiative (AHI); Hai District Council (District Agricultural and Livestock Development Office). **Kenya:** Kenya Agricultural Research Institute; Community Against Desertification (CMAD); Extension Dept., Ministry of Agriculture; Kenyatta U. **DR Congo:** Institut National of Research et Etudes Agronomiques (INERA); Innovative Resources Management (IRM). **Mozambique:** National Agricultural Research Institute (INIA). 21 farmers' groups and communities, Uganda, Tanzania, Malawi, Kenya. ASARECA Network. **Ghana:** CSIR Water Research Institute. In **Europe:** **Austria:** Boku University. In **Asia:** **India:** Indian Council of Agricultural Research (ICAR) Research Complex for the Eastern Region, India; **Sri Lanka:** Challenge Program on Water and Food (CPWF) Secretariat.

**Regional Networks in Latin America:** Red latinoamericana y del Caribe de Nutrición Humana y Desarrollo Sustentable (RED LAYC); **Africa:** East and Central Africa Program Agricultural Policy Analysis (ECAPAPA), Eastern and Central African Bean Research Network (ECABREN) and Southern Africa Bean Research Network (SABREN) of the Association for Strengthening Agricultural Research in East and Central Africa (ASARECA); African Network for Soil Biology and Fertility (AfNet) of Tropical Soil Biology and Fertility (TSBF) Institute of CIAT; Pan African Bean Research Alliance (PABRA).

**Within CIAT:** Inputs to: PE-3; PE-4, IP-2, IP-3, IP-5, SN-1, SN-2, SB-2, SB-3, BP-1. Outputs from: IP-2, IP-5, BP-1, SN-1, SN-4, PE-3, PE-4, TSBF.

## CIAT: SN-3 Project Log Frame (2005-2007)

**Project:** Participatory Research  
**Project Manager:** Carlos A. Quirós (A)

Narrative Summary	Indicators	Means of Verification	Important Assumptions
<p><b>Goal</b>            To contribute to the socioeconomic improvement of rural communities through strengthening local and institutional capacities by means of participatory design, application and dissemination of approaches, methodologies and tools, emphasizing gender and equity issues</p>	<p>Results from the impact study of the interventions by SN-3 show:</p> <ul style="list-style-type: none"> <li>▪ Better management of resources (e.g., human, economic, natural) in environments where participatory methods and tools have been incorporated</li> <li>▪ Greater incorporation of the producers' needs in development plans supported by the State</li> <li>▪ Active participation of community groups in decision-making about endogenous and exogenous initiatives</li> <li>▪ Participating marginal groups enjoy socioeconomic benefits to a greater extent than similar groups where said decision-making has not been incorporated.</li> </ul>	<p>Projects, plans and reports of national public-sector entities, donors, NGOs and community-based organizations in the three reference sites and CIAT's mandated agroecosystems that refer to their use of project products</p>	
<p><b>Purpose</b>            Participatory research methodologies for organizational and technological innovation in agriculture, co-developed, tested and widely disseminated, to benefit poor farmer groups and their organizations, particularly ethnic minorities and women</p>	<ul style="list-style-type: none"> <li>▪ Set of at least five participatory decisions taken on technological innovation (PM&amp;E, case histories of innovation, enabling rural innovation, evaluation of impact of technological innovation and knowledge management projects) evaluated and adapted for different contexts and stakeholder groups in marginal environments in Africa and Latin America (LA)</li> <li>▪ At least three sets of new methods and tools (e.g., analysis of social networks, appreciative inquiry) that incorporate equity and gender developed, applied and disseminated at the level of members and stakeholder groups at the end of the third year (2007)</li> <li>▪ A set of institutions not previously involved in the SN-3 activities implement, together with the project, co-development processes of decision-making and eco-technologies with a participatory approach.</li> <li>▪ A set of institutions not previously involved in the SN-3 activities implement processes of integrated incorporation of participatory decision-making (i.e., Agroenterprises + CIALs + InforCom).</li> <li>▪ The approaches and decision-making developed by SN-3 oriented toward.</li> <li>▪ Evaluations of the performance of the project and its members show that they are in line with the mission and vision of SN-3 and CIAT.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Impact study</li> <li>▪ Institutional reports</li> <li>▪ Publications</li> <li>▪ Proceedings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Institutional economic stability.</li> <li>▪ Financing for training activities, publication and dissemination of materials.</li> <li>▪ Institutions willing to prepare and support facilitators and share information.</li> <li>▪ End-users—above all, farmers—willing to participate.</li> </ul>

Narrative Summary	Indicators	Means of Verification	Important Assumptions
<p><b>Output 1</b> Mechanisms, approaches and methodologies developed and disseminated for strengthening farmers' organizations and rural innovation systems to accelerate and institutionalize demand-driven innovation in production systems</p>	<ul style="list-style-type: none"> <li>▪ Methodology for evaluating the impact on the projects of agricultural and livestock technological innovation (PITAs) developed by the end of 2006</li> <li>▪ Impact of the CIAL methodology in Honduras and Colombia established by the end of 2005</li> <li>▪ Methodology for doing case histories on innovation developed by the end of 2006</li> <li>▪ Method for constructing and learning from innovation histories developed by end of 2005</li> <li>▪ Procedure for participatory evaluation of multipurpose forages validated in collaboration with the Forages Project by 2007</li> <li>▪ Effect of the CIALs in the communication networks established in pilot sites by 2006</li> <li>▪ Methodology for knowledge management at the local level validated and made available to the suppliers of technical assistance and member organizations</li> <li>▪ At least 7 cases on the methodology of knowledge management systematized and shared with decision-makers by the end of the first quarter of 2006</li> <li>▪ Methodology for balancing supply with technological demand at the level of producer groups and suppliers of technical assistance services,</li> <li>▪ At least 15 CIALs working on food security within the organizational structure of a government organization in Colombia</li> <li>▪ Participatory methodology for studying and improving social networks prepared in 2007</li> <li>▪ At least one NGO using the methodology for improving social networks by the end of 2007</li> <li>▪ Participatory methodology developed for constructing project impact pathways by end of 2006</li> <li>▪ Participatory construction of the impact pathways of 18 CPWF projects in the Volta, Mekong and Karkheh basins</li> </ul>	<ul style="list-style-type: none"> <li>▪ Document on impact of the CIALs on communities' development in Cauca and Honduras (2005)</li> <li>▪ Article submitted for revision and publication</li> <li>▪ ILAC Brief on innovation history method published in 2005</li> <li>▪ At least 4 case histories on innovation published by 2006</li> <li>▪ Methodology for preparing case histories on innovation published</li> <li>▪ Manual describing knowledge management available</li> <li>▪ Final report of FIT-8 project</li> <li>▪ Article on procedures for participatory evaluation of forages submitted for evaluation prior to publication</li> <li>▪ FOCAM progress report</li> <li>▪ Visits to the communities where CIALs have been established</li> <li>▪ Records of CIALs established in the Cauca Valley in database (<a href="http://www.enlacecial.org">www.enlacecial.org</a>)</li> <li>▪ Thesis on participatory evaluation of multipurpose forages available</li> <li>▪ Guide on methodology for studying improvement of social networks, published</li> <li>▪ Guide to participatory construction of project impact pathways, published</li> <li>▪ Impact pathway workshop reports, and individual project impact pathways written up</li> </ul>	<ul style="list-style-type: none"> <li>▪ Good coordination and integration among collaborators.</li> <li>▪ Minimal conflicts for meeting demands.</li> <li>▪ Full participation of stakeholder groups.</li> <li>▪ Field staff fulfilling true facilitator roles.</li> <li>▪ Data available from reference sites.</li> <li>▪ Internet system functioning well.</li> </ul>
<p><b>Output 2</b> Conceptual and methodological frameworks for building institutional and local capacity of resource-poor communities, developed on the basis of an analysis of experiences in co-development in LAC, with emphasis on gender and equity issues; disseminated</p>	<p>Influencing policy:</p> <ul style="list-style-type: none"> <li>▪ Partnerships with national and international entities for evaluating, adapting and disseminating participative decision-making methodologies</li> <li>▪ Methodology for the co-development of technologies in an institutional context validated and disseminated by the end of 2007</li> </ul>	<ul style="list-style-type: none"> <li>▪ Documents on agreements, annual progress reports of the Kellogg-CAIS-IPRA/CIAT Project</li> <li>▪ Methodological guide for co-development of technologies, published</li> <li>▪ Technical reports on adaptation of technologies, decision-making and tool</li> <li>▪ Annual reports of the Kellogg-CAIS-IPRA/CIAT project</li> </ul>	

