

**BEST PRACTICES AND STRATEGIES FOR INTERVENTIONS TO PROMOTE
RURAL NONFARM EMPLOYMENT IN LATIN AMERICA**

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1. INTRODUCTION

This document reports on the findings of the project “Best practices and strategies for Promoting Non-Farm Employment Creation in Rural Development in Latin America.” This is a project supported by DFID -World Bank and carried out by RIMISP.

The objectives of the study are to inform policymakers and project and program designers of best practices and strategies for promoting rural nonfarm employment (RNFE), in broad development programs and in projects focused on RNFE.

By “nonfarm” we mean the manufactures or services sectors. Note that manufactures include processing of farm products, and services include commerce of farm products, inter alia. Thus, the sectoral categorization of an activity concerns only the nature of the product and the types of factors used in the production process. By “employment” we mean either self-employment or wage-earning employment. That employment can take place anywhere in the rural space: in the domicile, on the farm premises, in a rural town. The definition is not restrictive as to scale (in a huge factory or by a single person), or technology (traditional or modern, capital- or labor-intensive). By “rural” we mean the combined space of the “countryside” and “rur-urban areas” (villages and rural towns; some project/program design includes in the broader rural area the intermediate cities linked closely to surrounding rural areas).

The general approach of our analysis is inferential, as we examine a range of recent field projects and programs, asking several questions, and infer best practices and strategies.

The questions are the following:

- RNFE promotion interventions should fuel overall local economic development. How does the intervention ensure this?
- RNFE promotion interventions should be market-oriented. How does the intervention promote links to market demand?
- RNFE promotion interventions should improve the whole supply chain (from input access, to RNFE production, to marketing and distribution) of the RNFE products. How does the intervention accomplish this?
- RNFE promotion interventions should give rise to continued, market-sustainable development even after the project or program ends. What provisions are taken for this?

We and the team of 28 case study authors (their report titles and names are detailed in the references) and the 950 participants in a broad electronic conference asked these questions of specific projects/programs and in general, and developed the findings reported here. We proceeded as follows.

Six “commissioned” case study projects/programs were chosen by expert international and national opinion in a workshop in February 2001. The studies were commissioned and national experts chosen. The criteria for selection of the projects/programs were cases where projects appear successful in their operational answers to the four questions above. The final selection included interventions in Brazil, Chile, Honduras, Mexico, and Peru. They were studied in brief field studies in March-May 2001 by two-person teams (a national author and a representative from the RIMISP team). The studies were received and synthesized in June-July.

Eight “competed” case study descriptions of interventions (projects and programs) answering to the above criteria were selected in an open competition (solicited bids) via internet in July/August. 35 documents were received, and the best eight were selected.

The above 14 studies (6 commissioned, 8 competed studies) are described in summary form in Tables 1-4 in section 2, and more detailed summaries are presented in annexes 1 and 2.

The above 14 studies, plus six IFAD project summaries (highlighting RFNE promotion interventions), plus the synthesis of the first six (commissioned) studies, were presented as input to an electronic conference involving more than 950 participants (among which, professors, policymakers, and practitioners involved in rural development) in September/October 2001. The questions were those posed above.

This document summarizes the operational answers to the above four questions and pinpoints their practical implications for policy, project, and program design to promote RNFE.

The report proceeds as follows. Section 2 summarizes key characteristics of the 14 projects studied. Section 3 lays out findings and illustrations from the projects in response to the four questions noted above. Section 4 summarizes implications. Then two annexes present summaries of the interventions studied.

2. CHARACTERISTICS OF THE INTERVENTIONS STUDIED

2.1 Basic Characteristics of the Interventions

Tables 1 and 2 present the basic characteristics of the interventions studied. While the following cannot be interpreted as a statistical representation of the characteristics of projects in Latin America focusing on RNFE, we believe they are indeed broadly representative. Table 1 treats the six commissioned studies, and

Table 2, the eight completed studies. Note that the numerators summed sometimes exceed the denominator because some projects have several activities or funders or implementers or target markets.

First, most of the interventions are “projects”, corresponding roughly to one project, one activity (say, cheese-making). Three of the interventions are “programs” that comprise several activities and/or projects. The distinction is of course somewhat artificial.

Second, nearly all the interventions began in the 1990s. Most of the studies did not specify the end-date of the intervention (only two did). This reflects the fact that RNFE projects were less common before the 1990s.

Third, although we cannot say whether the sample of interventions is statistically representative, it is interesting to note that 4/14 of the cases chosen are from Brazil, roughly consistent with the country’s population share in LAC. Peru has another 4/14, due to the density of innovative projects there (perhaps due to its intermediate status in terms of economy and institutional formation). Moreover, most of the interventions are “region” specific (state, department, that is, a subset of the country), but a few are national. Of the regional interventions, roughly half are municipality-specific.

Fourth, 8/14 are focused on food processing. The rest are in nonfood manufacture (5/14) and services (mainly tourism, in 2). This weighting reflects the local communities’ interest in adding value to primary production, and reflects a recognition that processed food is in demand by urban consumers with growing incomes. Hence, about 80% of the interventions focus on manufactures, rather than on services. This is at odds with the composition of RNFE incomes in rural LAC, about 70% of which are in services rather than manufactures (Reardon et al. 2001).

Moreover, nearly all the projects focus on self-employment rather than wage employment in the rural nonfarm sector. Again, this is at odds with the importance of wage employment in the rural nonfarm sector, roughly about half (Reardon et al. 2001).

That the projects are weighted toward manufactures and self-employment and neglect the service sector and wage-employment means that there is room for improvement, and the misalignment is probably due to the current foci of projects reflecting the prevailing biases or conventional wisdom of what “good rural development” should be, where “self-employment in manufacturing” especially if linked to the farmer’s own primary production, is thought to be “better” than “wage employment in the service sector” in terms of improving welfare. In rural development circles, wage labor “smells” of exploitation of workers by abusive employers (an image that can, however, sometimes be the reality). A secondary reason for the foci is that project managers

may not be aware of the findings of recent empirical research on the composition of RNFE in Latin America today.

Fifth, most of the interventions target the regional urban market (say, the intermediate city near the rural area they serve); one targets national government procurement, and three target the export market. This weighting reflects the recognition that countryside markets are relatively unpromising target-markets because of low incomes and lack of growth, while regional urban markets comprise richer consumers seeking processed foods, light manufactures, and services such as tourism.

Sixth, nearly all the interventions work with rural economic organizations, such as rural economic organizations and associations. A few deal directly with individual workers or firms. This reflects a recognition that projects save time and money by working with a group due to economies of scale and due to the need for a critical mass for certain actions such as product labeling, that certain capital goods are non-divisible (such as milk processing plants), that collective planning and action pools knowledge and provides an incentive for change, and that larger groups can more effectively provide a critical mass of product to a market, thus spurring demand and product recognition.

Moreover, most of the food processing projects put special emphasis on working with women entrepreneurs, but there is no gender limitation in any of the projects.

Seventh, 5/14 are implemented by municipal governments, 4/14 by state/regional governments, 5/14 by NGOs, and 3 by national governments. This composition reflects a change (diversification) from the traditional project implemented by foreign donors or national government agencies.

Eighth, the funding sources are similarly diversified: 6/14 by national governments, 7/14 by foreign donors, 3/14 by NGOs/non-profit foundations, and 2 with participation in funding by large/medium private firms. The latter reflects interest in business linkages and sub-contracting.

Ninth, as for differences between the commissioned and the competed interventions, the latter tend to be more related to NGO and municipality involvement, more diversity of approach (with several programs, as compared to projects, included).

2.2 Main Meta-Level Actions of the Interventions

Tables 3 and 4 present the main actions of the interventions studied. While the following cannot be interpreted as a statistical representation of the main actions of projects in Latin America focusing on RNFE, we believe they are indeed broadly representative of the more successful interventions. Table 3 treats the six commissioned studies, and Table 4, the eight competed studies. The structure of our

points follows the structure of the rest of the document, first focusing on meta-level actions (more general actions that are not specific to a level of the supply chain) and then on the levels of the supply chain (to wit, input access, production of RNFE products, and marketing).

With respect to meta-level actions, over-arching the specific levels of the supply chain, several generalities are salient, despite the evident diversity of approach.

First, most of the eight food processing projects focus on RNFE production and marketing, but include actions to increase/improve input access which include improving farm production; this is because quality, safety, or cost of the crop input is important to the marketability of the processed product for reasons of market demand or regulations or both. The other seven interventions have less emphasis on including actions to improve production of inputs to RNFE; the exceptions are tourism projects, which emphasize agro-tourism.

That half of the projects have relatively little focus on improving the production of inputs to the RNF activity (that is, improving farm production for example) is a symptom of what we perceive as a pendulum swing from a near-exclusive focus on farm production in rural development projects in the 1980s to a focus on organization-building in the 1990s, with a relative neglect of farm production of inputs into the activities (marketing, processing) of the organizations involved (Berdegue, 2001). This neglects the fact that most of these organizations indeed depend on a fixed set of suppliers, and thus what happens at the level of those suppliers has huge consequences for the performance of the organization. A good sign is that a number of the projects we studied corrected for this bias and included development of input supply (farm or other input production level improvements) in addition to the RNF activity promotion: that is to be encouraged.

Second, it is uncommon for an intervention to be implemented by a single entity; rather, it is common for the implementer to be a set of actors – combinations of the municipal government or council, the regional/state government, the national government, a local, national, or international NGO, and a national extension or training agency. This combination ensures local “ownership” and guidance of the intervention, as well as bringing to bear national and international resources to accomplish the objectives. However, having several actors involved in implementation also raises the potential problem of the complexities of inter-institutional dynamics and networking. Many projects fail in that regard (Berdegue, 2001), but none of the case study authors discussed these issues.

Third, most of the interventions take an explicit or implicit “supply chain” approach – identifying markets and then meeting the market requirements with interventions at each level of the supply chain, from input access to production to marketing to the final

consumer. Note that while the terms are similar, the “supply chain” and “supply-side” approaches are very different, with important consequences for effectiveness of the intervention. The “supply side” approach is a traditional approach that tends to focus on “produce it and then try to sell”, with little attention to issues along the chain nor to the final market, the buyer. The supply chain approach pays attention both to production issues, but also to the effective functioning of the full chain and to the requirements of the market. Some of the interventions use non-local private or NGO actors to help suppliers link to the market. Examples include selling through exporters under contract, and using the services of international NGOs to locate buyers.

Fourth, most of the interventions provided implicit or explicit subsidies – providing free training, cheap intermediate inputs or equipment, working capital under market interest rates, transport of participants to trade fairs, and so on. In some cases, there is explicit provision for reducing the subsidies over time, leading or forcing participants to gradually pay their own way and become independent.

Fifth, most of the interventions included helping participants to access credit – either subsidized credit directly from the project, or credit from the local credit market with help from the project, in the form of training in how to access it, acting as co-signatory for the loan (and thus providing collateral), or collective organization that was the key to getting a loan.

2.3 Main Chain-level Specific Actions of the Interventions

With respect to input-access level actions, several generalities stand out.

First, the interventions promoting food and non-food crop processing usually include training in production of the intermediate input (fruits and vegetables, milk, trout, pine trees). This means that the new RNFE projects have not necessarily induced abandon of farm sector interventions, but have served to orient them.

Second, where necessary, interventions attempt to facilitate access to inputs (factor or intermediate) for production of non-food manufactures, such as by organizing buying rural economic organizations for sheet metal for metalwork in Honduras, or selling clay to artisans in Peru, or supplying equipment to food processors in Colombia. In some cases (such as in trout processing in Peru), the project facilitated a large-scale private firm’s investment in equipment and infrastructure for the rural economic organizations. In some cases the project or program, coordinating with various levels of government, facilitated infrastructure improvement in the area, as needed for the productive activities.

With respect to RNFE-production-level actions, several main actions stand out.

