



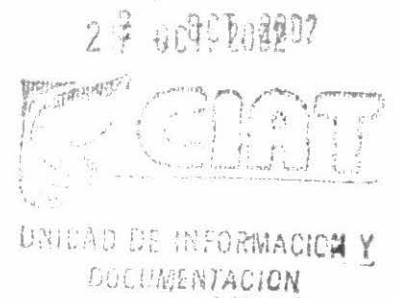
PROJECT PE - 3
Communities & Watersheds

SUMMARY
October, 2002

**SUMMARY ANNUAL REPORT
2002**

PROJECT PE-3

**Community Management of Natural Resources in Hillside
Agroecosystems of Latin America**



27 OCT. 2002



SUMMARY ANNUAL REPORT 2002

PE-3 PROJECT

Community Management of Natural Resources in Hillside Agro-ecosystems of Latin America

Objectives: To improve the standard of living and food security of hillside farmers in tropical America, and make their interaction with the environment more sustainable.

Outputs:

(1) Improved production systems, (2) More sustainable landscapes, (3) Strengthened organizations, (4) Decision makers supported, (5) Efficient and participatory management system of the project.

Gains: Farmers and locally organized producers use technologies, tools, and methodologies developed by CIAT and its partners at the level of reference sites. Results are sustainable, production systems profitable, land use improved, and natural resources preserved at the landscape level. Partner organizations use technologies, tools, and methodologies developed by or with the project for their planning and activities at local, national, and regional levels. Decision makers at different levels have more information, tools, and methodologies, provided by the project, to support their planning, monitoring, and decisions.

Milestones:

- 2001: *Impact:* Sustainable and profitable production systems, improved land use, and natural resource preservation on farms, spreading to the landscape within reference sites. *Strategic research:* Partner organizations use the project's outputs for their activities at local, national, and regional levels.
- 2002: *Impact:* Sustainable and profitable production systems, improved land use, and natural resource preservation at the landscape level within reference sites. *Strategic research:* Decision makers at local, national, and regional levels use the project's results for their activities.
- 2003: *Impact:* Sustainable and profitable production systems, improved land use, and natural resource preservation on farms, spreading to the landscape beyond the reference sites. *Strategic research:* Decision makers at local, national, and regional levels use new results from the project for their activities.

Users: Farming families and rural communities of the Andean and Central American hillsides. Project sites profit from increased community action aimed at sustaining the productivity of the resource base. As a result, off-site stakeholders benefit. National and international development organizations involved in priority setting and investments in development.

Collaborators: SDC, IDRC, DGIS, CIMMYT, CIP, IFPRI, IWMI, IICA, PASOLAC, CARE; universities of Florida, Wageningen, Edinburgh, Guelph, Nacional Agraria (Nicaragua); CURLA (Honduras); DICTA, INTA, CONDESAN, CIPASLA, Campos Verdes, CLOs, CIALs, individual farmers.

CIAT project linkages: Collaboration with the Ecoregional Program for Tropical Latin America, soils (PE-2), land use (PE-4), smallholder systems (PE-5), agro-industries (SN-1), participatory methods (SN-3), forages (IP-5), and impact assessment (BP-1) projects.

PE-3 Logframe Work Plan, 2001-2003

| Narrative summary | Measurable indicators | Means of verification | Important assumptions |
|--|--|--|--|
| <p>Goal To improve the standard of living and food security of hillside farmers in tropical America and make their interaction with the environment more sustainable.</p> | <ul style="list-style-type: none"> • Reduced infant mortality • Reduced maternal mortality • Reduced soil erosion • Improved water quality in rivers and streams • Increased income (monetary and/or in kind) | <p>National and local statistics Local research</p> | <p>The environmental, social, economic, and political conditions, on a macro level, are maintained.</p> |
| <p>Purpose To strengthen local processes of sustainable rural development in the hillsides of tropical America, based on the experiences of natural resource management (NRM) at benchmark sites.</p> | <ul style="list-style-type: none"> • Groups residing at five work sites in Honduras and Nicaragua successfully implement land management initiatives consistent with those ones validated by the project and its partners • At least 15 key entities of the region have access to at least three tools and methods developed by the project | <p>Field verification Institutional reports</p> | <p>Local partners continue project-related activities. Donors remain interested in the proposed project objectives and continue to give support.</p> |
| <p>OUTPUT 1 Improved production systems. Farmers use technologies developed by CIAT and its partners to establish sustainable and profitable production systems.</p> | <ul style="list-style-type: none"> • Screening alternatives in demonstration parcels in San Dionisio, Yorito, and Cabuyal (“Supermarket of Options for Hillsides”) • Validating alternatives in at least 25 CIALs in San Dionisio and Yorito • Alternatives adopted by at least 100 farmers at project work sites • Successful alternatives being transferred to at least 12 sites other than the initial work sites | <p>Field verification Project reports CIAL reports</p> | <p>That climate variability is normal.</p> |
| <p>OUTPUT 2 More sustainable landscapes. Land use has improved across the landscape because locally organized farmers are using the tools and methods developed by the project and its partners.</p> | <ul style="list-style-type: none"> • Three local consortia of NRM operating at work sites in Honduras, Nicaragua, and Colombia • Five local consortia of NRM in formation at other sites of Central and South America • Stable water quality (sediments and contaminants) as integrating indicator of the status of natural resources in at least three watersheds at the work sites • Environmental monitoring initiated in at least two work sites in Honduras and Nicaragua | <p>Consortia reports Monitoring reports</p> | |

Continued.