Narrative Summary	Indicators	Means of Verification	Important Assumptions
	<ul style="list-style-type: none"> <li>▪ CIAT technologies, decision-making and tools adapted to the context of the Centers for Learning and Exchange of Knowledge (CAIS) in the second semester of 2007</li> <li>▪ Proposal for adjusting policies and/or regulations in a National System of Agriculture and Livestock Technological Innovation ready for presentation to stakeholders</li> <li>▪ From 30-50% of the women in the communities exposed to the participatory methods and tools leading groups of farmers in technological innovation processes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Document of proposal for adjusting to SIBTA regulations presented to the system's authorities</li> </ul>	
<p><b>Output 3</b> The resource-to-consumption (ERI) framework developed, tested and applied to strengthen farmer organizations and rural women's capacity to make a transition from semisubsistence to competitive, market-oriented production in Africa</p>	<ul style="list-style-type: none"> <li>▪ Five projects and programs applying the set of R-to-C tools (ERI) by the end of 2007</li> <li>▪ At least 30% of the producer groups exposed to new approaches for integrating participatory decision-making will have adopted mixed production schemes (subsistence and commercialization of surpluses) by the end of the third year of the project (2007)</li> <li>▪ As a result of applying new approaches for local agricultural innovation, at least 30% of the producer groups will have changed their subsistence systems for subsistence and commercialization schemes in the Project's pilot zones in Africa and LA by the end of 2007</li> <li>▪ From 20-50% of the women will be participating in the farmer groups and holding positions of leadership</li> <li>▪ Degree to which men, women and marginal groups are deriving socioeconomic benefits from applying participatory approaches</li> <li>▪ Degree to which the participatory approaches developed by IPRA have changed gender relations in communities and families: women decision-makers in the communities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project progress reports</li> <li>▪ Set of manuals for orienting the ERI, published and disseminated widely</li> <li>▪ Two articles accepted for publication in journals</li> </ul>	<p>Institutions willing to prepare and support facilitators; funding available</p>
<p><b>Output 4</b> Methodologies for establishing community-managed participatory monitoring and evaluation systems (PM&amp;E) tested, applied and widely disseminated</p>	<ul style="list-style-type: none"> <li>▪ PM&amp;E systems functioning in at least 10 rural communities in countries of Africa and LA</li> <li>▪ At least 6 private or public organizations will have incorporated this form of decision-making in their official R&amp;D plans by the end of the third year of the Project.</li> <li>▪ At least 10 grassroots organizations in Africa and LA have adapted and adopted their own versions of the PM&amp;E system by the end of 2006.</li> <li>▪ At least three teams of facilitators of participatory methods formed in Africa and LA by the end of 2007.</li> <li>▪ Methodology for establishing and implementing PM&amp;E processes at the grassroots community group level, validated and disseminated</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reports on establishment of PM&amp;E in Africa and LA</li> <li>▪ Databases in which information of the established systems is recorded</li> <li>▪ PM&amp;E case studies, project reports</li> <li>▪ Reports of the events held by the facilitators</li> <li>▪ M&amp;E reports and databases, impact studies</li> <li>▪ Manual on PM&amp;E available</li> </ul>	<p>Staff has time, suitable methodologies, and sufficient funds available.</p>

Narrative Summary	Indicators	Means of Verification	Important Assumptions
<p><b>Output 5</b>            Institutional and organizational capacity of R&amp;D partners to develop and adapt community-managed participatory research methodologies in R&amp;D organizations effectively, strengthened</p>	<ul style="list-style-type: none"> <li>▪ Number of publications increased 50% for each of the three years in this planning period (2005-2007)</li> <li>▪ A 50% increase in the number of entities trained to incorporate participatory processes in their plans and programs</li> <li>▪ At least three new initiatives that integrate the three RII projects, terminated</li> <li>▪ Andean users' network of participatory decision-making, managing tools and procedures generated by SN-3</li> <li>▪ Number of training events</li> <li>▪ Second-order organizations qualified for providing support services to local development</li> <li>▪ SN-3 information, follow-up and evaluation system, which supports the processes of technological innovation effectively, designed and tested at the end of 2006</li> </ul>	<ul style="list-style-type: none"> <li>▪ Project reports</li> <li>▪ Publications of internal projects and other institutions</li> <li>▪ Training manuals developed</li> <li>▪ Andean network operating actively</li> <li>▪ Reports of training activities</li> <li>▪ Agreements made among second-order organizations and public and/or private entities</li> <li>▪ Web page, databases, virtual work spaces, internal PM&amp;E and publications</li> </ul>	

## Project Inputs

### *IPRA Staff List*

<b>Name</b>	<b>Position</b>	<b>Location</b>
<b><i>Latin America</i></b>		
Carlos Arturo Quirós	Acting Project Manager	Palmira, Colombia
Boru Douthwaite	Senior Staff	Palmira, Colombia
Vicente Zapata	Senior Research Fellow	Palmira, Colombia
Luis Alfredo Hernández	Research Associate I	Palmira, Colombia
Andrea Carvajal	Communication Assistant	Palmira, Colombia
Elias Claros	Research Assistant	Palmira, Colombia
Viviana Sandoval	Research Assistant	Palmira, Colombia
Freddy Escobar	Technician	Palmira, Colombia
Jorge Cabrera	Technician	Palmira, Colombia
Luisa Fernanda Lozano	Secretary	Palmira, Colombia
Sophie Alvarez	Consultant	Palmira, Colombia
José Ignacio Roa	Professional Specialist	Palmira, Colombia
Edson Gandarillas	Researcher	Cochabamba, Bolivia
Juan Fernández	Researcher	Cochabamba, Bolivia
Vivian Polar	Researcher	Cochabamba, Bolivia
Gabriela Silva	Researcher	Cochabamba, Bolivia
Walter Fuentes	Technician	Cochabamba, Bolivia
<b><i>Africa</i></b>		
Susan Kaaria	Senior Scientist	Kampala, Uganda
Pascal Sanginga	Senior Scientist	Kampala, Uganda
Jemimah Njuki	Senior Research Fellow	Kampala, Uganda
Annet Abenakyo	Research Associate	Kampala, Uganda
Peace Kankwatse	Research Associate	Kampala, Uganda
<b><i>Students</i></b>		
	<b><i>Level</i></b>	<b><i>Students</i></b>
Elisabeth Gotschi	PhD	Austria
José Luis García	Undergraduate	Colombia
Andrea Carvajal T.	MSc - ongoing	Colombia
Juliana María Medina	MSc - ongoing	Colombia
José Sélimo Muñoz	Undergraduate	Colombia
Peterson Mwangi	PhD	Kenya
Alsen Oduwo	MSc	Kenya
Kibiby Mtenga	PhD	Malawi
Wouter Ton	MSc (graduated)	The Netherlands
Jackson Tumwine	PhD	Uganda
Pamela Pali	PhD	Uganda
Lule Ali	MSc - graduated	Uganda
Rick Kamugisha	MSc	Uganda
Robert Muzira	PhD	Uganda
Birungi, Pauline	MA	Uganda
Sophie Alvarez	MSc - completed	USA
James Barham	PhD	USA



## **Budget**

### ***Special Project Funding***

The following donors provided special project funding for the IPRA during 2005:

- Maendeleo Agricultural Trust Fund (MATF) of Farm Africa
- The International Development Research Centre, IDRC
- Federal Public Service Foreign Affairs, Foreign Trade and Development Co-operation, Belgian
- Department for International Development, DFID
- Cauca Valley Government
- Kellogg Foundation
- Donors who fund the CPWF
- USAID
- SGRP

### ***Actual expenditures 2005***

<b>Source</b>	<b>Amount (US\$)</b>	<b>Proportion (%)</b>
Unrestricted Core	430,611	29%
Restricted Core		0%
<b>Sub-total</b>	<b>430,611</b>	<b>29%</b>
Special Projects	1,008,008	68%
Water and Food CP	33,993	2%
<b>Total Project</b>	<b>1,472,612</b>	<b>100%</b>

## **IPRA Highlights**

### **Output 1: Mechanisms, Approaches and Methodologies Developed and Disseminated for Strengthening Farmers' Organizations and Rural Innovation Systems to Accelerate and Institutionalize Demand-driven Innovation in Production Systems**

#### ***Strengthening Rural Innovation Systems through Network Analysis***

Our theoretical framework in this output is Complex Adaptive Systems (CAS)<sup>1</sup>. Rural innovation systems are complex adaptive systems because they contain agents and strategies that interact and adapt to each other. CAS theory states that innovative performance is mediated by the nature of patterned interactions between agents (e.g., organizations, individuals). We are applying Social Network Analysis plus the Innovation History method to analyze this interaction.