The overwhelming generality is that the interventions include training, training, and more training. The focus is on production techniques, but also includes training in understanding and meeting standards and seeking certification. The training in some cases is via pilot plants that offer demonstration, such as for milk processing in Peru. The projects also provide subsidized equipment and seed capital for plant.

With respect to marketing actions, several actions stand out.

First, most of the interventions have a component of market research and identification, with the end product a marketing plan.

Second, most of the projects including training in marketing; the training covers a range of elements (packaging, distribution, demand identification).

Third, many projects facilitate contacts with buyers, via for example trips to trade fairs, to supermarket chains, to shops.

Fourth, some projects facilitated or directly undertook direct sale of the merchandise, for example via processing firms, government procurement, or exporters.

The rest of this report explores in detail, with illustrations, the best practices emerging from the above main actions and approaches.

Table 1, Basic Characteristics of Interventions of Commissioned Studies of Interventions						
	Start year	Activity focus	Target market(s)	Target Participants	Implementers	Funders
Brazil – Rio Grande do Norte	1999	Clothing manufacture	Mainly urban southern Brazil but also local urban	Rural workers in rural economic organizations	State and municipal governments and national NGO	GOB
Brazil – Paranha	1999	Processed foods	Mainly local urban	Self-employed already in activities	State and Municipal Councils	World Bank and GOB
Chile – national	1992	Rural tourism	National urban and foreign	Self-employed, individuals and rural economic organizations	GOC (INDAP)	GOC
Honduras – Lempira region	1988	Agriculture, natural resource management, and diverse RNFE	Local rural and local-export and local urban	Farm households and rural town workers, associations	FAO and Ministry of Ag	FAO and GOH
Mexico- Chiapas region	1986	Growing, processing, marketing coffee	National urban and export	Farmers in the coop	Coop	Initially Catholic Church, then GOM, then self-financed
Peru- Huancayo region	1998	Raising and processing trout	National urban and mainly export	Rural rural economic organizations and large private firm	USAID and GOP	USAID and GOP

Intervention, by place	Start year	Activity focus	Target market(s)	Target Participants	Implementers	Funders
Brazil, Rolante, Rio Grande do Sul State	1997	Diverse: Program (that started 11 projects) promoting employment in range of services and manufactures (especially agroprocessing)	Rural and urban, in-region	Rural economic organizations, MSEs, and workers	Municipality of Rolante	Municipality of Rolante (which seeks funding from higher levels of government)
Brazil, Dos Irmaos, Rio Grande do Sul	2000	Rural tourism (in German colony and coffee area)	Customers from nearby cities	Family farm households in association	Municipality, and various local associations, and state extension agency	Municipality
Colombia, Cundinamarca region	2000	Diverse: Program (that started 37 projects) promoting employment in range of services and manufactures	Local rural and regional urban	Rural economic organizations	Government of Cundinamarca (regional) and IICA	Government of Cundinamarca and IICA
Paraguay, Chaco Department	1999-2003	Milk products manufacture and marketing	Government procurement (for school milk programs)	Farmer rural economic organizations	Regional government and Community Development Councils	GOP
Peru, Arequipa	1992	Milk products manufacture and marketing	Regional urban	Small farmers	NGOs (CEDER and FONDESURCO)	InterAmerican Foundation (US) and Fondo Contravalor Peru-Canada
Peru, Cajamarca region	2000	Milk products manufacture and marketing: Pilot project to improve cheese production, diversification, storage, marketing	Regional urban	MSEs and workers	The local NGO "Centro Ideas"	GTZ and the NGO "Centro Ideas"
Peru, Chulucanas region	1998	Clay art manufacture and marketing	Export	MSEs	The Peruvian NGO "ADEX" (export development association) and ATA, international, www.aid2artisans.com	USAID and export firms
Venezuela, Miranda State	1998-2001	Processed food manufacture (mainly horticultural)	Local rural and regional urban	Small farmers and woman-run MSEs	The non-profit "Polar Foundation", www.fpolar.org.ve And the (local) rural agroindustry association	The non-profit "Polar Foundation", founded by a major Venezuelan food company

Table 3, Main Actions in the Commissioned-Study Interventions				
	Meta-level actions (link to LED and demand)	Supply chain: Input-access	Supply chain: production	Supply chain: marketing
Brazil – Rio Grande do Norte (clothing rural economic organizations)	(a) Municipal govt., State govt., and national NGO (SEBRAE) coordinate; (b) clothing producer rural economic organizations contract with large firm; (c) firm identifies demand and markets	NA	Training in sewing	Private firm markets products in urban southern Brazil and locally
Brazil – Parana (food processing)	(a) Municipal Councils identify needed public investments; (b) regional project's management, Municipal Councils, and State govt. coordinate for public investments and to create coordination in State govt. agencies to improve regulations as enabling environment	Training in vegetable production	training in processing	(a) training in packaging, marketing; (b) facilitating contacts with buyers (e.g., supermarkets in local cities); (c) work with State govt. for certification of firms (health, safety)
Chile – national (rural tourism)	(a) national program (INDAP) works with rural economic organizations and individuals per region; (b) provide finance and technical assistance	Links to INDAP small farmer training and loans	subsidized loans to participants and creation of national standards	national conferences and general publicity
Honduras – Lempira region (diverse manufactures)	(a) Municipal Councils identify demand and local supply interest; (b) project works with rural economic organizations and individuals; (c) project helped organize trade associations; (d) helps (via organizing) participants' access to local credit sources; (e) coordinates with GOH for infrastructure improvement; (f) coordinates with NGOs and national trades-training program (INFOP)	(a) organized input purchase coop for metalwares; (b) link with NRM program in pine forest management (input into woodworking)	training (joint with INFOP) in carpentry and metalworking, cheesemaking, brickmaking	(a) buyer contacts/visits to markets; (b) training in market identification and adaptation
Mexico- Chiapas region (coffee processing)	large cooperative that has its own processing plant and sales points in large Mexican cities and commercial links with foreign marketers	Farm production training	(a) training and monitoring of coffee production; (b) 3 rd party certification of organic	direct distribution through coop's own sales points and contracts with foreign sellers
Peru- Huancayo region (trout processing)	(a) project helped private processing/exporting firm and small producers rural economic organizations link: did market and technical study; organized contacts/negotiations; (b) private firm financed capital improvements in coop farms	Private firm invested in rural economic organizations fish farming equipment	firm processes fish to international standards	firm markets fish

Intervention, by place	Meta-level interventions	Input access level interventions	RNF production level interventions	Marketing level interventions
Brazil, Rolante, Rio Grande do Sul State; broad program	<ol style="list-style-type: none"> 1. Actors are Municipal Council & Regional Extension Institution & several rural economic organizations & Rural Union 2. Actors diagnosed RNFE markets and formed plan, sought funding, started 11 RNFE projects in services (e.g., tourism) and manufactures (e.g., processed foods). 3. Inter-agency coordination at municipal level for RNFE enabling conditions (e.g., reduce legal barriers). 	<ol style="list-style-type: none"> 1. Production infrastructure: Most rural investment by Municipality channeled via project. 2. public services (health, sanitation) 3. federal, state, local, and World Bank 	Mainly training	Each project was assigned a committee at the municipal level, to study the market for the RNFE product
Brazil, Dos Irmaos, Rio Grande do Sul	The project follows 4 steps: (1) market research on what tourism services potential clients want; (2) organization building; (3) technical assistance (with help of EMATER, regional extension agency) for the association; (4) evaluation.	Identify needed changes in sanitary conditions and give technical assistance	Training to receive clients	Develop marketing plan and research on clients' needs
Colombia, Cundinamarca region; broad program	<ol style="list-style-type: none"> 1. funds RNFE project ideas proposed by communities 2. explicit link with other organizations/NGOs 3. tech assistance, involving local university students 4. learning-by-doing and building organizations 5. emphasis on financial sustainability (participants must save and invest in activity; only work 1 year with group) 	Program funds 85% of equipment/tools a given project needs; community pays other 15%	Program provides technical assistance	The community organization in charge of a given project identifies market demand locally or in the region's cities
Paraguay, Chaco Department; milk products	<ol style="list-style-type: none"> 1. to shift government milk products procurement from large farmers to small 2. work with small farmer dairy rural economic organizations 3. subsidize assets along the chain 	<ol style="list-style-type: none"> 1. Provided more productive cows 2. training 	Provided processing plants and seed capital for additional private investment; training	Government procurement of the product
Peru, Arequipa; milk products	<ol style="list-style-type: none"> 1. Build pilot plants for demonstration and training and to introduce products into urban markets to create demand. 2. Organize group for marketing and milk production. 3. work with producers on standards, consistency, and labeling to sell in urban market 	<ol style="list-style-type: none"> 1. irrigation 2. milk cattle 3. sanitary conditions 4. credit 	Pilot plants used for training and demonstration	Pilot plant sold milk products in city to familiarize merchants with products and compete with large firm (Leche Gloria)
Peru, Cajamarca region; milk products project	<ol style="list-style-type: none"> 1. participatory approach to milk processing and storage, product improvement and diversification, and marketing 2. project provided equipment and training for the milk processing plant for the coop (promoted as a pilot plant to inspire private emulation) 	Promote low use of external inputs in milk production	Project provides equipment and infrastructure and training	Project funded market contacts (trips by participants) in urban areas
Peru, Chulucanas region; clay art manufactures	<ol style="list-style-type: none"> 1. Via CEDAR (Artisans Center of Chulucanas), an NGO, provide services to local artisans 2. First CEDAR and ATA (international NGO) analyze market, and then provide assistance along supply chain 3. seeks further local and donor funding 	CEDAR sells clay to artisans and technical assistance in choices	CEDAR brings in international experts in design from ATA to train local artisans in design and production	<ol style="list-style-type: none"> 1. works with exporters (contracts to sell via them) 2. brings products and artisans to national & foreign trade fairs in US & Europe

Venezuela, Miranda State, processed horticulture products	1. focus on training (80% of budget) and group organization 2. chain approach: sequence of actions from crop production, to crop processing, to marketing 3. focused on semi-commercial stage (diversification of products, adapting the processing to food safety regulations, focus on local market 4. revolving fund with seed capital from project but charges interest to help transition to commercial approach	Training in production of fruits and vegetables	Training in processing	Training in marketing and establishment of sales centers
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3. SYNTHESIS OF FINDINGS CONCERNING BEST PRACTICES AND STRATEGIES AT THE “META-LEVEL”

We define a “meta-level” action as an intervention that is not specific to a level of a supply chain for an RNFE product, but instead

- improves the overarching enabling environment for RNFE activities
- identifies and links the RNFE promotion efforts to growing sources of demand
- promotes links between specific efforts to promote RNFE and general efforts of local governments and non-governmental organizations to promote local economic development (LED).

Most of the projects studied have as their planning and operational perspective the local rural space, including the countryside and the rur-urban areas. This leads to actions to coordinate with efforts of other development stakeholders in the zone, including government and NGOs, associations and private firms.

Moreover, “best-practice” projects work beyond the traditional parameters of supply-side focus. Instead, the perspective taken by the project is to focus on market demand and meet the requirements imposed by that demand via improvements to the whole supply chain, from input access, through production, to marketing. This is such a successful practice because initial success at one level of the chain can be undermined by bottlenecks at other levels – and success on the supply side can be stopped in its tracks by lack of market demand. That is, excellent production practices but poor marketing means unsold product.

Several specific best practices stand out, discussed below.

Step 1. Set up the general institutional apparatus needed to identify market opportunities and subsequently to coordinate needed actions to improve the supply chain to meet the requirements of the market.

A first good practice is to organize local associations or municipal councils for the promotion of RNFE. The following box illustrates this. These associations provide a

forum for discussions concerning RNFE options, potential markets, and interventions needed at a community level to improve the supply chains (e.g., to improve infrastructure). This can be to generate ideas and to identify needs, to coordinate local actions, and to link community actions with regional and national government and NGO actions.