| Narrative summary | Measurable indicators | Means of verification | Important assumptions |
|---|--|---|-----------------------|
| <p>OUTPUT 3 Strengthened organizations. Local and national organizations involved in sustainable rural development at various levels (site, national, regional) use the technical and methodological resources developed by the project in their decision making and other activities. Inter-institutional coordination is enhanced.</p> | <ul style="list-style-type: none"> • At least 25 CIALs operating at project work sites • At least 30 CIALs in formation at other work sites in the region • At least 20 national technicians trained and promoting CIALs | CIAL reports Training reports Institutional reports | |
| <p>OUTPUT 4 Decision makers supported. Decision makers at various levels use and have access to more information, tools, and methods to use in decision making, planning, and monitoring.</p> | <ul style="list-style-type: none"> • At least two technicians of each collaborating institution trained and using tools developed by the Project and its partners • Digital information (CD-ROM and Web site) available and accessible in Honduras and Nicaragua, and in process in other countries • Local decision makers at the level of three municipalities with access to site-specific information on natural resources and trained to use this information | | |
| <p>OUTPUT 5 Efficient, participatory project management. Different internal and external partners directly participate in project management to ensure adequate and efficient use of the project's resources.</p> | <ul style="list-style-type: none"> • Plans and reports opportunely prepared and approved by previously established authorities • Partners are well informed and actively participate in fieldwork at the project sites (local consortia) or elsewhere • National hillside consortia operating in Honduras and Nicaragua • Regional hillside consortium operating • Experiences and lessons learned by the project and its partners disseminated in Latin America through different channels (e.g., networks, publications, meetings) • New projects adopt methods, techniques, and experiences generated by the project and its partners | Planning documents and reports Proceedings of Consultative Group and Executive Committee meetings Reports of members and consortia Dissemination materials and project reports Direct verification through networks and consortia | |

The New Logframe 2003-2005

Project PE-3: Communities and Watersheds

Project Description

Goal: To foster community based watershed management (CBWM) to address local natural resource priorities and contribute to improved environmental management, equitable resource allocation, and enhanced livelihood and food security.

Outputs:

1. Improved watershed management: land-water interactions
2. More equitable highland-lowland resource allocation
3. Provision of environmental services: water, biodiversity, and recreation
4. Strengthened organizations: community and institutional capacity building
5. Efficient use of project resources through participatory project management

Gains: Farmers and local organizations adopt technologies, tools, and methodologies developed with CIAT and its partners at research watersheds. Results are sustainable, production systems profitable, land use improved, and natural resources preserved at the watershed level. Partner organizations apply technologies, tools, and methodologies developed by or with the project for their planning and activities at local, national, and regional levels. Decision makers at various levels have information, tools, and methodologies provided by the project to support their planning, monitoring, and decisions.

Milestones:

- | | |
|------|--|
| 2003 | Establish monitoring networks and indicators for individual research sites / watersheds. Document land-water interactions, highland-lowland interactions, resource allocation inequity, and community priorities. Initiate capacity building programs at the local level. Promote the adoption of already proven approaches and technologies. |
| 2004 | Continuation of monitoring networks. Capacity building, strengthening local organizations, and training programs. Develop new technologies and approaches. Community-based adoption of proven methods and technologies. Improved local management using CIAT's research results. |
| 2005 | Continuation of monitoring networks. Community-based adaptive management with proven methods and technologies. Ongoing capacity building. Decision support providing information, tools, and methods at various levels (local, national, regional). Training programs. Improved watershed management using CIAT's research results. Scaling out. |

Users: Farming families, youth, and rural communities of tropical watersheds. Project sites profit from increased community action aimed at improving watershed management. Educational institutions directly through youth involvement and student participation, and indirectly through access to research materials. National and international development organizations involved in priority setting and investments in development.

Collaborators:

SDC, CIMMYT, CATIE, CIP, IPCA, IWMI, IICA, PASOLAC, CARE, CIPAV, CVC, universities of Georgia, Florida, Guelph, British Columbia (Canada), Javeriana (Cali, Colombia), Nacional Agraria (Nicaragua), and CURLA (Honduras); DICTA, INTA, CONDESAN, ACERG, Herederos del Planeta, CIPASLA, Campos Verdes, CLOs, CIALs, Hillside Agricultural Program, Haiti (HAP); District, Provincial and National partner staff in Laos; DOA, Bangkok, DOAE, Bangkok, TTDI, Huay Bong, Nakhon Ratchasima, Land Development, Dept, Bangkok and Kasetsart University, Bangkok in Thailand, Thai Nguyen University, Thai Nguyen, Vietnam, National Institute of Soils and Fertilizers, Hanoi, Hue University of Agriculture and Forestry, Hue Hung Loc Agriculture, Research Center, IAS, Dong Nai Thu Duc University of Agriculture and Forestry, HCM in Vietnam and Chinese Academy Tropical Agric. Sciences, Hainan, China Guangxi Subtrop. Crops Res. Inst., Nanning Guangxi, China Central Institute for Food Crops, Bogor, Indonesia.

CGIAR System Linkages: IWMI, CIP, CIMMYT and Water and Food, Mountain Development, and Urban Harvest CPs.

CIAT Project Linkages: Soils (PE-2), Land Use (PE-4), Agroindustries (SN-1), Participatory Methods (SN-3), Forages (IP-5), Impact Assessment (BP-1), Bean Improvement (IP-1), Cassava (IP-3), Rice (IP-4).

CIAT PE-3 Project Logframe, 2003-2005

Project: Communities and Watersheds
Manager: José Ignacio Sanz

| Narrative Summary ^a | Measurable Indicators | Means of Verification ^a | Important Assumptions |
|---|--|--|--|
| <p>Goal To foster CBWM to address local natural resource priorities and contribute to improved environmental management, equitable allocation and enhanced livelihood and food security.</p> | <p>Water quality Biodiversity Conflict resolution mechanisms Income (monetary and/or in kind) Farmer adoption of technologies / methods</p> | <p>National and local statistics Local research</p> | <p>The environmental, social, economic, and political conditions are maintained on a macro level.</p> |
| <p>Purpose To strengthen local processes of watershed management and sustainable agricultural development in tropical regions based on the experiences of NRM at research sites.</p> | <p>User groups (# and types) Institutions with community involvement Local capacity building – training programs Youth involvement in NRM Community-based involvement in watershed management</p> | <p>Field verification Institutional reports.</p> | <p>Local partners continue project-related activities. Donors remain interested in the proposed project objectives and continue to provide support.</p> |
| <p>Output 1 Improved watershed management based on knowledge of land-water interactions. Farmers adopt approaches and technologies developed with CIAT and its partners to establish environmentally sound management and livelihood alternatives.</p> | <p>Land-water interactions: Water quality Land use change / intensification/ diversification Soil erosion Nutrient management Productivity</p> | <p>Local research Field verification Project reports Youth reports Local research groups' reports</p> | <p>Climate variability is normal.</p> |
| <p>Output 2 More equitable resource allocation based on highland-lowland interactions and trade-off analysis. Identify and monitor indicators of highland-lowland resource interactions. Promote community-based approaches for resolution of inequities.</p> | <p>Highland-lowland interactions: Erosion Water quality Water quantity (drinking and irrigation) Trade-off analysis: Water rights / concession Income distribution (highland-lowland) Livelihood opportunities Conflict resolution: User association participation Consortium functioning Policy and/or institutional changes</p> | <p>Local research Field verification Youth reports CIAT reports Consortia reports Monitoring reports.</p> | <p>Social stability</p> |

Continued.