This output is testing two hypotheses:

1. The performance of a rural innovation system can be predicted by the structure of its networks;
2. Planning and evaluation methods based on network models can improve innovative performance.

The research task is therefore: 1) to identify and analyze key interaction patterns between agents in different innovation systems; and, 2) assign performance measures to the innovation systems being studied. In 2005 we mapped and analyzed the innovation systems associated and two farmer research groups in Cauca, Colombia (with support from PRGA). We developed a prototype method for participatory network analysis, planning and monitoring and evaluation. We also used the innovation history method to map and analyze with the successful development of four bean varieties in East Africa (with support from PABRA). We also received funding for an impact assessment project that will allow us to map the networks of 18 CPWF projects in Africa and Asia. While the work in Cauca enables us to study the structure of individual farmer groups, the PABRA and CPWF work allows us to investigate the position of farmer groups in research and development networks. Comparative network analysis will begin in 2006, however early results from Cauca show that there are clear network differences between a well-established and active CIAL and a newer, less dynamic one.

Application of a modified version of the Innovation History method, that included network analysis, allowed us to derive and publish policy lessons based on the analysis of four NRM projects in India in November 2005. We drafted a journal article that compares and contrasts the networks that have promulgated CIALs in Colombia and Honduras.

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1. Axelrod, R. and M.D. Cohen. 1999. *Harnessing Complexity: Organizational Implications of a Scientific Frontier*, The Free Press, New York.

**Output 2: Conceptual and Methodological Frameworks for Building Institutional and Local Capacity of Resource-poor Communities, Developed on the Basis of an Analysis of Experiences in Co-development in LAC, with Emphasis on Gender and Equity Issues; Disseminated**

***FIT 8: Pro-poor knowledge-sharing methodologies***

Research in 2006 was carried out to explore the potential of a participatory knowledge management approach which conveys changes in the structure of technical assistance and in the behaviour of those responsible for knowledge sharing.

Key research questions for this study were:

- What are facilitating and inhibiting factors regarding the introduction, adaptation and dissemination of new farmer-professional interaction in the technical assistance context?
- What is the perception of the different actors in the innovation system regarding new approaches to participatory knowledge sharing? What are the effects of perceptions on the adoption of these new approaches?
- What are some of the successful methodological arrangements tested on farm which can be scaled out and disseminated across the decision-making ladder?

Results showed that (a) adoption of new structure and the development of new attitudes regarding the farmer-professional relationship, on the part of the so called “knowledge managers”, is possible and (b) greater satisfaction and technology appropriation on the part of producers is reported. This has made possible to set a model in place, in the four agro ecological regions of Bolivia, to make a turn in regards to the traditional top-down, delivery-oriented methods to facilitate agricultural innovations.

The knowledge management research project has been developed within the context of the objectives for reducing poverty, empowering poor farmers to utilize technological knowledge and strengthening the conditions for guaranteeing food security within the framework of SIBTA, the FDTAs and the enterprises supplying technical assistance services.

In order to comply with the foregoing, the FIT 8 project has brought together foundations, suppliers and demanders of technological innovations around “learning alliances,” in which different versions of an approach we have called “knowledge management,” have been experimented with. This participatory approach for sharing knowledge brings together the local know-how with the technical know-how and they are submitted to validation on farmers fields as the local capacity for adopting the technologies is strengthened in the producers through the strategy we refer to as “development of competencies in the field”: (a) Induction of the project among members and users; (b) implementation of the project’s activities with the participating actors, including training, formulation of action plans for applying the approach, preparation of working documents, socialization of outcomes; and (c) M&E of the action plans.

Some of the outstanding results of this study which help make a turn in technology dissemination within the SIBTA system are:

- Creation of a favorable environment for applying a nontraditional approach for communicating technological innovations, incorporating the local know-how and the active participation of the producers
- Consciousness-raising of an important group of technicians whose organizations operate in the four ecoregions framework in order to incorporate the management approach when developing the projects of technological innovation
- Evidence (testimonies and evaluations) of the acceptance of the methodological approach among foundations, technicians, suppliers and producers
- Evidence of the complementarity between CIAL and ECAS methodologies, using the knowledge management approach in a case in Sucre (FDTA-Valleys and UNEC-Agro-central).
- Evidence of the applicability of the methodological approach in ten different types of agricultural, livestock and beekeeping activities (see Poster).
- FDTA-Chaco provided a first training round to all new recipients of PITAS 2006-2007 indicating its willingness to incorporate the knowledge management approach to the implementation of agricultural innovation projects
- Proposal for a diploma program in knowledge management, being studied by three universities in Bolivia
- Development of a module on knowledge management that will be incorporated in the distance-learning program on management of innovations, financed by IFAD and to be offered in 2006 for students of the University of Florida, East African and LA countries.
- Products: A CD with all the material of the project, a manual for forming knowledge managers and a video that shows the essentials components of the methodologies.

***Institutional strengthening of local innovation processes:*** This study has been designed to provide responses to the question “how can pro-poor local innovation processes be strengthened so that there is faster access to new relevant knowledge, technologies and markets by the poor?”

The setting for this study is a large group of Centers for Learning and Knowledge Interchange (CAIS, for its Sp.Ac.)<sup>2</sup> dispersed throughout Latin America and the Caribbean. Our hypothesis is that institutions such as these, engaged in the development and dissemination of rural innovations, need to develop capacities to conduct “co-development”<sup>3</sup> efforts. To be effective co-developers of pro-poor innovations local institutions will have the abilities and skills that enable them to draw down successfully, resources from extra-local innovation systems and then adapt these locally.

The research task is therefore, to identify the processes, capabilities and ways of organizing that are needed to strengthen co-development, and to incorporate these into approaches and methodologies that can be applied by local institutions to (a) identify local opportunity for innovation (b) network effectively with local and non-local sources of knowledge, technology and market opportunity to acquire promising innovations (c) interact with non-local providers to test and adapt these innovations to local conditions (d) accelerate their own learning processes.

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2. CAIS: Centros de Aprendizaje e Intercambio de Saberes.

3. By co-development we mean a process in which farmer organizations and their service providers engage as active partners in the learning and decisions involved in selecting and adapting potential innovations for local use.

Participatory action-research activities are conducted with our partners to include:

- (a) Co-development of methods and technologies. This requires merging CAIS knowledge and experience with external knowledge (CIAT's among others) through collaborative learning encounters and on site problem-solving and lesson-learning.
- (b) Strategic planning geared to sustainability of CAIS to ensure, in the long run, the co-development process continues to develop within CAIS communities and organized groups of stakeholders. Strategic planning is supported by tools such as social network analysis, participatory monitoring and evaluation and most significant change tools.

Early results of this research in 2005 have shed light on interaction approaches to conduct knowledge merging that result in co-developed technologies. CIAT and CAIS have jointly prepared action plans for every one of these Centers, which will be the basis for monitoring of co-development efforts, lesson learning and reflection regarding the facilitation of agricultural innovation. Researchers are concerned to use efficient methods to incorporate local knowledge into the co-development of technologies, both those that have been tested so far in the CAIS' environments, and those resulting from the interaction between CIAT and the CAIS themselves.

Thus far the principal outcomes of the project are:

- Capacities of thirty-five professionals from twenty two Centers in nine LA countries all of them CAIS members who have participated in the study so far have been strengthened. Enhancing their capacities has facilitated the strategic planning process out of which the Action Plans are key instruments to guide co-development efforts at the institutional and local levels of action .
- CIAT has shared with the Centers some of the leading technologies CIAT has developed in recent years such as Rural Agro-enterprise development, Local Research Committees (CIALs), geographic information systems (GIS) including easy-access technologies for three dimensional mapping and , information and communication technologies (TICs)

**Output 3: The Resource-to-consumption (ERI) Framework Developed, Tested and Applied to Strengthen Farmer Organizations and Rural Women's Capacity to Make a Transition from Semi Subsistence to Competitive, Market-oriented Production in Africa**

***ERI approaches***

Research was conducted to examine the market-led hypothesis that linking farmers to better market opportunities provides incentives for adoption and re-investment in NRM innovations, using empirical data from cross-sectional household surveys and action research on linking farmers to markets in selected sites in Malawi, Uganda and Tanzania. Analysis revealed mixed results, with significant differences based on gender, wealth categories, crops and survey areas. There is evidence that better access to markets and increased income led to increased investments farm inputs (including inorganic fertilizer) and the application of soil conservation measures. However, for the majority of women and poor farmers in Uganda, re-investing in ISFM was not among the first three priorities.

Investment on other livelihood needs (buying or renting more farmland, livestock, paying school fees and buying clothes) seem to receive higher priority.