Box 1: Municipal Councils coordinating with Regional Government to Create Enabling Conditions for RNFE

Interventions create or reinforce “municipal councils” or similar associations to organize and channel interaction with regional and national governments. Following are examples.

Brazil/Parana Project (Commissioned Study). The Brazil/Parana project used existing Municipal Councils set up under a watersheds program in Parana sponsored by the World Bank. The councils sponsor forums where the community recommends areas of agro-processing production and marketing that they want to improve, and that becomes the basis of the project’s actions. Those demands are channeled as a proposal to the Regional Executive Commission. The latter analyzes and approves it, and then works the proposal through regional government agencies. The Commission provides feedback to the councils concerning needed actions to meet regulations. Local and state governments then provide technical assistance, training, financial assistance, and coordination of regulatory bodies at the state level in order to facilitate certification of the processed horticultural products with a quality label. The project works closely with the regional government to simplify regulations and consolidate and link agencies (in Regional Executive Commissions) related to human and agricultural health, food processing, and product safety to help rural entrepreneurs obtain legal status and thus expand their markets to urban areas. They also then provided “kits” to participants to help them accomplish business registration.

Peru/Huancayo Project (Commissioned Study). The Program (in which the trout processing project fits) has promoted Regional Support Committees consisting of representatives from Regional Government, local public organisms, municipal governments, business associations, farmer associations, and universities. The Business Services Center of the program promotes dialogue within the Committees for better regional coordination of policies and public investments. The program works with the Regional Government (CTAR), the Ministry of Fisheries, and the Business Development Services Network to coordinate promotional actions and to sponsor Management Training Workshops.

Brazil/Rolante Project (Competed Study). In 1997, the Municipality of Rolante developed a Multiyear Rural Development Plan to provide support to activities responsible for rural employment (dairy processing, leather and shoe factories), the creation of new jobs and the monitoring of quality of life and environmental protection. With the collaboration of EMATER/RS (the State Extension Agency), the Municipal Agriculture Secretariat, a rural credit cooperative, the rural workers union, some agriculture producer associations, the Animal Health Inspection Service and other local institutions, the Municipal Council for Rural Development (MCRD) was created. MCRD was in charge of the development plan that included actions directed to create projects for production of public goods and services (health services, school snacks, school transport) and private goods and services (food processing, handicrafts, cookies baking, sanitation services (for firms), rural tourism, and public taxis).

Step 2. Build rural economic organizations to pursue the general market opportunities identified by the municipal councils and regional bodies.

Most of the projects studied work mainly with rural economic organizations (such as cooperatives), for several reasons, to: (a) spread fix costs over more units and create economies of scale; (b) create critical mass for investment; (c) build capacity in existing local organizations as part of philosophical commitment of project; (d) better connect to local financing that requires that only groups borrow; (e) create critical mass of supply to the market; there is an implicit belief that only groups, not individuals, have a chance in competitive markets; (f) associations promote social capital, which lowers transactions costs and increases information transfer.

The projects tend to either work with groups that existed when the projects started (such as did the FAO project in Honduras) or to set up new ones (such as in the Northeast Brazil project). The projects tend to plan jointly with the organizations rather than to impose plans. The Honduras project worked with the livestock association in the rural town of Guarita to plan a cheese enterprise for sale in the region. They also helped organize the formation of a metalworkers association.

Box 2– Building Rural Economic Organizations as Basic to the Project

Venezuela (Competed Study). In 1998, the Venezuelan non-profit Polar Foundation (created by a large food company) initiated a three-year project in the Miranda State, Venezuela, with the objective of strengthening the socio-economic level of a particular population through the organization of a mechanism to produce, process, and market selected agricultural products. It is directed to small farmers and artisan women with little schooling. Three components constitute the core of the project: production of agricultural products, processing of horticultural products, and marketing of processed products. The basic strategy was the creation of incentives to link different steps with the agro-productive chain. The central idea concentrated on making room for new non-agricultural jobs required for such integration. Four major incentives were set: (1) Training and group organization, (2) sequential implementation stages, (3) a subsidy fund, and (4) support to marketing at different stages. Training was twofold: basic principles for social organization and managerial/entrepreneurial capacity, and technical skills in production and marketing. It resulted in the creation of a civil organization with the participation of man and woman. Specialized consultants were required to strengthen this process. As a permanent activity, training takes about 80% of the annual operation budget.

Step 3. Choose specific RNFE markets, preferably characterized by growing demand based on “growth motors”

A “market” is defined here as demand for a specific product, by a specific socioeconomic group, in a specific place (red beans by the poor in Lima, for example). An economic “motor” is an economic activity that creates growing demand for other economic activities, by three routes: (1) raising incomes which then are the source of growing consumer demand for the products of the other activities; (2) creating derived demand on the input (upstream) side for inputs to it from other activities; (3) creating derived demand for processing and commerce downstream from it. The motor can be local (such as an agriculture boom in the rural zone in question) or outside it (such as a nearby mine or city, or a rich economy outside the region from which local rural people earn remittances in migration).

A good practice for an RNFE intervention is to link the promotion (from the supply side) of RNFE activities with identified demand sources for the products of those activities.

The project has two best-practice options. On the one hand, the project can choose a priori an RNFE product (say cheese) but then needs to choose the target market according to the existence of growth motors that will raise incomes and spur demand for cheese. For instance, the project might note that the local rural market has limited capacity to absorb more cheese, and aim at the growing market (and growing incomes) of a local intermediate city. On the other hand, the project can choose a general target market (such as growing local towns) and ask “what RNFE products do consumers in the towns want to buy, and can rural folk produce them at competitive cost and quality?”

Box 3 illustrates different target markets, each of which is fueled by different motors (national-level industrialization, migration remittances, agricultural booms, and so on). Note that most of the interventions studied are in poor zones, so there are few stories of RNFE supply being aimed at growing countryside markets with the motor being an agricultural boom. Thus, in most cases the markets (outside of the countryside in which the project operates) are growing much faster and are less market-risky (in terms of demand fluctuation) and can absorb much more nonfarm product than can the local rural markets. That point was a factor persuading the projects to target those non-local markets.

Step 4. Develop access to assets needed to meet RNFE market requirements.

Each market has specific requirements with respect to cost, quality, safety, consistency, volume, and timing. These requirements imply capacity needs and thus access to assets on the part of RNFE producers (both as individuals and as groups).

Box 3 --- Identification of Target Market Options

Foreign markets as the target market. The Peru-Huancayo project links local trout production and processing to foreign markets: the local market for these products is extremely limited, while growing incomes in foreign markets fuel rapid demand increase for seafood, fresh and processed. The safety, quality, and packaging requirements are very high. Note that this business opportunity was identified by a local consortium that won the competition sponsored by the Project. The consortium was led by the local university (Universidad Cayetano Heredia), the Rural Support Center, and a private firm, Inform@ccion. They did studies of market potential and identified the processed trout market as a promising opportunity.

National urban markets as the target market. The Chile project links rural tourism services to demand arising from growing urban economies and demand from foreigners. In the past decade, with significant urban income growth, there has been a rapid rise in urban demand for services, including tourism. Part of that is satisfied by beach resorts, ski lodges, and island tours. But rural areas offer a range of tourism opportunities, such as ethnic and eco-tourism and camping in rustic areas, as well as spinoff services for tourists in transit to other areas, who like to stay in a rural inn, eat at a roadside restaurant, or buy crafts from rural people. INDAP identified that demand and put in place a major program in 1992 to supply those services to mainly urban consumers.

Rural towns and intermediate city markets as the target markets. Rural towns and intermediate cities are growing very quickly in many regions of Latin America. That growth is fueled, in poorer areas, by the rural poor fleeing the countryside, by public services employment and commerce locating mainly in towns, and by the receipt of migration remittances. In richer areas, with more dynamic primary sectors, manufacturing and eventually services grow and agglomerate in rural towns and intermediate cities. Incomes and population, and thus nonfarm product markets, are growing faster in those towns than in the poorer countryside. That makes towns and intermediate cities attractive target markets for RNFE products. For example, the Honduras project recognized that rural towns are growing fast in and near the poor Lempira region, and conceived of a series of RNFE activities that would supply goods and services to growing towns. For instance: (a) consumers with growing incomes want processed foods, especially in dairy and fruits/vegetables, so the project promoted cheesemaking and vegetable pickling; (b) migrants like to invest their remittances in new buildings and home improvements, so the project promoted metalworking to supply kitchen and workshop appliances, doors and shutters, pails and machetes, as well as bricks and furniture. Moreover, it has adapted these products to be competitive in the face of readily available cheap imports from outside the region, although that continues to be a challenge.

Government Procurement Market. The Paraguay (competed) study: The Small Dairy Producers Committee and the Communal Development Board created a project to provide milk for schools snacks in the Department Presidente Hayes, Paraguay. This is a four year project (1999 – 2003) aimed at capturing the national budget allocation for schools snacks and, in the future, adding value to dairy production by processing milk, which is widely produced in the region. The Departmental Government spends about \$ 300,000/year to provide school snacks to approximately 16,750 students in 51 schools in this region. Up to 1998, milk was obtained from several rural economic organizations (of large farmers) located in other regions in spite of the fact that President Hayes Department produces livestock (2,100,000 head) and enough milk to satisfy school children's consumption.

The first asset required is skill/knowledge related to the market and to technologies. This is especially important in the newly competitive markets outside traditional countryside markets where the producer is in familiar territory and “local knowledge” is sufficient. The training is often in both production and marketing, not just the traditional training in production. Training is done both in a “canned” manner as well as an adaptive, flexible, hands-on training in strategic planning and market discovery. There is an incipient recognition in most of the projects that the market is changing very rapidly and flexibility rather than rote learning need to be staples of survival strategies. The marketing training is usually done in “hands on” group trips to meet with buyers.

Box 4: Building Production and Marketing Skills

Building market knowledge is a focus of the Honduras project. The project takes Honduran cheese makers over the border to meet with buyers in El Salvador markets. The training is not confined to being undertaken by the project; rather, the project builds links with other entities that can do a better job of training in certain aspects. An example includes the Honduras project using INFOP, the National Professional Training Institute for training in carpentry and metalworking.

Most of the projects studied use external, national resources for training, thus “leveraging” their project resources and improving the quality and quantity of training.

The second asset is entrepreneurial and management skills. Many of the programs/projects recognized that for rural economic organizations to withstand the onslaught of centrifugal forces created by competitive markets, participants would need skills to manage their organizations. But as noted above, a number of the projects went beyond the inward-orientation of just building the organization, to teaching participants skills in being entrepreneurs (finding and pursuing new markets) and managing their activities in a market environment that requires attention to chain coordination and quality standards. Good RNFE projects emphasize a new culture in which individuals emphasize quality, responsibility in delivery, and in meeting safety and quality standards. The latter relates to the next point.

The third asset is new “rules of the game”. In general, the growth of the newly competitive markets of the 1990s has been accompanied by a growth in the number and exigency of quality and safety standards. In many cases these have been standards specific to large supermarket or hotel chains (private standards, rather than public standards; see Reardon and Farina 2000). Some of the farsighted projects we studied, however, recognized that if rural producers want to participate in competitive markets, they need to meet these demanding private standards (hence the second asset discussed above). Furthermore, some interventions (such as the Chilean rural tourism program or the Brazil-Parana agro-processing project) created standards and certification/labels to communicate the implementation of the standards to the

consumer, thus creating a market for the RNFE product. This is discussed further under the marketing level of the chain, below.

The fourth asset is access to credit markets. Financial institutions usually figure as “soft infrastructure.” Every project studied had an important activity of providing subsidized credit (replacing missing financial institutions), facilitating the access to credit from non-subsidized sources such as local banks and rural economic organizations, or directly building financial institutions such as rural economic organizations.

Most of the projects have some system of financial assistance. Some help their clients to obtain credit such as from financial rural economic organizations in the area (Honduras) or give various direct loans (the Chile project).