CIAT PE-3 Project Logframe, 2003-2005. (Continued)

| Narrative Summary ^a | Measurable Indicators | Means of Verification ^a | Important Assumptions |
|--|---|---|--|
| <p>Output 3 Valuation and analysis of environmental services including water, biodiversity, and recreation. Adoption of sustainable management practices by local farmers and user groups. Increased forest and agricultural biodiversity. Realizing the potential of recreational opportunities.</p> | <p>Water: Water quality Water quantity Biodiversity: Native vs. exotic species numbers (temporal and spatial) Agro-biodiversity (no. and type) Recreation: Types and no. of suppliers Eco-tourism</p> | <p>Field verification Local research CIAL reports Youth reports Institutional reports</p> | <p>Climate variability is normal.</p> |
| <p>Output 4 Strengthened organizations. Local and national organizations involved in sustainable agricultural development at various levels (site, national, regional) use the technical and methodological resources developed by the project in their decision making and other activities. Inter-institutional coordination is enhanced.</p> | <p>Training programs (no. and type) Youth group formation and activities User groups supported (no. and type) Digital information (no. and type) Decision support mechanisms Information dissemination (format and content)</p> | <p>Local research groups' reports Youth reports Training reports Institutional reports Dissemination materials and project reports</p> | <p>Social stability</p> |
| <p>Output 5 Efficient use of project resources through participatory project management. Internal and external partners directly participate in project management to ensure adequate and efficient use of the project's resources.</p> | <p>Approved projects designed with partners and donors Partners participate in fieldwork Data-sharing agreements Lessons learned by the project and its partners disseminated New projects adopt methods, techniques, and experiences generated by the project and its partners</p> | <p>Planning documents, proposals, and reports Dissemination materials and project reports Direct verification through networks and consortia Reports to donors Annual Reports</p> | <p>Institutional linkages maintained</p> |

a. For acronyms and abbreviations used, see page XX.

Investigators:

Colombia:

| | |
|-------------------------|---------------------------------------|
| José Ignacio Sanz (60%) | PhD Soils, Project Manager |
| Gregoire Leclerc (25%) | PhD Physics, GIS |
| Vicente Zapata | PhD Communications, Capacity building |
| María Cecilia Roa | Sc Development, Research Associate |

Honduras:

| | |
|---------------------|---|
| Miguel Ayarza | PhD Soils, Regional Coordinator |
| Guillermo Giraldo | Sc Agronomy, Consultant, Seed Systems |
| Luis Brizuela | B.S. Agronomy, Production Systems and Local Strengthening |
| Marco Tulio Trejo | B.S. Agronomy, Soils and Support to MIS Consortium |
| Orlando Mejía | B.S. Agronomy, Biophysical modeling and Database Management |
| Miguel Angel Méndez | B.S. Agronomy, Agroenterprises |
| Heraldo Cruz | B.S. Agronomy, Multi-purpose Forages Evaluation |
| Gilman Palma | Technician, Production Systems |

Nicaragua:

| | |
|-----------------------------|---|
| Jorge Alonso Beltrán | MSc Agronomy, Liaison officer |
| María Eugenia Baltodano | Economist, Bioeconomic modeling |
| Guilles Trouche | PhD Breeder, CIRAD – CIAT |
| Axel Schmidt | PhD, Multi-purpose Forages evaluation |
| Clark Davies Salmeron (50%) | Agronomic Engineer, Multi-purpose Forages Evaluation and Monitoring CIALs |
| Juan Bosco Franco | Agronomic Engineer |
| Pedro Pablo Orozco | Agronomic Engineer, Production Systems |

Haiti

| | |
|------------------|-----------------|
| Gardy Fleurantin | Liaison Officer |
|------------------|-----------------|

Asia:

| | |
|-----------------------|---|
| Peter Kerridge | Project Manager FLSP |
| Rod Lefroy | Project Manager |
| Peter Horne | Team Leader |
| Reinhardt H. Howeler | PE-3 and IP-3, cassava agronomist, stationed in Bangkok, Thailand |
| Chintana Chanhdeng | |
| Sukanya Chanhdeng | |
| Panida Phommalisack | |
| Simonchanh Vantachack | |
| Sengamphone Pachith | |

Collaborators:

Within CIAT: See under CIAT project linkages on new logframe, page 7.

Outside CIAT: See under Collaborators and System linkages on new logframe, page 7.

Financial Resources:

Headquarters / Latin America and the Caribbean

| Source | Amount (US\$) | Proportion (%) |
|----------------------|------------------|----------------|
| Unrestricted core | 665,929 | 35 |
| Core substitution | 60,070 | |
| Carry over from 2001 | 195,856 | 10 |
| Subtotal | 861,785 | 45 |
| Special projects | 1,035,330 | 55 |
| Total | 1,897,115 | 100 |

Asia

| Source | Amount (US\$) | Proportion (%) |
|---------------------|----------------|----------------|
| Unrestricted core | 118,054 | 14 |
| Core substitution | | |
| Carryover from 2001 | 54,175 | 6 |
| Subtotal | 172,229 | 20 |
| Special projects | 682,046 | 80 |
| Total | 854,275 | 100 |

- a. US\$50,000 contributed from Reserve Fund towards salary of Rod Lefroy.

Research Highlights in 2002

We highlight six areas of our current research work:

(1) Scaling Out

Often, research and development projects in agriculture and natural resource management (NRM) have very little impact in relation to its arrival and diffusion to farmers, reduction of poverty, sustainability of the development process, or influence on policies. Thus, researchers and those involved in development face the constant challenge of maximizing impact, and advancing the development process. In the present situation of reduced financing to support research and agricultural development, interest is growing in “enlarging the scale”. If little attention is paid to the increasing of scale we “will have failed in our purpose of contributing to the alleviation of poverty, to improving food security, and to the protection of the environment” (Harrington et al., 2001).¹

Our objective is to use work methods and products developed at reference-site level to enter into alliances with different actors (local, national and regional) allowing us to reach more people with these benefits in less time, and in a better way. As an example, Figure 1 shows the increase of scale presented by “scaling out” from the San Dionisio, Matagalpa reference site to other regions of Nicaragua, such as the departments of Jinotega, Matagalpa, Boaco, Chontales, Managua, Estelí, Nueva Segovia, León, and Chinandega. The SOL (reference site) concept has

¹ Harrington, L. and collaborators. 2000. Delivering the goods: Generalizing and propagating NRM research results through “scaling out”. LEISA Revista de Agroecología, Vol. 17, No. 3.

become a valid instrument to initiate a process of approach to non-traditional partners/ donors through visits and demonstration of the products developed and offered by CIAT.