Results of an external evaluation conducted in Malawi sites revealed that gender and equity issues have been well addressed in ERI: Alternative enterprise options, to diversify income generating opportunities and satisfy the needs of different categories of farmers (men and women) have been identified by communities in pilot learning sites. At community level women are able to speak in a group, participate in project activities either as mere project participants or as committee members serving in different capacities. With cash earned through sale of bean seed, the communities are able to diversify their diets, purchasing fish, meat, beans, chicken, fresh vegetables, etc. Several poor farmers are now able to send pocket money to their children in secondary schools, pay school fees, buy school uniform, notebooks, clothes, etc. Other benefits from the project have been assessed in terms of generation and utilization of cash income from sale of bean seed, improvements in nutrition (dietary diversification) and children's perceptions about project impact. Two graduate research theses are being conducted to further assess the distributional impacts of community-based agroenterprises, etc, with focus on intra-household gender dynamics and poverty.

Scientists from IPRA in Africa successfully develop a project for strengthening research for development capacities in innovative participatory research approaches for integrated soil fertility management in Africa, in collaboration with the African Soil Fertility Network of the Tropical Soil Biology Institute. IPRA scientists have also actively participated in the inception phase of the Lake Kivu Pilot Learning Site of the Sub-Saharan Africa Challenge Programme.

### ***Social capital***

An important research focus has been on understanding the various dimensions of social capital as a strategy for strengthening the decision-making capacity of communities. A diagnosis of social capital in Uganda has generated understanding on the different dimensions, levels and types of social capital; strength of social capital and potential for joint community action; forms of inter- and intra-household support, village-level interactions and wider scale linkages; gender roles, responsibilities and resource access; patterns of participation and interest in NRM initiatives and local bylaws formulated by different stakeholder groups; and constraints to their adoption and/or compliance with them by different groups, particularly women, the elderly and the poor.

### **Output 4: Methodologies for Establishing Community-managed Participatory Monitoring and Evaluation Systems (PM&E) Tested, Applied and Widely Disseminated**

Community Driven Participatory monitoring and evaluation (CD-PM&E) is an important tool for community learning and empowerment. Action research was conducted in Africa (Kenya, Malawi and Uganda) and Latin America (Colombia and Bolivia) to evaluate develop methods and tools for building capacity of communities to establish PM&E, identification of community indicators, data collection, analysis and use of information for decision-making. Research analyzed lessons and experiences from applying a novel monitoring and evaluation approach developed analyzed the role that CD-PM&E plays in various areas: a) Identifying and sharing different perspectives and improving mutual understanding amongst

stakeholder groups within communities; b) tracking progress and improving the implementation of community projects c) enhancing community learning and empowerment d) increasing accountability of R&D institutions to communities. Results demonstrate that community-driven PM&E systems can be a powerful tool in enabling local people to articulate their objectives for projects and activities, take control of these initiatives, and evaluate the relevance of services and products offered. Our results demonstrate that involving local communities in the PM&E process can: (i) Strengthen capacity of local stakeholders to articulate their objectives for R&D services and make effective demand for these services; (ii) Ensure that community perspectives are integrated into the R&D agendas, and; (iii) Make these institutions more relevant and responsive to community priorities. However, for this occur the skills and knowledge of R&D organizations in facilitating and supporting PM&E systems had to be strengthened. Our experiences have shown that when local people are involved in all stages of the M&E process, including the development of objectives and activities, indicators that will be monitored, the type of data and tools for collection, and analysis, it leads to more relevant R&D projects.

### **Output 5: Institutional and Organizational Capacity of R&D Partners to Develop and Adapt Community-managed Participatory Research Methodologies in R&D Organizations Effectively, Strengthened**

Research was conducted in eastern and southern Africa to identify the key elements of, and the challenges to, building and sustaining multi-stakeholder research for development partnerships under the Enabling Rural Innovation (ERI) initiative. This multi-stakeholder partnership involves agricultural research centres, non-governmental organizations, government extension services, the private sector working together with farmers' organizations in eastern and southern Africa. Results, based on after action review (AAR) and peer assist, two participatory techniques for facilitating collective reflection and critical learning, highlight the dynamic process of partnership formation and the key elements that contribute to their success. These include: (i) shared vision and complementarity, (ii) consistent support from senior leadership; (iii) evidence of institutional and individual benefits; (iv) investments in human and social capital; (v) and joint resources mobilization and sharing. However, institutionalizing partnerships requires creative strategies for coping with high staff turnover and over-commitment, conflicting personalities and institutional differences, and transaction costs. Sustaining partnerships with the private sector still remains an important challenge.

### **Problems Encountered and their Solutions**

- Once again, one of the great difficulties that we have had in several LA countries is the lack of continuity and in some cases, a low level of commitment of the personnel that work in GOs. This causes constant inconformity in the communities, affecting the results significantly on some occasions. Thus we have been trying to establish commitments with the directors of the institutions based on the institution's priority needs and how the activities will impact; e.g., improving the group's effectiveness and efficiency.
- In Bolivia, 2004-2005 was a highly conflictive period, during which the changes in government and the social protests affected the work pace in general. Our project, as in earlier years, had to overcome the resulting setbacks and delays in the activities. It is expected that with the possession of the new Head of State, a community leader, the

country can return to the desired course and the normal development of our project's activities.

- Although individual case studies show promising signs of success and robust results at the community level, the greatest challenge lies in linking micro-level community processes to higher macro-level processes, where market opportunities and institutional conditions may offer better opportunities for small-scale farmers. The challenge is creating conditions under which national market initiatives can support and benefit small-scale poor farmers in marginal conditions. These include promoting efficient institutional market innovations and support services such as microfinancing, market information systems, business support services, pricing policies, marketing inputs, extension advice and rural infrastructure.
- The success of PMR is highly dependent upon the development of effective quality partnerships with research and extension systems, NGOs, business support services and farmer communities. However, considerable efforts are still needed to forge effective partnerships with the private sector, business services and high-level policy and government institutions.
- Given the diversity of activities involved in ERI, the success of this work is highly dependent on developing effective quality partnerships with research and extension systems, business support services, private-public partnerships, NGOs and farmer communities. The lessons learned suggest that it is important to build a critical amount of human and social capital to create institutional commitments and clarity in understanding the roles, responsibilities and expectations of the different partners. It is also critical to develop a simple and functional PM&E early on in the project in order to build in regular reflection activities with communities and partners, to ensure that lessons are documented, and to enable adjustments to be made to the project in a timely manner. However, considerable efforts are still needed to forge effective partnerships with the private sector and high-level policy and government institutions and initiatives in marketing. These are key for the sustainability of rural agroenterprises and for scaling up, linking community micro-initiatives to high-level macro economic policies. There are some important challenges of linking farmers to markets. These are related to improving market institutions and market behavior for small-scale farmers. Market institutions are indeed critical to the expansion of production possibilities and to improving of the performance of small-scale agriculture.
- ***Does market orientation benefit women and the poor?*** When promoting market-oriented production, there is need for a better understanding of intra-household and community dynamics to assess the differential and distributional effects of market-oriented production on different categories of farmers. Rather than focusing only on women as is the case in many gender-oriented strategies, our strategy has been to encourage and sustain active participation and cooperation of both men and women in the project activities and creating gender awareness at the community level through the use of interactive adult education methods.
- Job turnover continues to be a serious problem in many government institutions and especially in the NGOs in LA, above all in Bolivia. These organizations contract their personal for specific periods of time, generally no longer than 18 months. This type of contracting restricts their participation in new initiatives because work plans are set by the project directors so it is very difficult to include new activities or to make changes in them. A possible solution to this problem would be to get outstanding results, followed by a strong diffusion to the decision-makers at the level of SIBTA in order to convince them of the benefits that these methodologies could have and adopt them as part of the evaluation parameters from the standpoint of the end-user or



requester. When contracted, the technicians should initially be trained before working with the different groups of requesters.

- The present situation of competition for limited resources has resulted in a greater detraction from our time as researchers to become searchers of resources, which has affected the quality and quantity of research. Moreover, a large part of the resources are available mostly for projects where the technologies developed by our projects are required in development programs for their immediate implementation. Thus it would be convenient to create teams within each project or institution that can support these initiatives, providing sufficient inputs so that said people can write and negotiate the proposals with the partners and/or donors. Similarly, these projects for developing capacities without much commitment to research could eventually finance other scientific initiatives for generating new approaches or methodologies.

## **Indicators: Publication List**

### ***Book chapters and other publications***

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Douthwaite, B.; Ekboir, J.M.; Twomlow, S.; Keatinge, J.D.H. 2004. The concept of integrated natural resource management (INRM) and implications for developing evaluation methods. *In*: Shiferaw, B.; Freeman, H. A.; Swinton, S.M. (eds.), *Natural Resource Management in Agriculture: Methods for Assessing the Economic and Environmental Impacts of Management Practices*. CAB International, Wallingford, UK. pp. 321-340.