The fifth set of assets required is hard infrastructure. Only a few of the projects studied have a mandate to build basic infrastructure such as roads. But several of the projects explicitly encouraged other agencies to improve infrastructure that would facilitate the RNF activities.

For example, in the Peru/Huancayo project region, the Rural Roads Program was started in 1995 by the Ministry of Transport, Communication, Housing, and Construction with funding from the World Bank and IADB. Roads were improved by 800 construction firms, and are being maintained by 400 microenterprises (23 in the Huancayo Economic Corridor). Some of these are now linked to the trout production activities of the two parties.

4. ACTIONS SPECIFIC TO PARTICULAR LEVELS OF THE SUPPLY CHAIN

This section discusses actions that are specific to particular levels of the supply chain, starting from “upstream” in the chain, input supply to RNF production, to RNF production, to distribution/marketing of RNF products.

4.1 Actions to Improve Access by RNFE Producers to Inputs – Raw Materials and Equipment

This action is, in the domain of promoting RNFE, the parallel to providing seed in an agricultural project. Just as the right kind of seed (both to fit the production process and to produce the attributes of the final product desired by the market, and at a cost that keeps farming profitable, all else equal) is crucial in a farm sector project, so intermediate and capital inputs of the right quality and cost are needed for RNF production.

The right “quality” in practice implies a set of attributes: appropriate quality, timing, and safety of the inputs. It also implies access to inputs in the right quantities, and sustainable access (for example, that the periodicity of RNF production and input access mesh). A key point is that both “quality” and “appropriate” can only be defined in relation to the requirements for the characteristics of the final product as defined by the market, say in product specifications in contracts, in public or private grades and standards, and in public regulations.

The need for a combination of quality and low cost creates a challenge for RNF projects. The dilemma is that it requires the project to either find a cheap source of inputs for the participants to buy, or it involves development of the primary sector activities of the participants, thus often adding an agricultural component to the project or encouraging close links between the project and primary sector projects in the area. It is not a priori necessary that the RNF producer also produce his/her inputs – that is, that a food processor is also a farmer. Whether it is necessary depends on whether the market for crop or livestock products, or clay or cloth or other RNF activity inputs, functions well. It is in fact preferable that eventually the RNF producers can simply buy their inputs and focus on RNF production, to reap gains from specialization. The latter assumes that participation in RNFE is no longer primarily for overall income risk reduction.

However, it should be noted that often, especially in areas of smallholder farming, that the cost and quality of the primary sector output is not adequate. This is especially true in the case of fruits and vegetables and milk, which are prime candidates for food processing. Lack of attention to improving crop and livestock production then would undermine success in RNFE promotion, especially if the latter is targeting urban markets that demand quality and safety at low cost. That leads us to the first good practice, below.

A good practice is for a given agency having both farm sector and nonfarm sector promotion activities, to coordinate and link them in its field projects.

A good practice is helping the participants to organize for collective purchase of non-agricultural raw materials to RNF production.

As noted above, projects are not always able to or need to promote own-production of intermediate inputs. This has good precedent, in fact. Saith (1986) notes that the foundation of Japan’s industrialization was laid in a rural industry that used only imported intermediate inputs -- the textile industry using imported cotton. A century before, Britain used exactly the same strategy, importing cotton from its colonies and producing textiles in rural as well as urban workshops and mills.

Several projects studied exhibited this practice. The projects helped the participants to organize into collectives to buy or produce the intermediate inputs, to buy in larger scale and get lower prices. Usually they were the same groups (the metalworker association members also belong to the sheet metal buying cooperative in Honduras, the trout producers in Peru collectively buy fish-feed from a feed processor in Lima).

Box 5. Combining Farm Sector and RNFE Promotion

The Honduras project (commissioned study) was originally and is still primarily an agricultural and natural resource management project, and secondarily an RNFE promotion project. It has sought to link those components so that they mutually reinforce: (a) identify RNFE activities that improve or remove constraints to the farming activities that it promotes; an example is their training artisans to make grain storage silos to handle the greater maize output resulting from increased farm productivity based on farmers using the improved farming practices promoted by the project; (b) identify farming and forestry interventions that provide improved inputs to RNFE activities that it promotes; an example in the farming domain is their providing training to improve milk production in the dry season that allows for and processing of milk into cheese for the local market; an example in the forestry domain is their training and organizing a community in pine forest management, in resin and wood extraction, in resin and wood processing (sawmill and carpentry), and in resin and furniture marketing to the local towns and intermediate city.

A crucial practice is helping to finance directly or facilitate private investment in equipment of the type and scale required for RNF production in competitive markets.

The simple reality is that without outside help, most rural economic organizations would find it hard or impossible to buy large equipment or plant needed to attain the quality and scale needed to sell in competitive urban markets. Box 6 illustrates ways that projects helped. A further example, where the Peru project facilitated a private firm's investment in trout processing physical capital (improvements in canals) for the trout producing cooperative, is discussed below.

Box 6. Interventions Helping Organizations to have access to equipment and plant

Brazil/Northeast (commissioned study). One of the actions of the Ceara Mirim project was to help the COOPERVALE cooperative. In 1999, 20 women formerly devoted to sugar cane harvesting created the Seamstresses of Mato Grande Cooperative (COOPERVALE). The group grew to 60 members and has initiated its own clothing product lines. Today only 30% of total production is contracted and the remaining is marketed as final products through its own Marketing Division. This dynamism has allowed it to become partially independent from the project itself (a sustainability success...), up to the point that COOPERVALE has undertaken leadership when the local Vice Prefect - who was the major actor in the project - was removed from his position last year. This is a case of true local ownership of a project.

COOPERVALE has signed a new project accord with the newly elected local and State governments, integrating eight sewing associations that have been trained by the cooperative. The State Government will be the co-signer for COOPERVALE to obtain credit to buy sewing machines, since presently it is renting equipment. It is expected that an increase in production will allow COOPERVALE to launch its own trademark in the near future. Other production phases such as design, cutting, modeling, and quality control are being introduced into COOPERVALE production in order to access the market directly and contract other associations for specific dress part assembling.

Peru/Cajamarca (competed study). In 1999, IDEAS – a Cajamarca NGO- and GTZ/PRONAMACHCS – a rural development project- launched a pilot experiment to improve traditional cheese production, storage, and marketing. The participants are poor rural families. The idea was to introduce improved technology and practices at each stage of the supply chain, and to diversify the milk products sold. The goal was to create employment and build entrepreneurial capacity. The project built a small plant to process milk in Leoncio Prado. The project's pilot plant produces diverse milk products (cheeses, butter, yoghurts, sweet creams) that are marketed to the region's main urban markets, in San Marcos and Cajamarca. San Marcos is also the original market for the traditional cheese. The project has subsidized costs involved in approaching the regional market, including personal contacts and product presentation to potential buyers. This pilot project is centered on the processing plant that buys milk from all associated families that form the micro-enterprise that own and operate the plant. It is thus a direct integration of raw material production, processing, and marketing.

4.2. RNFE-Production Level of the Chain

The best practice is to adapt RNF product design and production technology to needs/wants of the market.

At least traditionally, although there is evidence that there are still many extant projects that have this problem, projects focused on the supply side without sufficient reference to what the market requires, what the consumer wants. The result was and still is the

extremely high failure rate of small enterprises that emerge from the typical development project.

The new type of intervention, on which we focus in our studies, goes beyond “business as usual” to both identify motors of growing demand (as discussed above), and to painstakingly adjust production promotion strategies and practices to the set of requirements of those growing markets. Those requirements include quality, safety, timing, volumes, costs, and product types. In each case, the projects adapted and re-adapted packaging, labeling, product type and quality to changing consumer needs. That is important in the newly competitive market (after the spate of policy reforms liberalizing markets and deregulating the retail sector in the 1990s).

4.3 Marketing-level of the Chain

Seek detailed, strategic market information.

This is one of the most challenging and important “best strategies” of the new projects. It is no longer adequate for market information to consist of price data alone. Gone are the days of producing general commodities for local markets with little market information necessary. Rather, useful information is now strategic information, going well beyond prices to include specific potential buyers (sometimes chains and large firms), terms of potential contracts, quality and safety standards and regulations, cost, timing, volume requirements, and buyers’ preferred design specifications.

Essential is market diagnosis with the results made known to the producers. Examples of such diagnoses are given in Box 7 above. This allows the producers to adjust their product (type, quality, design) to the market demand.

Several projects provide “direct informal contact” with buyers in various settings (conventions, trade fairs, at their headquarters) to provide market information to RNF producers. Examples are given in Box 8.

Box 7. Adjusting RNF Production to the Requirements of the Market

Brazil/Ceara Mirim (commissioned study). This project promotes subcontracted clothing production by producer rural economic organizations for big clothing firms that operate in the dynamic consumer markets of southern Brazil. These big firms stay in close touch with consumer trends and communicate the derived requirements (design specifications, colors, materials) in the contracts with the rural economic organizations.

A similar example is that of the Peru/Chulucanas project (competed study) where the potential market and the concomitant design requirements are ascertained by the international NGO International Aid to Artisans (ATA www.aid2artisans.org) and export companies with which the project participants are working (in business linkages, see below). The project then helps participants adjust to the market demand with training in design and production, introducing new technology in treatment and manipulation of raw material as well as finishing.

Peru/Huancayo (commissioned study). The project commissioned a consultant's report, that showed that substantial improvements in small trout-farmers production were needed (to improve quality and consistency that was necessary to sell to the private processing/exporting firm that had high quality standards for the export market and the supermarket/hotel/restaurant market in Lima).

Honduras/Lempira (commissioned study). The project took cheesemakers on market tours over the border in El Salvador and in neighboring towns, where they found that the traditional cheese that they were producing is not desired by consumers; a different kind of cheese, fulfilling consumers' wishes, then replaced or was added to the lines of cheese products made by the cheesemakers; the project helped them make that transition with technical assistance.

Chile/rural tourism (commissioned study) and the Brazil/Dos Irmaos (rural tourism) (competed study). In both of these interventions, studies were undertaken to understand clients' and potential clients' requirements and desires in terms of tourist amenities. That information was used to plan budget allocations and specific actions in the interventions.

Honduras/Lempira. A decade ago, the project emphasized metalworking as an individual, traditional technology workshops in rural homes, focused on grain silos. But as the demand expanded for metalware (especially in growing rural towns), the project added other metalwares such as buckets, watering cans, pots and pans, house fixtures, and so on. To bring down the cost and expand production, the project promoted (with financial and technical assistance) the formation of collective machine shops.

Box 8. Helping RNF Producers Know the Markets: in Brazil and Honduras

The Southeast Brazil project recognized, as part of the design process, that local entrepreneurs in agro-processing were relatively ignorant of urban markets, quality standards in different markets, food safety regulations, and technologies available to meet the quality, cost, and packaging requirements of the urban market. It was perceived that this lack of knowledge, and thus ability to obtain legal status for their firms and certification for their products, was barring small-scale agro-processors from expanding their markets. Training participants in these, as well as gaining knowledge of those markets, is a major part of the project. The training includes participation in food trade fairs in the region and visits to supermarkets.

The Honduras project took project participants on tours and buyer-seller contact trips to various parts of the region and over the border to El Salvador to establish informal links and contacts for sales. The Honduras project takes groups of cheese and furniture producers on “giras” or tours of the markets over the border in El Salvador, in the city of San Pedro Sula and other regional intermediate centers.

The Chile program organizes nationwide tourism conferences and fairs where producers meet buyers and showcase their services, as well as provide websites with tourism locations and guest houses and campsites.

To access the chosen market and/or to meet the requirements of the market, sometimes it is necessary to create business linkages with medium/large private firms or associations.

The linkages are needed for various complementary resources. In general both parties seek a linkage because the rural RNFE firm has low labor and land costs but is capital-poor, and the urban firm is capital-rich, and has knowledge, experience, and market contacts, but faces high land and labor costs.