In terms of “going to scale”, alliances will facilitate CIAT personnel with scenarios in which the methodologies are implemented, adapted, and improved; where impact is measured, and more importantly, the learning of our methodological instruments is in the hands of development partners. This justifies before traditional donors to research that funds invested in the research bear fruit.

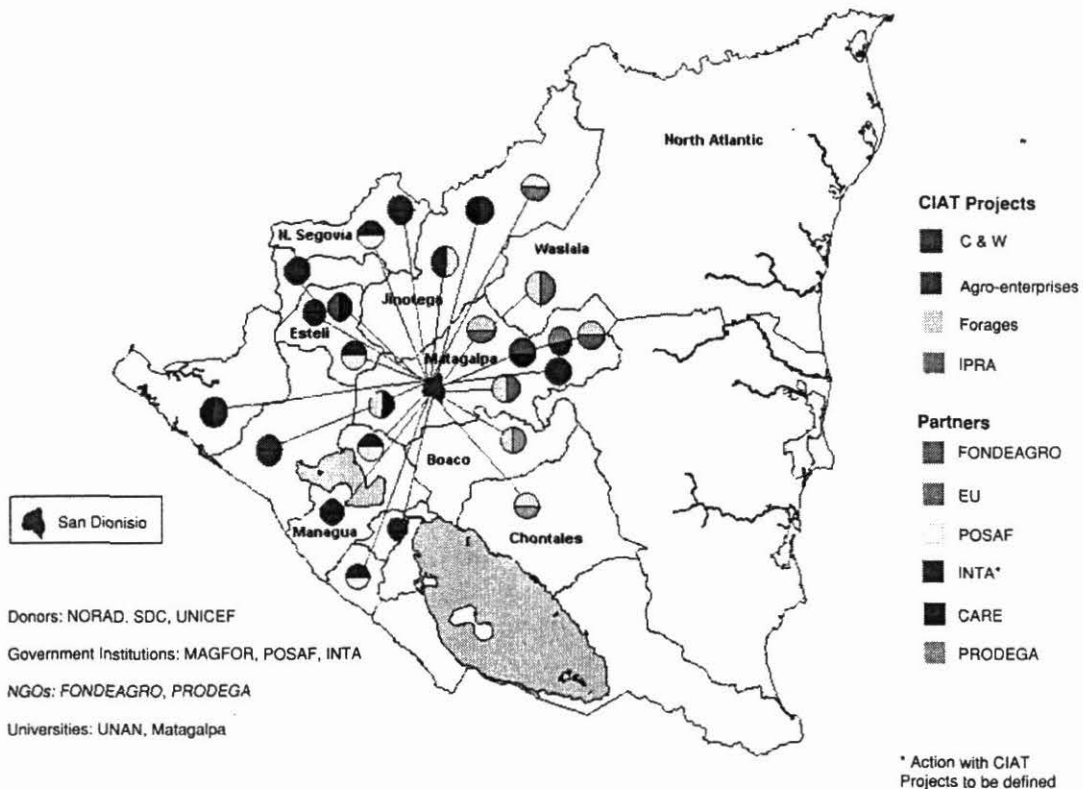


Figure 1. Scaling out from the reference site, Nicaragua.

(2) Integration of Germplasm Activities

An extensive range of improved germplasm of maize, bean, rice, soya, sweet potato, fodders, and sorghum has been evaluated during the last 4 years at SOL sites. The bean materials are part of the CIAT improvement program, and of the Ensayo Centroamericano de Adaptacion y Rendimiento (ECAR) of the Proyecto Regional de Frijol para Centro América, México y el Caribe (PROFRIJOL). The maize materials are advanced lines generated by the Regional Maize Program (PRM, the Spanish acronym) and Instituto Nacional de Tecnología Agropecuaria (INTA). The rice materials are commercial varieties and lines with tolerance to drought and *piricularia* of the CIAT- Centre de coopération internationale en recherche agronomique pour le développement (CIRAD) Rice Project. The collection of sweet potato is composed of local materials originally introduced by the Centro Internacional de la Papa (CIP). The sorghum materials are from the International Sorghum and Millet Program (INTSORMIL) Network and the

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). The forage species under evaluation originate from different sources (local, regional, and CIAT). The collection includes grasses, herbaceous and bushy legumes, and green manures.

An extensive range of producer interest groups evaluates the materials, including Comités de Investigación Agrícola Local (CIALs), groups of experimenting producers, and groups of producers organized by support institutions. Of the selection carried out by the producer groups of interest, the improved materials pass to the communities to be evaluated in different environments, and their subsequent distribution to producers (Figure 2).