Kaaria, S.; Chitsike, C.; Best, R.; Delve, R.; Ferris, S.; Kirkby, R.; Kaganzi, E.; Sanginga, P.; Njuki, J.; Roothaert, R. 2005. Enabling rural innovation in Africa: A programme that empowers communities to improve livelihoods. ERI Brochure, CIAT-Africa.

Kaaria, S.; Njuki, J.; Chitsike, C.; Sanginga, P. 2006. A facilitator's guide for establishing and supporting community-based participatory monitoring and evaluation systems. (under review)

Lenné, J.M.; Pink, D.A.C.; Njuki, J.; Wanyonyi, C.; Spence, N.J. 2005. Opportunities and constraints for future economic development of sustainable vegetable seed businesses in Eastern and Southern Africa. A scoping study commissioned by the Rockefeller Foundation, the Department for International Development, and the Gatsby Charitable Foundation; available from the DfID Crop Protection Programme, Natural Resources International, Aylesford, Kent, UK.

Muzira R.N.; Kabale farmers' groups; Pali P.; Sanginga P.; Delve R. 2006. Farmers' participation in soil fertility management research process: Dilemma in rehabilitating degraded hilltops in Kabale, Uganda. *In*: Bationo, A. Waswa, B.; Kihara, J.; Kimetu, J. (eds.), *Advances in integrated soil fertility management in sub-Saharan Africa: Challenges and opportunities*.

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### ***Innovation Briefs***

Acosta, A.; Douthwaite, B. 2005. Appreciative inquiry: An approach for learning and change based on our own best practices. ILAC Brief July. Available at: <http://www.cgiar-ilac.org/downloads/Brief6Proof2.pdf>.

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### ***Capacity-building materials***

Alonso, L.; Zapata, V. 2005. *Manual de Yuca Seca*. CLAYUCA, Cali, CO.

Bekunda, M.; Mudwanga, B.E.; Lundall-Magnuson, E.; Makinde, K.; Okoth, P.; Sanginga, P.; Twinamasiko, E.; Woomer, P.L. 2005. Entry points for agricultural research and rural enterprise development in the Lake Kivu pilot learning site of the Sub-Saharan Africa Challenge Program. Forum for Agricultural Research in Africa (FARA). Sub-Saharan Africa Challenge Program. 91p.

Ferris, S.; Kaganzi, E.; Best, R.; Ostertag, C.; Lundy, M.; Wandschneider, T. 2005. A market facilitator's guide to participatory agro-enterprise development. *Enabling Rural Innovation in Africa, Guide 1*. CIAT (International Center for Tropical Agriculture), UG

Giraldo, G.; Zapata, V. 2005. *Petites Entreprises Semencieres*.

Kaaria, S.; Njuki, J.; Chitsike, C.; Sanginga, P. 2006. A facilitator's guide for establishing and supporting community-based participatory monitoring and evaluation systems. (under review)

Sanginga, P.; Chitsike, C. 2005. *The Power of Visioning: A Handbook for Facilitating the Development of Community Action Plans*. *Enabling Rural Innovation in Africa Guide 2*. CIAT (International Center for Tropical Agriculture), Uganda. 134 p.

Sanginga P., Martin A. and Kamugisha R. 2005. *Strengthening social capital for improving policies and decision-making in natural resources management*. Final technical report to the Natural Resources Systems Program, DfID, UK.

Zapata, V. 2005. La Gestión de Conocimiento como Enfoque Metodológico para Facilitar la Innovación Tecnológica.

Zapata, V. 2005. Manual para la Formación de Gestores de Conocimiento.

### ***Poster presentations***

Fomentando Cambios 2005. Seguimiento Evaluación Participativa. CIAT (Centro Internacional de Agricultura Tropical), Cali, CO. 2 p. (bipático)

Niederhauser, N.; Douthwaite, B.; Oberthür, T. 2005. Information management for agricultural high value product supply chains. Poster presented at Tropentag.

Pali, P.N.; Nalukgwago, G.; Kaaria, S.; Sanginga, P.; Kankwatsa, P. 2005. Empowering communities through community-based participatory monitoring and evaluation in Tororo district. Poster presented at 7th ACSS Conference, 5-9 Dec., Imperial Resort Beach Hotel, Entebbe, UG.

Proyecto IPRA. 2005. El diagnóstico participativo. CIAT (Centro Internacional de Agricultura Tropical), Cali, CO. 1 p. (poster)

Proyecto IPRA, 2005. Fortalecimiento participativo de redes sociales. CIAT (Centro Internacional de Agricultura Tropical, (CIAT) Cali, CO. 1 p. (poster)

Proyecto IPRA. 2005. La evaluación abierta. CIAT (Centro Internacional de Agricultura Tropical), Cali, CO. 1 p. (poster)

Proyecto IPRA. 2005. Investigación participativa, el marco conceptual. CIAT (Centro Internacional de Agricultura Tropical), Cali, CO. 1 p. (poster)

Proyecto IPRA. 2005. Seguimiento y evaluación participativos. CIAT (Centro Internacional de Agricultura Tropical, Cali, CO. 1 p. (poster)

Zapata, V. 2005. Apoyo a la producción y comercialización de especias y condimentos en los Valles de Chuquisaca. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Valles, Cochabamba, BO. 5 p. (brochure)

Zapata, V. 2005. Aprovechamiento maderable y no maderable del bosque para la producción avícola. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Trópico Húmedo, Cochabamba, BO. 5 p. (brochure)

Zapata, V. 2005. De la transferencia de tecnología a la gestión del conocimiento. CIAT (Centro Internacional de Agricultura Tropical), Fundación Trópico Húmedo, FDTA-Valles, FDTA-Altiplano, FDTA-Chaco. Cochabamba, BO. 1 p. (poster)

Zapata, V. 2005. Gestión del conocimiento. FIT-8, Cochabamba, BO. 8 p. (brochure)

Zapata, V. 2005. Gestión del conocimiento. Proyecto FIT-8, Cochabamba, BO. 1 p. (poster)

- Zapata, V. 2005. Identificación de mercados y diseño de estrategias de comercialización para ASOPRACHT. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Chaco, Cochabamba, BO. 5 p. (brochure)
- Zapata, V. 2005. Manejo del cultivo de uva de mesa. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Valles, Cochabamba, BO. 5 p. (brochure)
- Zapata, V. 2005. Manejo integral de ganado lechero, Mejoramiento de especies animales. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Altiplano, Cochabamba, BO. 5 p. (brochure)
- Zapata, V. 2005. PITAs FDTA-Chaco AGROCITI. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Chaco, Cochabamba, BO. 5 p. (brochure)
- Zapata, V. 2005. Producción y comercialización de semilla de maíz en comunidades Guaraníes Itika Guasú. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Chaco, Cochabamba, BO. 5 p. (brochure)
- Zapata, V. 2005. Transferencias de tecnologías para el manejo integral del hato lechero en el Municipio de Corque. CIAT (Centro Internacional de Agricultura Tropical), FDTA-Altiplano, Cochabamba, BO. 5 p. (brochure)

### ***Papers presented at events***

- Alum, W.; Kazikwera, R.; Birungi, P.; Sanginga, P.; Kaganzi, E. 2005. Farmer participatory market research: An approach that could lead to increased commercialisation of agricultural products. Paper presented at 7th ACSS Conf. (5-9 Dec., Imperial Resort Beach Hotel), Entebbe, UG.
- Delve, R.J. 2004. Legume management: From process to market-led research. Paper presented at the Rockefeller Soils Grantees Workshop (20-24 Sept., Safari Park Hotel), Nairobi, KE.
- Delve, R.J.; Roothaert, R.L. 2004. How can smallholder farmer-market linkages enhance improved technology options and natural resource? Paper presented at NARO (National Agriculture Research Organization) Conf. Integrated Agricultural Research for Development: Achievements, Lessons Learnt and Best Practice (1-4 Sept.) Entebbe, UG.
- Delve, R.J.; Roothaert, R.L. 2004. Linking farmers to markets, one approach for increasing investment in natural resource management. Paper presented at the AHI (African Highlands Initiative) Regional Conf. (12-15 Oct., World Agroforestry Center), Nairobi, KE.
- Kaaria, S.; Delve, R. 2005. Developing innovative partnerships for effective research for development initiatives: A case study of enabling rural innovation (ERI) in Africa. Paper presented at IFAD IMI Workshop: What are the Innovation Challenges for Rural Development? (15-17 Nov.), Rome, IT.