Develop brands and labels and standards to improve buyer acceptance of RNF products.

This is a crucial and innovative “best practice”. The use of labels is increasingly required by supermarkets and demanding consumers. Two of the projects are emphasizing this, including the Mexico project with quality and organic standard labels and attractive packaging, and project quality and safety certification labels (accorded by the state government) to the processed vegetable products in Parana, Brazil.

Box 9. Business Linkages to Promote RNFE

The Peru trout processing project illustrates business linkages. It was born of the joint action of a national private sector association and USAID. It focuses on encouraging private investment, and on linking private firms in the nonfarm sector (in this case, with trout processing firms) with local farmers associations. It encourages private investment through Economic Service Centers that provide the following to private firms and local producers: (a) market contacts inside and outside the region; (b) technical and market-information assistance for business in the region; (c) information about laws, insurance, transport and other business regulations and services; (d) formulation and submission of specific proposals to the national government for policies to create an enabling environment for private investment in the region.

The project identified the private firm (Piscifactoria los Andes, S.A.) as a leader in the market (with technology, market intelligence, brand, and HACCP certification for export to Europe). The firm wanted to expand its throughput in processing but lacked the funds for an investment in more trout farming capacity. The project helped the local farmers' association to improve its capacity (expansion and improvement of farm infrastructure) and quality in order to supply the trout to the private firm. The project acted basically as a facilitator of conversations between the two entities for them to form a "strategic alliance." The project also financed a market study and an investment study to inform the negotiations. 80% of the latter was co-financed by the two private parties.

The result is a renewable two-year contract where the farmer association supplies the processing firm with trout, and the latter loans the farmer association the funds needed for the capital improvements, and also provided technical and managerial assistance to the farmer association.

Labels communicate characteristics of the product, including its meeting standards of quality and safety. In the case of organic coffee standards, the Mexico project obtained certification of the implementation of these standards from three foreign certification firms. INDAP in Chile is forming national rural tourism standards such as for cleanliness and facilities.

5. SUSTAINABILITY AND COST OF THE ECONOMIC ACTIVITIES PROMOTED BY THE INTERVENTIONS

5.1 Working for the Long-Run Public Good?

One concern is that the interventions are only creating private goods for specific private agents directly associated with the project, and thus substitute for general market development that will benefit broader sets of rural people.

There are two points that need to be noted in relation to this issue:

- In all cases, these interventions by and large are generating public goods such as price and market information systems, training and technical assistance programs, and the promotion and facilitation of communication and direct negotiations between commercial private firms and organized groups of rural people.
- The direct primary beneficiaries of these interventions are poor or even very poor rural people, who arguably require some form of direct and time-limited subsidy to be able to begin participating in more dynamic economic activities, even in cases in which there are market options available to other sectors of the population from which the poor are excluded because of transaction costs, asymmetric information and other market imperfections.

A pertinent question is whether such actions will generate a self-sustainable dynamic once the project ends. The answer in large part will depend on the success of these projects and programs in linking the rural communities with whom they work to dynamic markets. Since the projects or programs studied were started recently or even very recently, it is still too early to answer this question, although the general orientation or emphasis of the project on linking to expanding markets points in the right direction.

With those two concerns noted, we now turn to rough estimations of the costs of the interventions studied, and attempts in the projects and programs to “design sustainability” into the interventions, as much as possible in an uncertain and competitive economy.

5.2. Project/Program Cost versus Benefits to Employment

How subsidized are the projects? For this we can only compare rough expenditure to job creation ratios with averages from similar projects in other continents. That of course does not really tell us whether they are excessively subsidized in an absolute sense. If we knew the life of a job created we could compare the expenditure made by a project to the discounted lifetime stream of earnings from a job created, but we do not have even a rough estimate of the period in question.

The commissioned case studies show the following costs (project operating costs plus investments) to create one job in the nonfarm sector, ranked from the least to the most expensive. The details of calculation are under separate cover; due to differences in projects and data availability, the methods of calculation are only roughly similar across studies.

Box 10. Intervention Expenditure per Job Created

- The Honduras project, with a range of nonfarm activities, for an average of 765 USD (with variation from 1115 USD for a carpenter to only 50 for a smith or 240 for a clay figurine maker); that is about half the yearly average income (of 1500 USD per job);
- The Northeast Brazil project focusing on clothing manufacture, 1100 USD (that is five times the estimated 200 USD yearly income per job);
- The Southeast Brazil project focusing on food processing, 3050 USD;
- The Peru project focusing on raising and processing trout, 5900 USD (about three times the yearly estimated income of 1750 USD per job).
- The Chile project focusing on agrotourism, 11,400 USD (with a yearly income of nearly 1000 USD per job).

There are several reasons to find these numbers plausible (not inordinate) at least in their patterns and their relation to the very scant evidence available from other countries and projects. That does not indicate whether they are in an absolute sense high or low, which we cannot analyze.

With the exception of southeast Brazil, the cost of creating a rural nonfarm job is roughly correlated with GDP per capita, as one would expect.

Moreover, the figures are roughly correlated with overhead, startup, and investment costs of the projects. The Honduras project spends the least to promote nonfarm jobs because the nonfarm component of the project is an appendage to a large and established agricultural project so these costs are merely incremental. The Chile project had heavy local infrastructure and training costs and is at an early stage of project life (as are the others except for Honduras). Note that we have, for data reasons, abstracted from duration issues.

Finally, the costs per job are in line with the (very scant evidence) available in the international literature. Harper and Finnegan (1998) find (we are selecting a few examples from their list) that the cost per job in ITDG's project focusing on manufacture of improved stoves in Kenya was 3500 USD; mining project in Zimbabwe, 4300 USD. World Bank experience as reviewed by Webster (1990) lists investment costs per job (not World Bank bank subsidy or promotional costs, but rather investor's investment per employee) as 9850 USD in Africa and 3171 USD in Asia. Finally, Levitsky (2000) finds that the cost per job created by business incubators in Brazil is 3258 USD.

5.3 De-Subsidizing Gradually to Build Independence of Actors

The general approach of the projects is to offer fully subsidized services to the project participants, without an explicit plan to reduce the share of subsidy and increase the share of the participants' co-payment over time. But there are some important and interesting exceptions, as discussed below. Moreover, most of the projects have an explicit strategy for the medium term of reducing subsidies and increase co-payment and project withdrawal of support. We consider this a best practice in order to increase the probability of sustainability.

Box 11: Intervention Innovations in making participants gradually independent

- The Chile project has a seven-year limit on credit to a given participant; they also require co-payment for technical assistance (although this is seldom implemented).
- The Peru/Huancayo project requires co-payment for investment studies and relies fully on private investment funds for capital investments.
- The Honduras project is implementing gradual withdrawal from direct support for the input (sheet metal) cooperative supplying metalworkers.
- In the Northeast Brazil Project, an independent cooperative (Coopervale) is being progressively relied on to supply training and organizational services to the rural economic organizations supported by the project.
- Although credit is provided at subsidized interest rates, the Southeast Brazil project requires full repayment of credit.
- The Mexico project "graduated" from its reliance on the Catholic Church (which initiated the activity) but still relies on direct and indirect financial assistance from the Mexican Government.

6. INTERVENTION DESIGN IMPLICATIONS

Given the fact that RNFE represents about 30% of total rural employment and 42% of rural income in Latin America and the Caribbean (Reardon et al. 2001), as soon as an organization opens up to looking at the rural economy as a whole, or, at the household level, to overall income (and not only at the agriculture sector or farm income), it is almost inevitable that the intervention's managers will recognize the importance of RNFE and RNF income for the local population, as well as the opportunities that can be found in areas different from agriculture. Indeed, we found that a number of interventions are being undertaken by donors, governments, and NGOs to promote RNFE in Latin America. We selected 14 of these interventions (programs or projects) for more detailed study to infer best practices and strategies.

Our review of best practices found in a set of 14 commissioned and completed studies of interventions to promote RNFE in Latin America, gave rise to a series of

specific best-practice recommendations for donors, governments, and NGOs to apply to interventions. These have been set forth as “action steps” in this document, and illustrated from the interventions studied. The purpose of this final section is to summarize general strategic perspectives that arise from that set of specific recommendations. Table 5 summarizes the general principles, specific processes, and provides examples from the text of best practices and strategies. Below are several general lessons that emerge from that summary.

Table 5: Summary of Principles and Processes with Illustrations		
Principle	Processes and Elements	Examples from the studies
1. Meta-Level Actions		
a) Set up the institutional apparatus	<ul style="list-style-type: none"> • Municipal councils > Regional bodies > National bodies 	Municipal councils and regional government coordination in Parana, Brazil
b) Build rural economic organizations	<ul style="list-style-type: none"> > Professional associations > cooperatives 	Horticultural processing cooperatives in Venezuela
c) Choose specific RNFE markets based on “growth motors”	<ul style="list-style-type: none"> > local > urban > foreign 	Construction, processed foods, and metalware for rural towns, Honduras
d) Develop access to assets needed to meet RNFE market requirements	<ul style="list-style-type: none"> > Market knowledge > Production skills > Management skills > Access to finance > Regulations/standards > infrastructure 	<ul style="list-style-type: none"> > Building carpentry and metalworking skills in Honduras > Coordinating food processing regulations in Parana Brazil
2. Chain-level Specific Actions		
a) improve access to raw materials and equipment	<ul style="list-style-type: none"> > link with farm sector interventions > collectively buy inputs > facilitate investment by private firms 	Forming sheet metal buying cooperative for metalworkers in Honduras
b) improve RNF production	<ul style="list-style-type: none"> > training > technology design > adapt production design to market requirements 	<ul style="list-style-type: none"> > training food processors in better techniques in Parana Brazil > training agrotourism groups in better service in Chile
c) improve marketing of RNF products	<ul style="list-style-type: none"> > strategic market information > create business linkages > develop brands and labels 	<ul style="list-style-type: none"> > link ceramics artisans to international trade shows and firms > take cheese producers on market tours in Honduras > link trout producers to trout processing and exporting firms in Peru
3. Promote Market-Sustainability of RNF activities Promoted by Interventions		
a) gradually de-subsidize	require co-payment and investment	require co-investment by community groups in Colombia
b) create public goods		pilot milk processing plants to train producers in Peru

First, the best-strategy intervention involves a vision that the outcome of the intervention leads to multipliers from RNF activity that spurs local economic development (LED) in the zone. LED is growth which is inclusive of the poor, that is based on mutually reinforcing linkages between diverse economic activities that give employment to local people, and that derives its sustainability from dynamic sources of demand. This vision also embraces non-local sources of demand for local RNF products, and non-local sources of the inputs required for the production of those goods and services.

Second, the best-strategy intervention includes a mix of public and private investments and actions to promote market-sustainable RNF activity in which the poor participate. There is a vision that intervention-design should pay attention to the overall enabling environment (such as policies and infrastructure and social-capital based organizations).

Third, the best-strategy intervention squarely faces the marketing challenge, as a priority. The cost, as well as the benefit of going beyond the local market and linking RNF strategies to demand spurred by growth motors, is that one has a “tiger by the tail.” The dynamic markets are more competitive and far more demanding than the traditional local rural markets. A high rate of failure is probably unavoidable, and projects should be prepared for a relatively long period of learning and adjustment. An “adaptive management” approach is required for this sort of project, as opposed to one in which decision-makers aim at delivering fixed, pre-established “optimum” solutions. For the same reason, these projects are social- and human-capital intensive.

Fourth, crucial to meeting the market challenge is to take a supply-chain perspective in promoting RNF activities, starting from an understanding of the requirements of the market, and working backwards to the improvements needed all along the supply chain to be able to meet those requirements. Explicit strategies of quality assurance, strategic market information, labels and packaging, contracts and organization are needed. These are big challenges for development projects as they are far from using the traditional skill sets of local governments, extension agents, and project managers. They thus require additions to budget, training and search for new kinds of personnel, and flexible and innovative project planning and management.