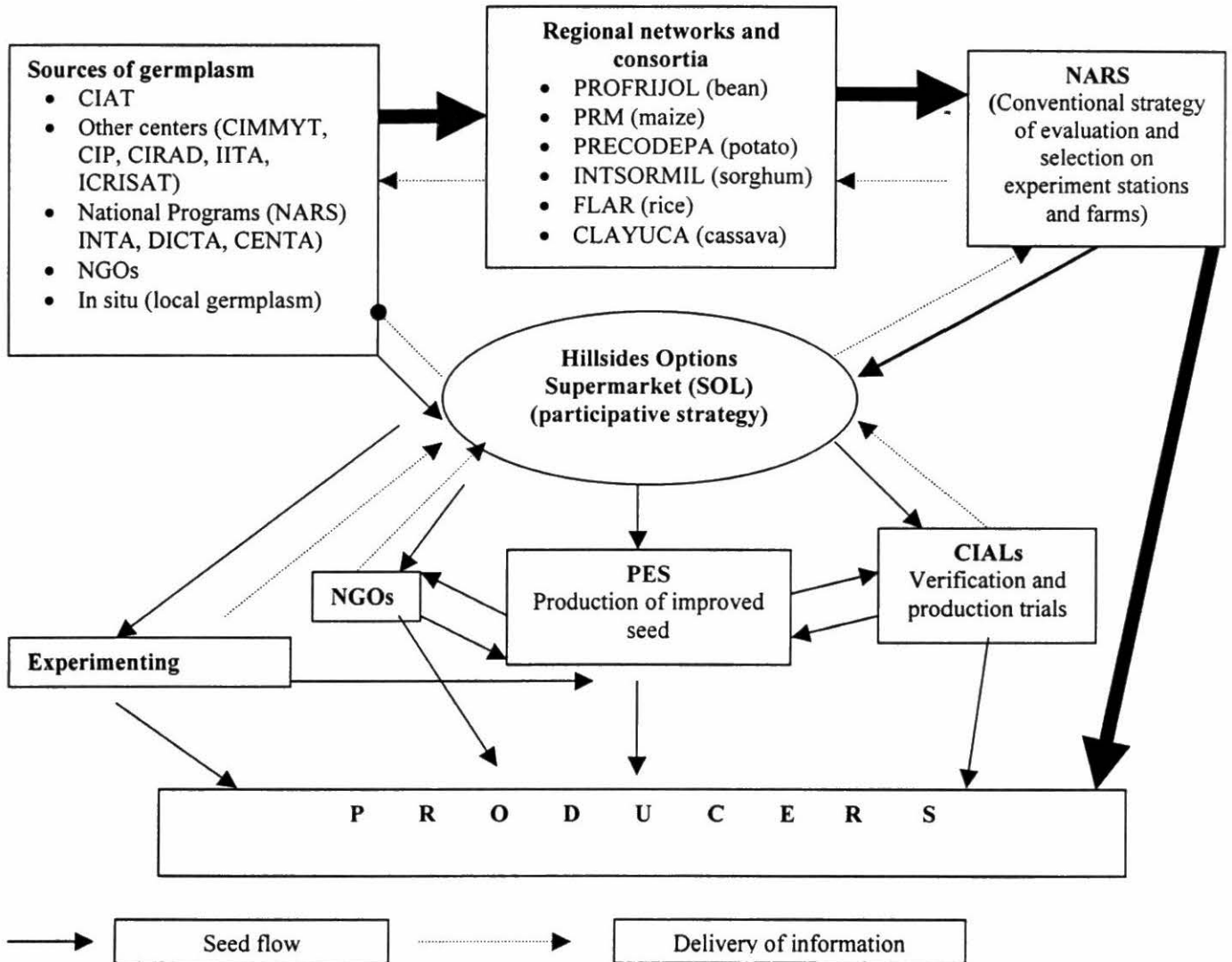


Figure 2. Flow diagram of germplasm in the Supermercado de Opciones para Ladera (SOL) reference sites.

The results obtained indicate that the selection of materials by producers based on their expressed criteria in the participative evaluations permits not only the continuous improvement of the different crops, but also the adoption and utilization of the materials on the farms of the producers. Adoption is seen to be quicker.

(3) Extensive Training

The process of training trainers and training potential applicants of the research products has been a large effort, compensated by the positive response of professionals and applicants in several institutions of Honduras, Nicaragua, and Colombia. To date, more than 400 staff members of nearly 40 institutions have received training in the use of these research tools. A current demand for training in their use is being fulfilled with the participation of trainers in each country.

For the Youth Project in Honduras, 35 young facilitators coming from six communities of the municipality of Yorito were trained in the first three steps of the CIAL methodology during the first 2 months of 2002. The University of British Columbia (UBC), providing the methodology for evaluation and analysis of water quality through a 3-day workshop in April, produced immediate awareness of the water problems in the Yorito urban area among participants. The workshop combined the evaluation of water and pollution sources with computer training, which became an important source of motivation because youngsters were encouraged to present their activities using maps in Power Point, and their quantitative research results using Excel graphics. Thirty youngsters and several ISP teachers participated in this workshop.

This year, the Forages for Smallholders Project (FLSP) provided several training events for international partners to be able to help local, regional, and national organizations. In a collaboration between CIAT and the Participatory Research and Gender Analysis Program (PRGA), Peter Horne and Ann Braun ran a training course, "Improving adoption of agricultural technologies – how participatory research can complement conventional research approaches," for 15 Japanese scientists at the Japan International Research Center for Agricultural Science (JIRCAS) in Japan from the 4th to the 8th of March, 2002. The FLSP also ran a training course on Participatory Diagnosis from 20–25 January 2002 for 15 staff of an International Rice Research Institute (IRRI)–managed project in northern Laos.

In Thailand, a 5-day training course was held for 30 government officials from the Land Development Dept (LDD), the Department of Agriculture (DOA), the Department of Agricultural Extension (DOAE), and the Thai Tapioca Development Institute (TTDI). The course was prepared upon the request of the Deputy Director General of the LDD, who, after visiting one of the farmer participatory research (FPR) pilot sites, was convinced that the participatory approach is very effective in achieving adoption of new technologies, including soil conservation practices. Participants of the course learned, and then practiced in the field, several FPR methodologies, such as rapid rural appraisal (RRA), participatory rural appraisal (PRA), farm budgeting, participatory planning, implementation of FPR trials, and evaluation of the tested technologies. Most participants went home with the motivation and desire to collaborate in the project and to try out the participatory approach.

In Vietnam, two FPR training courses were held for local extensionists and key farmers, one in Van Yen district of Yen Bai province in north Vietnam, and one in Hue city in central Vietnam. These courses were intended to teach both extensionists and farmers about FPR methodologies as well as cassava production technologies. By being together for 1 week in the same course,

people get to know each other, so that in the future they can work together as local “FPR teams” to teach others in the community how to conduct FPR trials, and how to adopt new technologies.

(4) Cassava Development Villages in Thailand

In Thailand, the government has supported the formation of “Cassava Development Villages” in 11 of the 24 pilot sites of the Nippon Foundation Project, with the objective of empowering the local community to make their own decisions about the protection of natural resources and the development of new crops or new practices that will improve their livelihoods.