- Kaaria, S.; Chitsike, C.; Njuki, J.; Sanginga, P.; Sangole, N.; Kaluwa, M.; Soko, L.; Pali, P. 2004. Strengthening community learning and change: The role of community-driven participatory monitoring and evaluation systems. Paper presented at the AHI (African Highlands Initiative) Regional Conf. (12-15 Oct. World Agroforestry Center), Nairobi, KE.
- Kaaria, S.; Kirkby, R.; Delve, R.J.; Njuki, J.; Twinamasiko, E.; Sanginga, P. 2004. Enhancing innovation processes and partnerships. Paper presented at NARO (National Agriculture Research Organization) Conf. on Integrated Agricultural Research for Development: Achievements, Lessons Learnt and Best Practice (1-4 Sept.), Entebbe, UG.
- Kaaria, S.; Njuki, J. 2004. Strengthening institutional learning and change: Applying participatory monitoring & evaluation (PM&E) systems to strengthen learning, assess progress, impacts and build in corrective loops into innovation processes. Paper presented at the Rockefeller Soils Grantees Workshop (20-24 Sept., Safari Park Hotel), Nairobi, KE.
- Kamugisha, R.; Sanginga, P. 2003. Strengthening community bylaws for improving natural resource management and minimizing conflicts in the highlands of southwestern Uganda. Paper presented at the East African Soil Science Society Conf. Eldoret, KE. (25 slides)
- Muzira, R.; farmers' groups; Sanginga, P.; Delve, R.J. 2003. Enhancing farmers' participation in integrated soil fertility management research: Challenges with farmers' research groups in Kabale, Uganda. Paper presented at the East African Soil Science Society Conf. Eldoret. KE. 20 p.
- Njuki, J.; Kaaria, S.; Murithi, F. 2004. Strengthening participatory monitoring and evaluation processes in Kenya Agricultural Research Institute (KARI): Key strategies, challenges and preliminary results. Paper presented at the 9<sup>th</sup> KARI Biennial Conf. (8-15 Nov.), Nairobi, KE.
- Njuki, J., Kaaria, S.; Sanginga, P.; Chitsike C. 2005. Participatory monitoring and evaluation for stakeholder engagement, assessment of project impacts, and for institutional and community learning and change. Paper presented at Impact Assessment Workshop, CIMMYT (Centro Internacional de Mejoramiento de Maíz y Trigo), MX (19-21 Oct.).
- Sanginga, P., Delve, R.J.; Kaaria, S., Chitsike, C.; Best, R. 2004. Adding value to integrated soil fertility management with participatory research approaches and market opportunity identification. Paper presented at the Intern. Symposium African Soil Fertility Network (15-22 July). Tropical Soil Biology and Fertility Institute, Yaoundé, CM.
- Sanginga P.; Kamugisha, R.; Martin, A. 2004. Strengthening social capital for improving decision-making and managing conflicts in natural resources management. Paper presented at 10<sup>th</sup> Cong. Intern. Association Study of Common Property (9-12 Aug.), Oaxaca, MX.

Sanginga, C.P.; Kirkby, R. 2004. Integrated agricultural research for development: Enabling rural innovation in Africa. Paper presented at CGIAR-Uganda Parliamentary Meeting (19-20 Feb.), IFPRI (International Food Policy Research Institute), Kampala, UG. (35 slides).

### **CDs**

CIAT (Centro Internacional de Agricultura Tropical), Proyecto IPRA. 2004. III Encuentro Centros de Intercambio de Saberes (CAIS), Cali, CO. 1 CD

CIAT (Centro Internacional de Agricultura Tropical). 2005. Metodologías participativas para un municipio productivo. Cochabamba, BO. 1 CD

CIAT (Centro Internacional de Agricultura Tropical) - Proyecto IPRA. 2005. Taller de fortalecimiento de capacidades para el co-desarrollo de tecnologías, Centros de Aprendizaje e Intercambio de Saberes (CAIS). Cali, CO. 1 CD

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FOCAM (Fomentando Cambios)-INNOVA. 2004-2005. Metodologías para la gestión e investigación participativa de la innovación rural. Monteagudo, BO. 1 CD

### **Articles**

Bekunda, M.; Mudwanga, B.E.; Lundall-Magnuson, E.; Makinde, K.; Okoth, P.; Sanginga, P.; Twinamasiko, E.; Woomer, P.L. 2005. Entry points for agricultural research and rural enterprise development in Virunga Mountains of eastern and central Africa. *Afr Crop Sci J*

Botello, R.; Gandarillas, E.; Rodríguez, F.; Fernández, J.; Velasco, C.; Polar, V. 2005. Evaluación participativa de medio término de PITAs en ejecución, basada en la satisfacción de los demandantes. INNOVA and FOCAM projects. Cochabamba, BO.

Botello, R.; Gandarillas, E.; Velasco, C.; Fernández, J.; Rodríguez, F.; Polar, V. 2005. Profundización de demandas para la elaboración de propuestas de innovación tecnológica. INNOVA and FOCAM projects. Cochabamba, BO.

Classen, L; Humphries, S.; Fitzsimons, J.; Kaaria, S. 2006. Beyond food security: Seeking innovation-oriented sustainability through participatory development with asset-poor farmers. (submitted to *World Dev*)

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- Kaaria, S.; Chitsike, C.; Njuki, J.; Sanginga P.; Pali, P. 2006. Strengthening community learning and change: The role of community-driven participatory monitoring and evaluation systems. (submitted)
- Kaaria, S.; Lilja, N.; Sandoval, V.; Classen, L.; Humphries, S.; García, J.; Hincapié, F.; Sánchez, F. 2006. Assessing impacts of farmer participatory research approaches: A case study of local agricultural research committees (CIALs) in Colombia and Honduras. (submitted to Intern Agric Econ Assoc)
- Lenné, J.M.; Pink, D.A.C.; Spence, N.J.; Ward, A.F.; Njuki, J.M.; Ota, M. 2005. The vegetable export system: A role model for local vegetable production in Kenya. Outlook Agric
- Menter, H., Kaaria, S.; Quirós, C.; Ashby, J.A.; Arévalo, M.; Rodríguez, K.; Corredor, M.; Vivas, R. Changing institutions: Assessing the institutionalization of participatory approaches in agricultural research and rural development institutions; examples from Colombia. (submitted to Intern J Sustainable Agric)
- Njuki, J; Kaaria, S; Sanginga, P; Chitsike, C. 2006. Participatory monitoring and evaluation for stakeholder engagement, assessment of project impacts, and for institutional and community learning and change. (submitted to Intern J Agric Sustain)
- Sanginga, P. ; Tumwine, J. 2005. Patterns of participation in farmers research groups. Agric Human Values

Based on these publications, we made a calendar and a document with summarized information about PM&E.

## Indicators: Training List

### *Scientific meeting presentations & proceedings*

Presentations given by IPRA members in workshops and/or seminars at the local or international levels.

<b>Date</b>	<b>Place</b>	<b>Topic</b>	<b>Presentations</b>	<b>Person</b>
Oct. 1, 2004	Universidad Autónoma de México, San Cristóbal de las Casas, Mexico	Seminar about valuation of local resources	Valuation of local resources: bitter starch cassava case in Cauca, Colombia	Viviana Sandoval
Feb. 22-24, 2005	Barquisimeto, Venezuela	Polar Foundation Projects	Use of participatory tools and methods in development projects	Carlos Quirós
Mar. 16-17, 2005	Managua, Nicaragua	Research on Tropical Forages	Participatory research on to generate technologies for tropical forages	Carlos Quirós
Mar. 21-22, 2005	White Horse Inn, Kabale	Improved access to information for Development. ACACIA II. Africa Highlands Initiative	Managers Stakeholder Meeting	Elly Kaganzi
Feb. 2005	Washington, USA	Outcomes from interaction between China and Andean Zone	Internal Seminar BID	Carlos Quirós
June 3, 2005	Kawanda Agricultural Research Institute	Enabling Rural Innovation in Africa: Science and Research Update	CIAT Board Meetings	Pascal Sanginga
July, 2005	CIAT, Cali-Colombia	Meeting of experimenters farmers	Fast study of market for small producers	José Ignacio Roa Viviana Sandoval
Nov. 15-17, 2005	Casa San Bernardo, Via Laurentina 289, Rome, Italy	Developing Innovative Partnerships for Effective Research for Development Initiatives: A case study of Enabling Rural Innovation (ERI) in Africa	IFAD Workshop: What are the Innovation Challenges for Rural Development?	Susan Kaaria and Robert Delve