This perspective is part of a growing consensus of the weakness of traditional RNF projects that focused on micro enterprise, in manufactures, on supply side interventions, targeting only the local market. That approach was not necessarily bad two decades ago, but the context has changed in the past decade, with policy reform, improvements in rural infrastructure, and globalization. These latter have spelled the de facto de-protection of rural areas in LAC and the vast increase in competition in the nonfarm economy. Rural nonfarm firms now have to compete with urban and

foreign manufactures, and conform to cost and quality requirements of the new markets. The context has also changed with the rapid rise in importance in the RNF economy of the service sector and of wage employment as rural towns have developed. The means that the rural world where interventions take place today is vastly different from the one of just a decade ago.

Fifth, the new projects recognize as fundamental that the new competitive context requires a range of new assets for the participants, with major additions to organizational and social capital, managerial skills, to human capital, to financial, and to physical capital. A major challenge is that the whole set is needed as they are complements, not substitutes. One can do the training and see failure due to bad roads, or provide the necessary credit but not meet the contract obligations due to the weak functioning of the local economic organizations, or produce excellent goods but fail to extract a profit due to poor management and marketing skills. These are costly commitments for projects. The projects studied undertook many innovative ways to leverage their resources by tapping into municipal and state governments, national training and technical assistance agencies, other projects, and the resources of the communities in which they work. Such savvy networking for the purpose of leveraging diverse “hard” and “soft” resources, together with “adaptive management”, must be the wave of the future.

Sixth, the rural nonfarm sector is largely uncharted territory for the world of rural development projects. The projects studied are innovative and bold, but recent in origin. Moreover, there tends to be a lack of institutional support at the national government level for rural nonfarm employment initiatives; that is because this category of initiative “falls between the cracks” between, for example, the Ministry of Industry or of Tourism and the Ministry of Agriculture or of Rural Development. It is beyond the scope of this document to analyze alternatives for the the creation of an institutional “home” for rural nonfarm policies and programs in national or regional governments. The interventions studied here did show, however, that important policy and program actors are in fact the regional and municipal governments, whose preoccupation with development of their local areas seems to tend to encourage or at least provide a propitious setting for inter-sectoral action.

Finally, many of the practices that we identified as innovative and useful are also largely unevaluated in a rigorous cost-benefit way. Our case studies were necessarily limited by time and budget, and were thus mainly qualitative, and did not permit systematic study of potential counter-factual scenarios (what would have happened in the absence of the interventions). In particular, the projects are heavy on subsidies; it appears to cost a lot to create new RNF jobs, perhaps more than farm sector jobs. But the demand for RNF products is growing faster than that of farm products as Engel’s Law predicts, and this means that moving into the RNF promotion area for projects will require either more efficiency or more budget or both, and certainly a

keen eye to building economic sustainability of the private activity initially promoted by the public projects.

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ANNEXES

Annex 1, Summaries of Six Commissioned Studies

Brazil: Textile Manufactures Center in Ceará-Mirim, Rio Grande do Norte, Brazil

Ceará-Mirim is a small county (population circa 60,000) of the Metropolitan Region of Natal, capital of the State of Rio Grande do Norte in Brazil.

In 1985, 61% of the rural population in Ceará-Mirim was employed in sugar cane production and processing. The figure dropped to 31% by 1995. The sugar cane production that is left has become highly mechanized, creating substantial rural unemployment. The situation of Ceará-Mirim is not unique in Rio Grande do Norte, and to make matters worse, there has been recent drought.

The government of the State of Rio Grande do Norte thus decided to attract factories and investors to develop an industrial regional center to employ those expelled by the sugar sector. As a result, in 1999, 60 companies initiated activities in the State, for an investment of US \$147 million and the creation of 8400 jobs. The government of Rio Grande do Norte attracted these industrial investors with a favorable fiscal policy (a 90% tax exemption on goods and services), added to the advantage of low labor costs of the Northeast in comparison to the densely populated Southeast of Brazil (where urban centers and consumer goods markets concentrate).

The municipal governments have also put investor-attraction programs into place. For example, the Ceará-Mirim municipality exempted new factories from municipal taxes for 15 years and is willing to subsidize rent and equipment for dress-making enterprises as long as they demonstrate creation of local jobs. Most of these create permanent sewing jobs for rural women with limited training, who can work either in their homes, or in small or large sewing groups under piecework subcontracts.

In 1997, the Ceará-Mirim Project (C-MP) was formalized by an agreement signed by the Municipal Government, the State Government (the Labor Secretariat which operates the Support Program for Small Farmers), the National Employment System (SINE), the Bank of the Northeast, the National Industrial Training Service (SENAI), the Micro and Small Enterprise Support Service (SEBRAE) (and NGO), and FAMA (a clothing factory that issues subcontracts for the sewing of clothing parts).

These participating agencies played a crucial role in the implementation of C-MP. Of particular importance is the provision of training activities (by SENAI and SINE) and social organization (by SEBRAE). The local government was the initial promoter of the project. Contracts to get the project running were provided by FAMA.

The C-MP started with a promotion campaign and the formation of sewing associations. Although 13 associations were announced, only two were implemented and legalized in 1997-1999: (a) The Rios Dos Indios (ACRI) with 51 women and 12 men working in two eight-hour shifts, who make, on average, US \$75/month plus social benefits and produce 12-15 thousand pieces/month; (b) the 30th of July Association with 47 women and 6 men, who produce about 10,000 pieces per month.

In 1999, 20 women formerly devoted to sugar cane harvesting created the Seamstresses of Mato Grande Cooperative (COOPERVALE). The group grew to 60 members and has initiated its own clothing product lines. Today only 30% of total production is contracted and the remaining is marketed as final products through its own Marketing Division. This dynamism has allowed it to become partially independent from C-MP, up to the point that COOPERVALE has undertaken leadership when the local Vice Prefect - who was the major actor in the project - was removed from his position last year. This is a case of true local ownership of a project.

COOPERVALE has signed a new project accord with the newly elected local and State governments, integrating eight sewing associations that have been trained by the cooperative. The State Government will be the co-signer for COOPERVALE to obtain credit to buy sewing machines, since presently it is renting equipment. It is expected that an increase in production will allow COOPERVALE to launch its own trademark in the near future. Other production phases such as design, cutting, modeling, and quality control are being introduced into COOPERVALE production in order to access the market directly and contract other associations for specific dress part assembling.

The wages of new contracts provided by COOPERVALE are around US\$ 90/month plus legal social benefits. This is possible due to the local municipal subsidies represented in energy and water costs and rent (as it is allowed to operated in a former rural training center).

There are several issues that should be highlighted from C-MP experiences:

- The project has a market-demand driven approach that used public policy (mainly fiscal incentives) to attract major dressmaking firms to set up their factories or contracting centers in the State of Rio Grande do Norte.
- The project used social organization that evolved from simple associations toward a cooperative. In spite of the importance of the social capital, it is also one of the weaknesses of the project since contractors are using associations to make contracts that do not recognize social benefits in full. The Ministry of Labor is setting up a new legal system to avoid this kind of contracting in the future. The final resolution of this matter could change the legal conditions faced by new dressmaking firm investors.

- Note that the major dressmaking firms contract work that requires low mechanization. Clothing parts that demand more intricate work aided by machinery are not contracted out so that the seamstress associations cannot access that technology.
- Direct and indirect public subsidies seem decisive factors for the implementation of this type of manufacturing development project.

Brazil: “Farmer Factories” in Southeast Brazil

The Southeast Brazil project is designed to use the whole zone or territory as the market area for the project participants: it promotes agro-processing both for the small stores in the countryside markets as well as for the larger stores in the rur-urban areas and the supermarkets in the nearby cities.

This project is an activity of the government of the State of Paraná, Brazil. The State Agricultural Secretariat coordinates the project. The responsible agency is CODAPAR and it is implemented by EMATER, the State Rural Extension Agency. It was started in 2000.

The objective of the project is adding value to agricultural products, and increasing rural family income through the creation, implementation, and improvement of small and sustainable agro-processing units that can sell in competitive markets.

This project is funded from three public sources: (1) The State Development Agency; (2) the national program PRONAF (National Family Agriculture Support Program); (3) the PARANA 12 MONTHS project, supported by the World Bank.

Although the rural population in Southern Brazil decreased during the 1990s, the share of income from nonfarm activity was increasing, particularly from services and agro-processing. The agro-processing industry in Paraná employs 18% of those working in nonfarm activities.

The project target population is formed by 21 ethnic groups among whom agro-processing is a common practice, particularly for home-consumption. In recent years these products have been sold in local informal markets, and most of the products have no formal quality certification or the firms, formal licensing. Production and marketing are individual activities and collective enterprises are the exception. There are circa 300,000 family enterprises that qualify as the target population.

An initial survey by the project of 1730 producers was used to identify types and forms of processed crop and livestock products. The project thus targeted existing firms. The survey showed that there were various bureaucratic/administrative hurdles that impeded the registration of processing firms to receive legal status. The survey also showed a general lack of understanding of marketing strategies, product presentation, and consumer tastes and preferences.

The project used the survey information to design its actions. It undertook to ease the steps to legalize/register the businesses and help existing firms to produce better their products and to market them to formal markets mainly in urban areas. The target population is defined as producers using family labor (no more than two permanent

wage employees), with 80% of total income earned in farming, provided that such an income is less than US\$ 13,700/year. Estimates indicate that each supported agro-processing firm could create about 20 jobs (directly and indirectly), which means that approximately 20,000 new jobs would be created by the end of 2001.

However, due to a very heterogeneous target population in terms of products, technology, access to markets, marketing strategies and legal status, the project does not have strict rules for participation. Individual assistance is provided to each agro-processing unit or organization, via four instruments:

(1) Legalization Kit. This is a package designed to reduce time and steps to legalize products. In many cases, health licenses and tax forms are required to legally sell processed agricultural products. Legalization used to take several months, but with the consolidation of requirements and the cooperation of a number of government institutions, can be done in 15 days.

(2) Technological component. An aggressive training program for technicians and producers has been designed as a means to introduce technology and assist production units in applying it. Both generic and specifically applied courses are organized where needed, and three training sites were opened in the State of Paraná.

(3) Marketing component. This constitutes a bridge between producers and selected market segments (supermarkets, small retail stores, natural food stores, etc.) and final consumers. Several actions are included: (1) dissemination campaigns to explain to consumers facts about available products, their origin and characteristics; design of logos, packing, bar coding, etc., in order to improve product presentation to final consumers. These services are paid by producers at reasonable prices; (2) participation in food fairs (ferias de sabores) where buyers and final consumers are exposed to the production process and can taste final products. 'Business tables' are organized in these fairs to promote a direct producer-buyer interaction. These events are organized and financed by the State and the project.

Incentives component. These include credit, tax breaks, and physical infrastructure. The State Fund provides small loans to small producers to be used in agro-processing. In 2000, 1.2 million reais were used for these credits that average US\$ 5000 each. It is expected that 5 million reais will be spent in 2001. PRONAF (federal program) has credit lines available to complement or enlarge present agro-processing units. Training and introduction of new technology is funded through the PARANA 12 MONTHS project. Tax exemptions vary (a lot) by municipality, the unit in which they are defined and granted.

The project is implemented through existing Municipal Councils that are created as a regular organizing activity of the State Extension Service in each Municipality. These Councils are recipients of all demands for agro-processing assistance. Public debates take place in those Councils before investment and priorities for production units are set.

One of the most important contributions of the project is the training of both technicians involved in implementing the project and the agro-processors themselves. This is a direct intervention that improves both technology and management capacity. It involves regional and federal institutions and is usually linked to the credit lines available for producers.