After nearly 2 years, most of these Cassava Development Villages are operating very successfully. After the first year’s harvest, most farmers were able to return the money of the “borrowed” fertilizers, and were thus able to “borrow” more fertilizers for the next crop. The timely availability of fertilizers at a reasonable price was considered as a very important reason for farmers to join this group. The resulting increased yields obtained, together with a relatively good price for cassava roots this year, have considerably improved farmers income from cassava. In addition, working together, farmers have markedly expanded the vetiver grass hedgerows to control erosion in their fields; they are also continuing to experiment with application of organic manures and the planting of green manures. At one site, farmers used their revolving fund to buy four head of cattle, which were allocated to four members. The original farmers keep the offspring of these cows, while the mother cows are then allocated to other members. The village herd has now increased to about eight head. It is a practical way of diversifying from cassava production into other enterprises that can supplement the household income. Enabling and empowering the community to do so is of primary importance.

(5) The Bolivian Consortium

In June 2002, a CIAT six-member team participated in a workshop with Bolivian partners. It was designed with three purposes in mind: (1) to share the final synthesis of previous work on inter-institutional collaboration topics, (2) to prepare the narrative summary of a project platform on which a variety of specific projects could be drawn, and (3) to search for an organizational scheme to give sustainability to inter-institutional cooperation in Bolivia.

As a result of this workshop, a platform was developed for project generation with multi-institutional collaboration. Three work areas were identified after completion of the analysis of previous workshops and visits. An agreement was also reached around operational aspects of collaboration. This agreement gave way to the establishment of an inter-institutional Consortium that has operational guidelines and a very modest organization. Its coordinator is in charge of promoting the Consortium among donors and national institutions and identifying opportunities for the Consortium in Bolivia.

Some important issues have been accounted for in terms of a contextual analysis and the future role of CIAT’s participation with Bolivian partners. First, Bolivian partnering institutions look upon the Center as a “member” of the Consortium and not as an “outside provider” of research services. Along these lines, the Consortium is led by a Bolivian nongovernmental organization (NGO), Programa Manejo Integral de Cuencas (PROMIC), of high repute and strongly linked

with both the donor community and government authorities. Second, the knowledge gained by CIAT's staff through their participation in this process contributes to better prepare CIAT's projects to work together with Bolivian partners. The three topics of concern for the Consortium (1) integrated watershed management, (2) production systems, and (3) rural enterprises, are now clearly depicted for CIAT's projects to plan for research and development interventions. Third, PE-3 has important knowledge of the geographic areas, institutions, and partners with whom its recently developed theoretical framework can be applied.

(6) Youth Projects in Honduras and Colombia

The projects, Role of Participatory Research by Youth in Food Security and Natural Resource Management: Improving Education for Rural Development, one in Honduras funded by CIDA and the other in Colombia funded by the Kellogg Foundation, are fitted within the new framework, are in place, and ongoing. The project's objective in Colombia is to increase the chances of rural youth' access to a high-quality education that fosters their personal development and improves their natural and physical environment through learning processes based on participatory research. The project will also stimulate the formation of leaders, and will provide managerial skills and tools for the formation and consolidation of rural youth organizations. In Honduras, the purpose is to contribute to the early involvement of rural youth in research leading to the discovery and/or adaptation of practices for better food availability and natural resource management.

Problems Encountered and Their Solutions

The main general problem for the project is that of funding. The solution has been to streamline around the new conceptual framework and, most important, to create strategic alliances that share senior scientists, for example with the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), and the UBC. There is an ongoing search for funds in collaboration with partners. One of the tasks for the regional coordination in Central America is the identification of funding opportunities to scale up CIAT research based on demands from partners in the region.

We have found it difficult to strengthen the participation of PE-3 with projects in Africa because of difficulties of communication with the person there assigned to PE-3. The solution is, during Planning Week, to further commit who in Africa is responsible and responsive to PE-3.

Proposed plans for next year

A major proposal with partners ongoing for the Norwegian Agency for Cooperation for Development (NORAD) on the Mesoamerican Biological Corridor (MBC) is progressing and, if approved, we will be able to initiate activities in various countries of Central America with various partners and in various sites of the non-protected part of the MBC.

The Youth Project in Honduras is exploring radio and satellite technologies and next year will be considering the use of project capital funds for these tools. Only then we can think of teaching and using Web page development to rural teachers and youngsters for rural development. The University of British Columbia team gave some guidelines for our participatory research with the

youngsters to collect the information needed for analysis next year. In April 2003, the team will return to give more training. In Colombia, since the Youth Project started on 1 June 2002, activities have been primarily concentrated on planning, ready to begin execution of the project next year.

Parallel to proposal elaboration, we propose to start work on the sites selected for the Water Challenge Program—the watersheds of the Andes in South America, the Ulúa in Honduras, and the Mekong in Asia.

During next year, we will strive to achieve a greater integration with Africa and Asia and more coverage in the Andes of South America—all framed within the conceptual framework or evolving towards it.

Project Performance Indicators: Communities and Watersheds 2002

1. Technologies, Methods, and Tools

1.1. Training in participatory research methods

Training has been carried out extensively in Asia. In Thailand and Vietnam, farmer participatory research methods are being taught and applied. In the uplands of Laos, the introduction of forage, feed, and livestock technologies in a participatory research and extension framework increased the number of villages in the project to 38. Further training was carried out in Central America for the application of tools (scaling out), an obvious follow up of previous training. A new project “Role of Participatory Research by Youth in NRM” has begun jointly with UBC to work in Colombia, Honduras, and Nicaragua.

1.2. Guides (Methodological Instruments for Decision Taking in NRM)

With partners in the reference sites, we have developed a series of methodological instruments for the taking of decisions in NRM, based on the combination of participative techniques and local indicators. This year, Guide 3 (participative mapping) was used for the local community of the sub-watershed of the Calico River, Nicaragua, to evaluate the state of forest, water, and soils before and after Hurricane Mitch. Training was given on Guide 1 (local soil quality indicators) in Africa and Latin America, resulting in 23 Action Plans. This same guide has already been incorporated into the Action Plans of Honduras and Nicaragua, with 13 institutions involved. In Honduras, validation was made of the Guide on Small Seed Enterprise Development (SEED). At CIAT Headquarters, new versions of the Guides were proposed and are underway.

1.3. Genetic materials and technologies evaluated

Honduras: New genetic materials of annual crops were introduced and evaluated in the Luquigüe reference site. The selection of 25 varieties and advanced lines by producers shows that the offering of germplasm from SOL-Luquigüe is satisfying their demand.

Nicaragua: Producers of the Municipality of San Dionisio evaluated 42 materials among maize varieties and hybrids. Nine materials of improved soya have been evaluated since the start of the SOL, 32 rice lines, 17 sweet potato clones, and 62 sorghum lines.