## Strengthening NARS

**Training courses:** Participation in training events related to PR with 152 institutions.

Date	City & Country	Event	Participating Institutions	No. of Participants
Nov. 8-17, 2004	Cali, Colombia	Third Meeting of CAIS (Centros de Aprendizaje e Intercambio de saberes)	26 support institutions CAIS	37
Feb. 2-3, 2005	Trinidad, Bolivia	Workshop on PM&E analysis	Suppliers from FDTA- Humid Tropics	26
Feb. 3-4, 2005	Yacuiba, Bolivia	Training workshop about PM&E	Suppliers from FDTA-Chaco	18
Feb. 12, 2005	Padilla, Chuquisaca, Bolivia	PM&E training workshop	<i>Sindicato</i> from La Ciénega Grassroots organizations	25
Feb. 16, 2005	Padilla, Chuquisaca, Bolivia	PM&E training workshop	<i>Sindicato</i> from Sillani, Grassroots organizations	11
Feb. 23, 2005	Santa Cruz, Bolivia	PM&E training workshop	Center for Rural Women (CEMUR)	14
Feb. 23, 2005	Candelaria, Bolivia	PM&E training workshop	Association of Andean producers of tubers (APROTAC)	15
Mar. 3, 2005	Moro Moro, Valle Grande, Bolivia	PM&E training workshop	Association of Fruit Growers from Moro Moro (AFRUMO)	16
Mar. 12, 2005	Colomi, Bolivia	PM&E training workshop	Pucara <i>sindicato</i> – CIAL- Pucara	32
Mar. 14-18, 2005	Nairobi, Kenya	Strengthening capacity of National Bean Program participants in establishing and facilitating PM&E; initiating partnership-based PM&E	National bean programs from national Agriculture Research Institutes in Malawi, Kenya, Uganda, Tanzania; NGOs: Harvest Plus, Zambia; World Vision, Southern Democratic Republic of Congo; Representatives from the DFID/IPDM projects in Eastern and southern Africa	35

<b>Date</b>	<b>City &amp; Country</b>	<b>Event</b>	<b>Participating Institutions</b>	<b>No. of Participants</b>
Mar. 18, 2005	Santa Cruz, Bolivia	PM&E training workshop	Center for Rural Women (CEMUR)	40
Mar. 21, 2005	Yacuiba, Bolivia	PM&E training workshop	Demanders from FDTA-Chaco	15
April 25-30, 2005	Nairobi, Kenya	PM&E Training for	Maendeleo Agricultural Trust Fund, Kenya	16
June 14-17, 2005	Moshi, Tanzania	Agroe-enterprise Capacity Building	Traditional Irrigation Environment Development Program (TIP)	14
June 20-24, 2005	Esteli, Nicaragua	CIAL Methodology	APRODER, POLDES, UNAG, FIDER, MOPAFMA, ADEPROD, CARE, APRODESA, ADEL, FUNJIDES, CUCULMECA, UNICAFE, FUNDESER, FORESTAN, CENADE, INGES, COOPAAD, CATIE	24
June 26, 2005	Municipality of V. V. Guzman, Chuquisaca, Bolivia	PM&E workshop with members of the Association of Women Producers from Muyupampa (AMPROM)		30
July 19-20, 2005	Kigali, Rwanda	Needs Assessment Workshops	ERI & The Rural Sector Support Project (RSSP) in Rwanda	52
July 20-22, 2005	Esteli, Nicaragua	Participatory diagnosis	Members of POSAF Project (Proyecto de seguridad alimentaria y foresteria) of MARENA (Ministerios de recursos Naturales), Nicaragua	24

<b>Date</b>	<b>City &amp; Country</b>	<b>Event</b>	<b>Participating Institutions</b>	<b>No. of Participants</b>
July 25- Aug 3, 2005	Kampala, Uganda	PM&E training for Research Associates (CIAT and partners)	CIAT, Africa 2000 Network; Uganda Environmental Action Foundation (UEEF); Africare; National Agriculture Research Organization (NARO)	12
July 27-29, 2005	Sucre, Bolivia	CIAL methodology	Offering institutions from Bolivian System of Technology Agropecuaria, SIBTA	15
Jul 29-31, 2005	Tarija, Bolivia	Workshop to systematize experiences and evaluate diploma program	Technicians from offering institutions of SIBTA	48
Aug. 8-13, 2005	Mtwapa, Kenya	Integrating PM&E into the Farmer Field School approach in Kenya	Kenya Agricultural Research Institute FAO Farmer Field School Program Ministry of Agriculture Kenya Ministry of Livestock Development Kenya	19
Aug. 15-19, 2005	Arusha, Tanzania	Agroenterprise Capacity Building	TIP, through AMDP and 14 partner agencies	35
Aug. 25-26, 2005	Cochabamba, Bolivia	Workshop on participatory methodologies for a productive municipality	Technicians and representatives from municipalities	60
Aug. 29, 2005	Santa Cruz	Workshop on participatory methodologies for suppliers	Staff from the FDTAs -Chaco & Humid Tropics	22
Sept. 8-9, 2005	La Paz, Bolivia	Workshop on participatory methodologies within the SIBTA framework for suppliers & institutions linked to the FDTA- Highlands	Vivian Polar	14
Sept. 12, 2005	Entre Ríos, Tarija, Bolivia	PM&E workshop	Members from the APG Amer-Indian region of Itika Guazu	29

<b>Date</b>	<b>City &amp; Country</b>	<b>Event</b>	<b>Participating Institutions</b>	<b>No. of Participants</b>
Sept. 15-16, 2005	Cochabamba, Bolivia	Workshop on participatory methodologies within the SIBTA framework	Suppliers, collaborating institutions & staff from FDTA-Valleys	27
Sept. 19-30, 2005	Nairobi, Kenya	Participatory approaches and scaling up; linking ISFM to markets	Network of Africa Soil scientists along with TSBF	30
Oct. 19-20, 2005	Cochabamba, Bolivia	Workshop on participatory methodologies within the SIBTA framework, for UMSS teachers & staff	UMSS (Universidad Mayor de San Simón) teachers & staff	25
Oct. 21, 2005	Municipality of Bermejo, Tarija, Bolivia	PM&E workshop with producers from the OTB, San Luis El Anta	OTB Territorial Grassroots Organization	25
Nov. 1-12, 2005	CIAT, Colombia	Strengthening of CAIS (Centros de Aprendizaje e Intercambio de Saberes)	Local Committees of Agricultural Research	28
Nov. 14-17, 2005	Esteli, Nicaragua	Technological evaluation done by agricultures		24
Nov. - Dec., 2005	CMDRs from municipalities of Valley, Colombia	PM&E workshop for the project on strengthening the CMDRs in the Cauca Valley	Elías Claros	100
<b>Total</b>		<b>30</b>		<b>957</b>

### ***Performance indicators***

- Technologies, methods & tools
- Methodologies for community visioning and participatory diagnosis
- Methodologies for establishing PM&E systems at both community and program levels
- Framework for integrating farmer PR to participatory market research processes
- Approach for linking farmers to markets
- Training guides:
  - Community facilitators' guide for establishing community-based PM&E evaluation systems
  - The power of visioning: Participatory diagnoses and community planning; building on assets and opportunities
  - Managing social processes and group dynamics in PR
  - Farmer experimentation processes
- A community-based PM&E system designed and adjusted to a wide range of LA situations
- A strategy for practical application of M&E systems adjusted to Bolivian PITAs

## Indicators: Resource mobilization

### *Project Proposals presented to donors*

<b>Title</b>	<b>Donor</b>	<b>Amount (US\$)</b>
Applying participatory monitoring and evaluation to assess project impacts promote learning and enhance performance of community development projects. Concept Note submitted to the May 2005. Funds to CIAT for 2 years	Maendeleo Agricultural Trust Fund (MATF) of Farm Africa	USD 95,000
Strengthening the Capacity for Research and Development to Enhance Natural Resources Management and Improve Rural Livelihoods in sub-Saharan Africa. Proposal Submitted by TSBF and ERI: for 3 years	The International Development Research Centre (IDRC).	CAN \$ 950,000
Empowering Communities to Improve their Livelihoods. A proposal submitted to Rwanda Rural Sector Support Project. for 18 months		USD 422,700
Strengthening Capacity for Collaborative Management of Rural Innovation in sub-Saharan Africa: Exploring new tools and partnerships	IFAD.	USD 200,000
Tracking social capital outcomes and sustainability of local policy initiatives, (5months)	NRSP-DFID	GBP 30,600
Rural integrated development in poor hillsides communities in Cauca Valley	Cauca Valley Government	15,000
Proposal to strength the Municipal Advise of Rural Development (CMDR, acronym in spanish) in Cauca Valley	Cauca Valley Government	18,000
Participatory Monitoring and Evaluation (PM&E) for National Agricultural Innovation Systems: Recommendations for Institutionalization from the Bolivian Experience	DFID	240,000
Food security: Agricultural production plots in the municipality of Silvia, Indigenous Reservations of Quisgo, Guambia, Jambalo, Pitayo, Quilcalla and Tumburao in Cauca Province, Colombia	British Embassy, Bogotá.	£29,900
Strengthening underutilized crop-supply chains for the poor through participatory inquiry and action. Concept note for SDC, IDRC, etc.	SDC, IDRC	USD 500,000
How SGRP (System-wide Genetic Resources) can support CG Centers in implementing the system priorities related to underutilized and high-value plant species to increase income and food security of the poor	SGRP	USD 24,000
<b>Total</b>		<b>USD 1'514,000</b>
		<b>CAN 950,000</b>
		<b>£ 29,900</b>