Chile: The Rural Tourism Program

The Chile project promotes rural tourism with a vision of the market for local services being tourist “corridors” (new highways or secondary roads that connect cities and major tourist destinations), the countryside near major tourist areas (e.g., camping spots inland from beach areas), and tourist zones connected to natural areas and indigenous zones. The approach is thus explicitly “territory-based”.

The national rural tourism program (RTP) was created in 1995 as part of INDAP, the Chilean National Rural Development Institute. The program is INDAP’s first initiative in rural tourism, and is part of a general initiative to promote income diversification among small farmers. The program is part of a general policy to promote rural tourism that involves a number of other national agencies (The National Tourism Service, The Fund for Social Solidarity and Investment; the Fund for Agrarian Innovation of the Ministry of Agriculture, the Service for Technical Cooperation, and the Development Corporation), plus funding by regional governments, NGOs, and foreign donors. In 1999 the program comprised around 100 national rural tourism projects. The project also coordinates the provision of services in the local area from other INDAP divisions.

Rural tourism in Chile is relatively new and has not come into the purview of public policy until recently. It is expected that rural tourism will grow very rapidly in coming years (around 20% a year). Nevertheless, there is a dearth of regulations on the quality and cost of services supplied, and so rural tourists tend to have varied experiences. That tends to dampen demand. To address this challenge, the RTP acts at three levels: (a) country-level, with studies and promotion; (b) region-level, providing coordination and technical assistance to tourism providers; (c) local-level, with projects to support local entrepreneurs. The latter receives the bulk of the RTP budget.

There are four categories of RTP services to support rural tourism: (a) studies evaluating specific investments (with the studies fully funded by INDAP); (b) technical assistance to entrepreneurs, through the use of private consultants paid by INDAP; the typical expenditure is from \$300 to \$500 per tourism firm; (c) Short-term (up to a year) and long-term loans to finance investments (such as improvements in a driveway or house). There is a limit of \$6,700 for individual projects but there is no limit for group projects, thus encouraging group projects. Long-term loans cover 75% of project cost, and 15% of the project cost is given as a grant; (d) training tourism entrepreneurs (funded fully by INDAP).

The program is targeted to small farmers (hence there are land and capital restrictions to receiving support). That means that all beneficiaries also farm. Participants are mainly couples aged 40 to 70 whose children have left home. Women are the main actors in the provision of tourism services, cooking the meals,

making the beds, checking in the guests, and so on. These households usually provide the service in their own home, and the activity is seasonal. The workers are from the family itself.

The tourism activities range from guest houses to rural camping to restaurants. In some cases, projects have a 'cultural content', linked to ethnic identity. In most locales, the RTP projects cover a mix of services, landscapes and specific tourist attractions.

Projects can be individual, associative or communal. Associative projects include individuals providing the tourist services but those individuals are members of an association that provides various services collectively, such as marketing, publicity, legal and administrative tasks, and training. This is the most common type of RTP project, and is much more common than communal projects, which undertake truly collective provision of the tourism service, or individual projects.

Earnings from tourism vary greatly, depending on the type and size of the business and the location and attractions. The most successful appear to be near major roads that link to non-rural tourism circuits. Rural tourism firms benefit from spinoff-demand from large-scale tourism, serving tourists who want to see the countryside near the lake, tourist city, or beach area around which the tourists planned their trip.

There are two final important aspects to note. (1) The RTP program focuses on the supply side, but could do more to identify and promote market demand, for example by working more with tourism agencies in urban areas. (2) The RTP works mainly through heavy subsidization and direct assistance. At present there is no clear plan to phase-out the assistance to make the program less dependent on subsidies. There also does not appear to be research on whether the tourism activities would survive in the event the subsidies were withdrawn.

Honduras: The case of South Lempira Project (FAO)

The South Lempira Project (SLP) started in 1988 as an institutional response to an extended drought that had a disastrous effect on smallholder agriculture in the Lempira Department of Honduras.

The project is funded and implemented by FAO and by the GOH (Ministry of Agriculture). The first phase (1988-1990) was oriented toward building farm productivity, emphasizing land and water management for food security objectives. The second phase (1992-1995) continued with a natural resource management (NRM) and farm production focus, but added activities related to RNFE, especially activities production-linked to the farm sector, such as building grain silos. In the third phase (1995-1999), the rural family and community replaced the farm and the micro-watershed as the principal project focus, and RNFE promotion became an important complement to farm sector and NRM activities in the project. Moreover, the project adopted an explicit Local Economic Development approach, with the project coverage extending beyond the countryside to small rural towns in the area.

SLP uses a decentralized and participatory approach through which rural communities develop strategic plans based on diagnoses. Local Development Committees negotiate these plans with the local governments, state agencies, and NGOs in the zone. This mechanism has proven useful to identify problems and opportunities such as milk production in the dry season and processing of milk into cheese for the local market, or the need for grain storage silos to handle the greater maize output resulting from increased farm productivity. The project promotes the creation of small firms or collective enterprises. SLP contributes with feasibility studies and, in most cases, follow-up technical and marketing information assistance.

Strategically, SLP supports RNFE generating activities from both the supply and the demand sides. From the supply side, the SLP facilitates access to inputs through the promotion and backing of communal banks and revolving funds, which are handled by small producers and allow micro-entrepreneurs access to inputs and capital goods. Likewise, SLP facilitates training to small firm entrepreneurs either directly or through other institutions capable of providing specialized training.

From the demand side, the PSL has supported marketing studies of RNFE products, especially metalware, cheeses, mats, and processed vegetables. Additionally, PLS has facilitated buyers-sellers negotiation round-tables, trade promotion trips, and market identification for the micro-enterprises to focus their marketing strategies and adapt their RNFE product to the market.

PLS has developed institutional strategies to assist RNFE activities. Strategic alliances with public and NGO institutions have been successfully used to provide

training, technical, management assistance, access to physical infrastructure, contact with potential buyers and participation of communities through the Local Development Committees.

SLP has been able to assist small producers to develop the following micro-enterprises:

- Cheese production, to take advantage of technological change introduced by the project into milk production that resulted in higher productivity, particularly during the dry season. Currently there are small plants producing cream, fresh cheese and milk cream.
- Metalware and related products. Increments in basic grain production introduced by the SLP created demand for tin silos (to replace old storage systems in the kitchen that resulted in losses of 40% and food contamination), sprinkling cans, buckets, broilers, funnels and other tools. There are 26 small producers in the region organized in two groups: the Regional Artisan Association of Lempira, which works in Candelaria (a small rural town), and the Regional Artisan Association of South Lempira, which operates in Guarita (a small rural town). SLP has contributed with technical and organizational assistance to the design of these micro-enterprises, access to imported inputs, training and market entry and strategic information.
- Construction material. As a consequence of income increases and international migration remittances, demand for new building and house improvement has increased rapidly. Utilizing the same strategies SLP has supported production of blocks and tiles for the local urban market.
- Handmade pottery and fabrics have been also promoted by SLP. La Campa cooperative (created prior to the project) has been strengthened, and a new organization has been promoted in Santo Domingo (a large village) with the cooperation of an NGO. Today, better quality products are going to the local and national market, with possibilities to produce for export.
- Sawmill and woodwork. These are new activities, taking place mainly in Central Lempira, with an incipient local market and an established market in the city of San Pedro Sula and surrounding towns. The project is linking this activity to resin production in pine forests (as another way to use the pinewood in the managed forests, hence linking NRM and RNFE promotion). Moreover, the project is using national public services for training in vocations, and adapting the teaching to the local market needs.

Mexico: ISMAM Project in Chiapas

The Sociedad de Solidaridad Social Indígena de la Sierra Madre de Motozintla San Isidro Labrador, ISMAM, is located in Chiapas State, which is one of the less developed areas of Mexico. Chiapas has a serious lack of infrastructure relative to the states of northern Mexico, despite its rich resources (forest, water, oil, minerals) and tourist attractions. Chiapas' population of 3.5 million is 30% Indian; 40% of the population is rural. 56% of Chiapas' workers are in the primary sector (versus 23% for all Mexico). The 1999 GDP per capita of Chiapas was US\$ 1,800 -- 40% of the national average.

The San Isidro Workers Society, ISMAM was founded by Mayan Indians in 1985, part of a process started in 1970 by the Catholic Church in the area to address socioeconomic problems of Indians in the region. The process started as social assistance and eventually become a cooperative movement. In 1986, ISMAM created its first board and approved a set of bylaws that specified that a member of the cooperative must use only organic inputs in farming, and undertake community collective labor during six months of the year. ISMAM also addresses issues outside of farming, such as health, human rights, food security, migration, family integration, and gender discrimination.

Today, ISMAM comprises 196 rural communities and groups, with over 1500 members, of which 98% are communal farmers (ejidatarios) and 2% are small landholders. In all, the members have 4500 ha devoted mainly to coffee, although maize, vegetables, honey, and cocoa are also produced in significant amounts.

Organic coffee production and processing are the most important activities of ISMAM. Coffee is produced on individual farms although the cooperative operates a 300 ha coffee farm that was partially subsidized by the Mexican Federal State. Cleaning and drying are performed on-farm. The dried coffee is taken to the processing plant at Tapachula (an intermediate city), where classification and packing take place.

Some of the dried coffee is processed into soluble coffee, for which ISMAM acquired a modern machine with a capacity that exceeds present demand for processed coffee in Mexico. ISMAM has registered 'Café Mam' as a gourmet mountain coffee. ISMAM also has a laboratory for *Stephanoderis cephalonomia* production that is utilized for the coffee BROCA biological control.

Over the past 15 years, ISMAM has exported 450,000 hundredweight of coffee worth 50 million dollars. The average annual production is 80,000 hundredweight. ISMAM exports organic coffee to 14 countries. The product is certified by OCIA (www.ocia.org) in the US, Naturland in Germany (www.naturland-

markt.de/NL_Web_english/) and OIA in Argentina (www.oia.com.ar/info.htm). ISMAM trades through the fair price movement in Europe obtaining an extra price of about \$ 15 per hundredweight.

The production and processing for the entire coffee harvest require about 12,000 man-days/year. The processing plant employs 65 permanent workers. ISMAM is organized in five different enterprises for the various parts of the chain, from production to processing to transport to marketing. The study made no estimate of indirect employment creation.

The study estimates that family income has increased 30% due to production and marketing of organic coffee (over the life of the cooperative). The increase is due to higher producer prices (than for conventional coffee production sold outside the cooperative system). There are also environmental benefits, as about 30,000 tons of cast-offs are no longer going into local rivers each year, due to a recycling system to maintain organic production

Government participation has been a key factor. The acquisition of the processing plant, the coffee farm, and various loans at subsidized interest rates are some of the government actions that helped ISMAM.

Moreover, a strong professional team to technically direct the cooperative's enterprises constitute a key asset, even though there is instability in the group of producer representatives (they are all removed after each election).

Peru: The PRA-Huancayo Project for Trout Processing

The Huancaya Trout Processing Project is part of the Poverty Reduction and Alleviation program (PRA) which started in 1998 through an agreement between the National Private Institutions Confederation (CONFIEP) and USAID. PRA is a program aimed at raising income through the creation of long-term employment, and increasing opportunities for private business in poor zones. PRA promotes the creation of Economic Service Centers (ESC), which provides market contacts and information, and technical and marketing assistance. The program also works with policymakers to encourage policies that create enabling conditions for productive private investment. The PRA promotes “economic corridors”, which are economic networks that link countryside areas with local intermediate cities and national cities. The program reinforces and initiates development processes within the corridors. Moreover, the program seeks to diversify manufacturing away from its narrow base that is in most of the region linked to mining, and encourage private sector investment in agro-processing activities in the economy of the region.

The specific project studied is a corridor dominated by the Mantaro Valley, the main valley in the Sierra. It is linked to Lima by a highway. The ‘Huancayo Economic Corridor’ was identified as a geographic unit with infrastructure that links the Mantaro and the La Merced Valleys. Mantaro is an important valley with irrigated commercial (potato, horticulture, and milk) and rainfed subsistence agriculture. Huancayo is a commercial regional center, although agroindustry development is limited.