Thailand: Cassava Development Villages were formed. Each member received fertilizers free of charge, as well as planting material of vetiver grass, and new cassava varieties, or other selected crop or animal species.

Vietnam: According to the latest estimates, in all FPR pilot sites combined in Vietnam, various new cassava production technologies have been adapted by 4812 farm households, covering an area of 1411 ha, and resulting in increases in income of US\$274 400 in 2002.

1.4. Databases or maps

A spatially linked soil database, HONDSOIL 1.0, was developed for Honduras to assist decision makers in identifying resource problems and target solutions. The Rural Atlas of Nicaragua is completed. It presents 130 maps and its database on the themes of geography and administration, natural physical and environmental characteristics, population (both social and cultural), and economics and production.

1.5. Support tools (models/software)

We have participated in developing a tool for the zoning and understanding of markets (Cross Project). The product includes agro-ecological zoning maps for 20 agricultural crops that are classified as vegetables, basic grains, and fruits.

We are putting together information collected about the Herederos del Planeta Juventud, Vida y Naturaleza de Bellavista (HPB) and Asociación de Usuarios del Río Bolo (ASOBOLO) in Colombia, using Toolbook. This is computer software that is being used to develop educational material and to organize, store, and present research results.

2. Publications

2.1. Refereed journals

Published: 2 articles
In press: 1 article
Submitted: 3 articles

2.2. Book chapters

Published: 3
In press: 1

2.3. Published proceedings

Published: 7 articles
In press: 5 articles

2.4. Scientific meeting presentations

Presentations 2

The Beltrán et al. paper received the award for best presentation at the Programa Cooperativo Centroamericano para el Mejoramiento de cultivos y animales (PCCMCA) Apr 2002.

2.5. Working papers, other presentations or publications

13

(See Appendix I)

3. Strengthening NARS

Bolivia: At a workshop in Cochabamba, group members analyzed and prioritized over 80 demand items, and more than 40 supply items, dealing with the work done with nearly 20 institutions in Bolivia. In this workshop, the active participation of Bolivian institutions, other regional partners (CIP and the Consorcio para el Desarrollo Sostenible de la Ecorregión Andina [CONDESAN]), and donors (was ensured.

Colombia: The staff of the Corporación Colombiana de Investigación Agropecuaria (CORPOICA) “Project Guaitara” in Nariño received technical support from PE-3 for the application of several instruments that would provide inputs to the project to arrest degradation of soils in seven municipalities of this state.

Haiti: We have begun to implement seed production through small businesses as part of the operating plan to be carried out in Haiti. At present, eight National Agricultural Research Systems (NARS) have begun their process of implementation, which will be supported with training in business management, organization, seed commercialization, and technologies in basic grains and forages.

Honduras: The Manejo Integrado de los Suelos de Centro América (MIS) Consortium was created at a workshop in Honduras, 11-12 August 1999, to focus efforts in the hillsides of Central America, a recognized hotspot for poverty and environmental degradation. Seven NARS from Honduras, six from Nicaragua, and four advanced research organizations (AROs) participated at the launching of the consortium.

Mexico. A workshop was held on the use of the Logical Framework. Besides helping the researchers of 14 NARS to use the Logframe, the visit was an opportunity to link with the Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias (INIFAP) with regard to NRM initiatives. INIFAP announced a visit of its directors to Honduras to observe the research and development activities taking place in Yorito. This visit will be an opportunity to further develop relationships with one of the strongest NARS in Latin America, for scaling our research and development strategies.

Nicaragua: CIAT-Nicaragua was given recognition by the Ministerio Agropecuario y Forestal (MAGFOR) for its technical and economic support in the elaboration of the Rural Atlas of Nicaragua; recognition awarded in August 2002. Five institutions were involved in helping produce the Atlas: MAGFOR, Instituto Nacional de Estadísticas y Censos (INEC), Instituto Nacional de Estudios Territoriales (INETER), the Ministerio de Ambiente y Recursos Naturales (MARENA), and CIAT.

3.1. Training courses

Asia: In a collaboration between CIAT and the Participatory Research and Gender Analysis Program (PRGA), Peter Horne and Ann Braun ran a training course, “Improving adoption of agricultural technologies – how participatory research can complement conventional research approaches,” for 15 Japanese scientists at the Japan International Research Center for Agricultural Science (JIRCAS) in Japan from the 4th to the 8th of March, 2002. A CD-ROM is available.

Colombia: The Organic Coffee Project gave producers training on management, commercialization, and exportation.

Honduras: In October 2001, training was given to the Investigación Participativa para Centro América (IPCA) project and the Comité Local para el Desarrollo Sostenible de la Cuenca del río Tascalapa (CLODEST) on participatory monitoring and evaluation (PM&E).

Courses for computer literacy were given both for youngsters involved in the Youth Project, and for farmers.

Nicaragua. Three workshops were given for the Empresa Nicaragüense de Acueductos y Alcantarillados (ENACAL), the Nicaraguan water authority in charge of planning and supervising the aqueducts and swish systems in the country. Training was delivered on four tools (1) Poverty Profiles, (2) Participatory Mapping, (3) Stakeholder Analysis, and (4) Organizational Processes.

Thailand: A 5-day training course on participatory research methods was held for 30 government officials from the Land Development Dept (LDD), the Department of Agriculture (DOA), the Department of Agricultural Extension (DOAE), and the TTDI.

Vietnam: two FPR training courses were held for local extensionists and key farmers, one in Van Yen district of Yen Bai province in north Vietnam, and one in Hue city in central Vietnam.

3.2. Individualized training

Asia. Since November 2001 (last reporting), the FLSP has provided substantial ongoing training support for project staff. This has included formal training events and continuous on-the-job learning opportunities linked with farm visits, field days, and regular project meetings. Also, the FLSP ran a training course on Participatory Diagnosis from 20–25 January 2002 for 15 staff of an International Rice Research Institute (IRRI)–managed project in northern Laos. In addition, four leading collaborators in the project, three from Thailand and one from Vietnam, participated in a 3-week FPR course in Los Baños, Philippines, organized by the CIP- Users’ Perspectives with Agricultural Research and Development (UPWARD) Program.

Colombia: An expert from UBC (Dr Sandra Brown) has given training to the Project in the use of the Toolbook software.