### ***Project Proposals funded by donors***

<b>Title</b>	<b>Donor</b>	<b>Amount</b>
Improving knowledge management for participatory development of agro enterprises in rural areas	Kellogg Foundation	USD 293,500
Participatory research is leading food security process, markets and natural resource conservation, in nine municipalities in Cauca, Colombia	Cauca Valley Government	USD 40,000
Institutional strengthening for CAIS: an alliance for local co development	Fundación Kellogg	USD 856,700
Learning to Innovate	CIAT – Budget CORE	USD 16,000
Learning and Institutional Change	CIAT – Budget CORE	USD 15,000
Developing capacity in CIAT to carry out social network analysis	USAID Linkage Funds	USD 11,000
Innovation histories of the adoption of four bean varieties in East Africa	PABRA	USD 20,000
Strengthening rural innovation ecologies: Participatory development of a methodology for strengthening social networks	PRGA	USD 5,000
Impact assessment of research in the Challenge Program on Water and Food (CPWF): Phase 1: Volta, Mekong and Karkheh basins. CPWF [The CPWF Board has agreed in principle that this project will be carried out in all 9 CPWF basins with a budget of \$900,000.]	Donors who fund the CPWF	USD 294,149
National Agricultural Innovation Systems that work for the Poor: Building on the Bolivian experience	DFID	£126,039
How the SGRP can support CG centers in implementing system priorities related to underutilized and high-value plant species to increase income and food security of the poor	SGRP	USD 24,000
<b>Total</b>		<b>USD 1'575,349</b>
		<b>£126,039</b>

### ***Number of higher degree students supervised***

- PhD, 8
- MSc, 11
- BSc, 8

## **Proposed Future Plans**

### ***Mechanisms for PM&E***

- Continue research in the pilot zones, where there are still ongoing applications in the PM&E method that require recording information in order to do a partial analysis in their PITAs.
- Adjust the PM&E database to the conditions of the local partners, the FDTAs, so that it contributes information coming from the farmers to the national information and communication system
- Continue with the analyses and documentation of experiences related to the methodologies for the participatory adjustment of proposals, mid-term and final evaluations of development projects as a contribution to the new SIBTA
- Prepare and present the new phase of the project: in Bolivia, which is being concerted with CIP (International Potato Center), DfID-Andes and IPRA at CIAT for research on a model for development that permits the national research centers to make decisions with respect to the generation of policies related to the agricultural and livestock area
- Continue to strengthen the communities' capacity to apply PM&E information for self-reflection and learning. This will also involve continuous capacity development at the community level and the design of simple tools for data collection and analyses that can be applied easily in the field by communities and project staff.
- Develop tools for analyzing and synthesizing data gathered from the learning sites and design an interactive, user-friendly database system to manage the data.
- Design a simple PM&E reporting system for linking the different PM&E systems to allow the agile flow of information and feedback between rural communities and R&D systems (communities – projects - centers - institutional). This will include simple tools for aggregating and reporting the micro-level data collected by PM&E processes to facilitate their use for decision-making at different levels and to provide feedback and learning.
- Conduct a systematic evaluation and review of PM&E processes in place to document lessons and experiences. This will involve an analysis of achievements to date, identification of methodological aspects that are effective, areas for further research and specific areas that need to be adapted and modified. Lessons and experiences will be documented and disseminated through feedback and review meetings with key stakeholders and policymakers in KARI, presentations at meetings and seminars, and different types of publications.

### ***CAIS project***

- Initiate the processes of co-development in the CAIS, where we will participate in the application and adjustment of diverse technologies and methodologies that should generate technology with the active participation of the farmers from the initial research phases. Likewise, the project should study what would be the ideal model of co-development in which the participation of the different actors is clearly established. This experience will be carried out in 9 LA countries.

### ***CIP project***

- In a process of knowledge management, PR and studies to strengthen the rural agroenterprises, the strengthening of the integrated sets of projects will begin in the Andean zone of Peru and Bolivia
- Finalize the establishment of PM&E processes at remaining learning sites (Kakamega and Embu), including capacity-building workshops as well as practical training activities
- Continue to strengthen the communities' capacity to apply PM&E information for self-reflection and learning, including continuous capacity development at the community level and the design of simple tools for data collection and analysis that can be applied easily in the field by communities and project staff
- Develop tools for analyzing and synthesizing data gathered from the learning sites and design an interactive user-friendly database system to manage the data
- Design a simple PM&E reporting system for linking the different PM&E systems to allow the agile flow of information and feedback between rural communities and R&D systems (communities – projects - centers - institutional), including simple tools for aggregating and reporting the micro-level data collected by PM&E processes to facilitate their use for decision-making at different levels and to provide feedback and learning
- Conduct a systematic evaluation and review of PM&E processes in place to document lessons and experiences, which entails analyses of achievements to date, identification of methodological aspects that are effective, areas for further research, and specific areas that need adaptation and modifications
- Document lessons and experiences and disseminated them through feedback and review meetings with key stakeholders and policymakers in KARI, presentations at meetings and seminars, and different types of publications.

### ***Enabling rural innovation***

Consolidate lessons and scaling up the ERI framework, including the following strategies:

- ERI will scale up to several other countries including Kenya, Ethiopia, Rwanda and DRC. To support this scaling-up process, the ERI team will also support partners to mobilize funds to support this process.
- Gender and equity dimensions of ERI will be strengthened, including the development of a strategy and research on HIV/AIDS and impact of agricultural technology choice, and how linkage to markets can support people living with HIV/AIDS, especially women who are the most vulnerable.
- ERI will focus on ensuring that community enterprise projects are functional and document the lessons and experiences from this process.
- Enhance the focus on strengthening our partnerships and creating new ones.
- Scaling up at different levels will be implemented within the community, across to other communities, within the district, within the country (nationally) and across countries (internationally).

### ***PM&E project activities***

- Continue supporting the implementation of PM&E systems and CIALs in the project pilot zones



- Follow up the technical personnel trained in participatory methods in the expansion areas of the project
- Strengthen linkages with FDTAs and SIBTA
- Continue adjusting the database that will feed into the database of the Bolivian foundations so that the information of the farmers' groups on the execution of their projects will be incorporated in their current evaluation systems
- Strengthen the contribution of PR methods to the improvement of SIBTA
- Identify farmer organizations to initiate joint activities and evaluate the contribution of participatory methods in the articulation of their demands within SIBTA.

### ***Innovation histories***

- Complete histories of the adoption of four bean varieties in East Africa and share the findings with the stakeholders involved through an institutional learning and change process
- Complete CIAL and CLAYUCA cassava-processing innovation histories
- Present the approach at the American Evaluation Association Conference in Atlanta, Georgia

### ***Interaction with the Kellogg Foundation projects***

Support the Kellogg Foundation's integrated project sets, CIP and the CAIS in Latin America in the incorporation and adaptation of participatory methodologies in their projects. Emphasis is on creating a capacity in the different regions to implement M&E to analyze the lessons learned for similar institutionalization processes.

### ***Use of SNA to strengthen rural innovation ecologies***

- Complete and analyze CIAT's research collaboration networks
- Develop SNA tools that are appropriate and useful for community-based organizations

### ***FIT 8: Pro-poor knowledge-sharing methodologies***

- Prepare a proposal or integrate it within a larger proposal, the initiative of creating with the users of the methodological approach (technicians and producers) four teams of multipliers that replicate the training and application of the same in the four macro-core regions, providing ample coverage of the firms supplying technical assistance services under the supervision of the FDTAs
- Prepare a proposal for financing the development of a diploma program in knowledge management, targeted toward teachers from the universities and institutes of agrarian sciences interested in incorporating the methodology in their curriculum, especially the social and technology transfer components
- Incorporate a new proposal for disseminating international public goods, the component of knowledge management as a useful methodology for improving the technology transfer systems in the Andean systems of agricultural and livestock technological development