Honduras: A MIS member participated in the training course given by the Managing Soil Erosion Consortium (MSEC) on the use of the geographic information systems (GIS)-assisted methodology to model soil erosion and hydrology at watershed level

3.3. PhD, MSc, and pregraduate thesis students

| | |
|------------|----|
| Colombia | 2 |
| Costa Rica | 7 |
| Honduras | 5 |
| Laos | 10 |
| Nicaragua | 3 |

3.4. Technical assistance

Technical assistance is given in the work of the Productores Empresarios de Semillas Artesanales (PES) in Haiti and Central America.

3.5. ARO research partnerships

The new effective partnerships have been made with UBC and CATIE, where we share scientists. We are working on the strengthening of our new partnership with the University of Georgia to work in Ecuador.

4. Resource Mobilization

4.1. Proposals funded

- “The role of participatory research by youth in food security and NRM: Improving education for rural development” – funded by the Kellogg Foundation for Colombia, for a period of 3 years; and funded by the Canadian International Development Agency (CIDA) for Honduras.
- In June this year, Swiss Development Cooperation (SDC) approved our proposal to carry out the dissemination of the decision support tools developed during our last project with them.
- Recently, the International Fund for Agricultural Development (IFAD) under the Technical Assistance Grant (TAG) Program approved the joint CIAT-CIP project proposal “Integrated upland agricultural development using participatory approaches in China, Lao PDR, and Vietnam”.

4.2. Proposals and concept notes submitted

- The MIS Consortium developed nine new proposals at the Program Planning Meeting in Nicaragua.
- Follow up to donors in Nicaragua has led to nine meetings with various donors, and five proposals elaborated.
- Four national and two regional proposals were developed for Honduras in collaboration with NARS, NGOs, and AROs.

- Other projects in the pipeline include FLSP in Asia, nutrient cycling, MBC, strengthening rural undergraduate education, youth in NRM (Nicaragua), women and land tenure (Colombia), strengthening ASOBOLO (Colombia), and integrated watershed management in peri-urban Cali, Colombia.
- The European Economic Community (EEC) has approved two additional phases of the seed program: One to help participating institutions to develop PES, and the other to improve commercialization channels for new products. CIAT has been invited to participate in the elaboration of the two initiatives. The total budget requested to support collaborative work between CIAT, the Food and Agriculture Organization (FAO), MOVIMONDO (an NGO for international cooperation and solidarity), and six local NGOs is 1.4 million Euros.
- Working actively with CATIE and CARE International we prepared the proposal “Multi-stakeholder participatory development of sustainable land use alternatives for degraded pasture lands in Central America,” which was submitted to the Norwegian Agency for Cooperation for Development (NORAD) for funding (US\$5.76 million for 5 years).
- The proposal on the MBC, “Conservation, rehabilitation, and production in communities located in the non-protected areas of the Mesoamerican Biological Corridor” has just been prepared with the participation of CATIE, CARE, UBC, and the Centro para la Investigación en Sistemas Sostenibles de Producción Agropecuaria (CIPAV). A draft has been sent to NORAD and the Regional Coordination for the MBC. The process will continue with consultations with these two institutions in October, and the elaboration of the final proposal for NORAD.
- A joint collaboration started this year between the MIS Consortium and the Soil Science Department of North Carolina State University in order to validate the NuMass expert system. This system generates N, P, and lime recommendations for several crops. A planning workshop was carried out recently to identify main collaborative activities with universities and NGOs from the region. Several proposals were developed for funding through the Collaborative Research Support Project (CRSP).
- A proposal was prepared for the Fundación Valles to present to the United States Agency for International Development (USAID)–Bolivia. A second pre-concept note was shared with USAID–Washington to put the Consortium into action.
- In Africa, planning workshops provided inputs for the formulation of a proposal to USAID. The lobbying of this initiative is in the hands of the Africa Coordinator, R Kirkby.
- As Classical Swine Fever is perhaps the most devastating disease problem of livestock in the uplands, the FLSP is developing a collaborative research project with the Animal Health Laboratory (AHL) of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) focusing on disease management in village pigs. If the application for funding from ACIAR is successful, the project is expected to start in January 2003. It will work alongside FLSP for 3 years.

4.3. Resource mobilization activities

We are working closely with NORAD as a partner in Central America. This has been a process of almost 2 years that has involved various regional NGOs and MBC organizations. This has now reached the point where we are ready to submit the final proposal.

In Bolivia, we have become involved in the whole process of the new Sistema Boliviano de Tecnología Agropecuario (SIBTA) and the donors linked to this process. Now the consortium has been formed and together with all the partners we are approaching the best ways for funding.

In Colombia, we are working with various organizations of Valle del Cauca in order to mobilize activities in our conceptual framework near headquarters.

5. Impact monitored

An evaluation of the monitoring and evaluation (M&E) system of the SOL was carried out in July and September 2001. A presentation (summary) was prepared with the results. It includes only the indicators where changes have been observed, or that were important in decision taking. The information was presented to members of the Technical Committee for joint reflection. The information compiled by the monitoring system generates a base from which to measure impact in the area of observation that is of interest.

The socioeconomic impact of land ownership on the standard of living of beneficiaries of Project Tierra was monitored in San Dionisio, Nicaragua. Overall, it is considered that an important change has been brought about in the life of the beneficiaries that previously owned no land and have produced crops, even with many difficulties. However, it seems that more time is needed for their economic situation to stabilize. Like all the inhabitants of the countryside, they depend greatly on exogenous factors, not only at the regional level, but also at country level, which significantly influence their activity.

The FLSP is implementing a practical framework for M&E to quantify both outputs and impacts, and to provide feedback into the development and extension process. In April 2002, a baseline survey was conducted using a "case-study" approach with 42 households in project villages. The results of the survey are currently being tabulated and analyzed.

In order to assess the progress made so far and to evaluate the impact of the Nippon Foundation project up to this point, a PM&E exercise was conducted in four principal pilot sites in Thailand. The extent of adoption of various cassava technology components as a result of the Project was high for the use of new varieties and chemical fertilizers, with vetiver grass hedgerows and green manures less well adopted, and intercropping not adopted.

Appendix I

Publications

Book and Journal

- Beltrán, J.A.; Tijerino D. 2002. Fortaleciendo los procesos organizativos a nivel local: La Asociación "Campos Verdes" una estrategia que facilita el desarrollo del Municipio de San Dionisio, Matagalpa, Nicaragua. LEISA Agroecol J. (Submitted)
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