The Huancayo ESC comprises several projects, with associative and individual activities pertaining to trout production and processing, eco-tourism, textile production, spice production, farm machinery production, among others. The trout project is a joint venture between Piscigranja (fishfarm) Pachacayo, Tupac Amaru, and Piscifactoria (fish processing plant) Los Andes. This project is based on Junin trout production that accounts for 50% of Peruvian trout production, approximately 2.000 mt. These two enterprises are responsible for more than 75% of regional production. Piscificadora Los Andes produces 700 mt/year and SAIS Tupac Amaru 70 mt/year. Their product is oriented to national (Lima) and international markets.

Two background analyses were done for the project, regarding international market potential and national trout production. The world trout market is expected to grow at 9% a year, reaching a total consumption of 2.7 million tons by 2010. National trout production only grows at 1.8% per year due to a lack of production technology, good quality feed, marketing channels, and investment – all this despite excellent production potential.

Piscificadora Los Andes exports about 70% of its trout products (fresh and processed) to Europe, Canada, and some Latin American countries. The remainder

goes to the national market (Lima). This enterprise generates permanent employment for 100 persons in fish production and processing and seasonal employment for 20 persons, depending on the year. Labor represents 30% of total production costs and feed about 50% of total cost.

SAIS Tupac Amaru is formed by 16 peasant communities and has 16 production units. It has 75 production ponds and generates employment for 14 to 16 persons. It is expected that the project will increase permanent employment to 50-60. Available water and land have a potential trout production of 1000 mt/year. More than 3000 poor rural families are involved in this enterprise.

The program has developed a strategic alliance between the two enterprises that allows Piscificadora Los Andes to increase exports in the short run. In the long run, it is expected that the alliance will translate into a new enterprise, in which SAIS will fully develop its production potential. SAIS participates with its available infrastructure and labor force while Los Andes contributes with management, technology, and working capital. One technological element is the change in fish feed through a contract with the major national producer (ALICORP) that maintains feed on the water surface and makes a difference in production. The extra investment required for SAIS to increase production is expected to come from private investment – from international firms that have been already contacted by PRA.

The Regional Administration Council is promoting a Consortium of Small Trout Producers, in which private producers, Ingenio, the Ministry of Fisheries, the ESC network, and PRA are all participating. This consortium is pooling demand for production inputs in order to negotiate favorable prices.

Additionally, both PRA and ESC-Huancayo provide technical assistance to strengthen management, solve marketing bottlenecks, and bring in new production technology and other non-financial support to increase product supply. PRA co-sponsored the profile analysis to link production and processing of both enterprises. PRA and ESC are a substitute for the lack of business development services in the Huancayo area.

The design of this project is market-demand driven. The idea of promoting the strategic alliance between Los Andes and SAIS was to respond to an identified market demand for fresh and processed trout that is unsatisfied. An additional characteristic is the promotion of clusters and linked enterprises in the so-called Economic Corridors through the ESC. In this sense, PRA behaves as a facilitator between producers and buyers, as dictated by the market. For this reason, PRA has been designed as a temporary project (with a “sunset clause” of four years) that works on several production possibilities in selected geographical areas.

Annex 2, Summaries of Competed Studies

The Municipality of Rolante, Rio Grande do Sul, Brazil, RNFE Development Program

In 1997, the Municipality of Rolante developed a Multiyear Rural Development Plan to provide support to activities responsible for rural employment (dairy processing, leather and shoe factories), the creation of new jobs and the monitoring of quality of life and environmental protection.

With the collaboration of EMATER/RS (the State Extension Agency), the Municipal Agriculture Secretariat, a rural credit cooperative, the rural workers union, some agriculture producer associations, the Animal Health Inspection Service and other local institutions, the Municipal Council for Rural Development (MCRD) was created. MCRD was in charge of the development plan that included actions directed to create projects for production of public goods and services (health services, school snacks, school transport) and private goods and services (food processing, handicrafts, cookies baking, sanitation services (for firms), rural tourism, and public taxis).

In the program, the Municipality allocated US \$ 2 million over 1997-2000 to fund activities included in the Rural Development Plan. Most public investment in rural Rolante was channeled through this program in that period.

The MCRD started with a diagnosis of the local rural economy, and examined various scenarios. From that base it selected various projects. Each project was assigned a committee that was responsible for the project management well as market demand analysis and budget allocation.

Several activities were common to the projects: (1) training is a major activity for all projects in the program; (2) production infrastructure (roads, water, electricity), undertaken by national, state, and local institutions, and in some cases, by the World Bank (in the case of sanitation infrastructure, for example); (3) social organization; (4) in most projects, particularly those promoting production of private goods and services, analysis of the market was undertaken.

11 projects are now operating. There have been significant effects: for example, food processing projects created 210 new jobs.

Rural Tourism and RNFE Creation. The Colonial Route in Dois Irmaos. Rio Grande do Sul. Brazil

In 1994, Dois Irmaos lost a shoe factory – and the many jobs that go with it -- as a consequence of the overvaluation of the real. To redress the rural unemployment from this loss, in 1999, the municipal government launched a tourism development plan named “tourism with quality,” that built on the reputation of Dos Irmaos as the capital of colonial coffee. It has traditionally attracted tourists from the nearby cities due to the German background and traditions of much of the population. The new plan included development of the 7 km “Colonial Baumschneiss Route,” mainly aimed at attracting urban clients from the region, and featuring rural hotels, home-made beer, handicrafts, and horseback riding. Dois Irmaos is only 60 km from the State Capital, Porto Alegre, and Novo Hamburgo, another important city near it. This plan was implemented with the collaboration of the Colonial Route Association, the Rural Workers Union, and EMATER, the regional extension agency, and SEBRAE (a national NGO that promotes RNFE among other things).

Dois Irmaos has a population of about 18,500 and only 2% live in rural areas. Tourism development is important to the rural population not only because of employment opportunities but also because the tourist route covers a significant proportion of the municipal countryside. In the first year of operation, 15 new commercial businesses (by 15 families) were opened. Estimates of the impact are: 63 new jobs in the firms and 126 jobs in spinoff activities, mainly among fresh agricultural product suppliers. In addition, four new attractions have been added to the tourist route, including the municipal museum.

Potential market demand was estimated by the project through a survey of tourists. The survey showed that about 76% of the visitors (mainly weekenders) were coming from Porto Alegre-Novo Hamburgo Metropolitan Region, and 17% from other towns in the State. This information was used to finish the design of the tourism route, all suggested stops and the kind of new businesses that were likely to take advantage of the visitors' flow.

The supply side requires a lot more preparation in this type of projects. In this specific case, sanitary conditions have been emphasized as well as the elaboration of a ‘marketing guide’ along the interest points in the tourist route. Training was given to those expected to have direct contact with visitors; the training included history, human relations, price setting, and quality assurance.

Public infrastructure construction was prioritized based on the ‘marketing map,’ including a specially designed bus that takes visitor along the route. A probation period of six months was set in operation as an in-service training before the plan was open to the public in full. The final phase was initiated in March 2000.

Sustainability of this project, hard to judge now because it is new, depends on the capacity to attract a sustained flow of visitors in order to ensure the market demand required by the different business and components offered along the tourism route. The sustained flow in turn depends on quality of service.

RNFE Generation Program in Cundinamarca, Colombia

In 2000, the government of Cundinamarca and the Interamerican Institute for Agricultural Cooperation, IICA, started a program aimed at reducing unemployment in the Department, emphasizing unemployment among women, youth and those displaced by social conflict in Colombia. The program contemplated promoting a diverse set of activities, such as food processing, commerce, handicrafts, tourism, transport, input distribution services, regional communication services (rural telephony, radio, internet), fast food, personal services, and so on. In 2001, the first phase of the rural program focused on food processing in the countryside or in rural towns, in small and medium enterprises. The program initiated 37 projects in the first year; these include projects in food processing, wholesale and retail commerce, and services (financial, accounting) to other projects. Each project requires an average investment of US\$ 7.000 of which \$ 2.000 goes to savings for investments in the activity by the members. The program has both urban and rural components, but we focus here only on the latter.

Identification of markets and marketing channels are one of the four major strategies of the project. The other three are: (2) production technology, including learning by doing; (3) financial facilities, specifically, a revolving fund that constitutes seed money for each project; and (4) management/entrepreneurship, which includes group organization and learning by doing. However, the program takes the view that the "market identification" step has to come first.

The food processing is done by farmers, making vertical integration practicable and avoiding major investments in plant.

Every project receives technical assistance from a university student who serves as an advisor. The program managers believe that such assistance, combined with the strong participatory group organization, are decisive elements that contribute to the sustainability of each enterprise.

As a complementary initiative, strategic alliances with the private sector, other government programs, and regional NGOs link the projects to the market and to the major industry chain.

Milk Product Diversification and Marketing, Cajamarca. Peru

In 1999, IDEAS – a Cajamarca NGO- and GTZ/PRONAMACHCS – a rural development project- launched a pilot experiment to improve traditional cheese production, storage, and marketing. The participants are poor rural families. The idea was to introduce improved technology and practices at each stage of the supply chain, and to diversify the milk products sold. The goal was to create employment and build entrepreneurial capacity.

Cajamarca is a region with comparative advantage and long tradition in milk production. Leoncio Prado is a village where cheese is produced using traditional processing technology. Rural families (15) derive their income (80%) from milk processing. The project built a small plant to process milk in Leoncio Prado.

The project's pilot plant produces diverse milk products (cheeses, butter, yoghurts, sweet creams) that are marketed to the region's main urban markets, in San Marcos and Cajamarca. San Marcos is also the original market for the traditional cheese. The project has subsidized costs involved in approaching the regional market, including personal contacts and product presentation to potential buyers.

This pilot project is centered on the processing plant that buys milk from all associated families that form the micro-enterprise that own and operate the plant. It is thus a direct integration of raw material production, processing, and marketing.

Training in new technology in processing and storage is key. The project uses the Participatory Technology Development as the means to introduce technical change, strengthen the organization and create management capacity.

New processing has improved milk transformation efficiency ratios (from 10:1 to 8:1), which results in a net gain increase of about 50%, for Swiss Cheese (the main "diversification product" that has taken off so far), since the price/kg of Swiss cheese is twice the price of traditional price.

Employment creation as a result of this pilot project embraces nine permanent positions (5 men and 4 women). This number yields a ratio smaller than about US \$ 1000/job.

Micro-enterprise and Small Producer Support Program, Chulucanas Clay Craft Project. Peru

In 1994, the Export Association (Peruvian business association) and USAID initiated the program to promote economic development in poor zones of Peru. It is aimed at improving small farmer's income and employment opportunities through strengthening their groups and organizations. In 1995, the program initiated the promotion of clay craft manufactures at the national level and a project specific to Chulucanas was started in 1996, with a horizon of six years. The Chulucanas-La Encantada region has a tradition in clay craft production, using traditional patterns. There are more than 300 craft workshops, but only 13% register sales of more than US \$ 4000 per year.

Craft production is seasonal and uses mainly family labor (3.5 and 2.5 man/months in high and low seasons, respectively) of which women provide 37%. Before the project, about 11% of the producers had received technical training and most production is sold at the workshop gate or in town. Only 17% of producers sell to export firms.

The strategy implemented by the project in Chulucanas can be summarized as follows:

- Identification of the potential market, with the participation of International Aid to Artisans (ATA)
- Determination of quality and design preferences of the potential demand
- Analysis of the supply chain in terms of surplus production for international markets
- Training in design and production, introducing new technology in treatment and manipulation of raw material as well as finishing
- Participation in international fairs and other international events to promote clay craft products
- Building linkages between producers and export companies in order to position artisan products, with the participation of the Peruvian Artisan Institute.
- Provision of financial support obtained from national and international financial programs as well as from donors

Results of the application of the strategy include:

- Seasonality of production has been reduced (with a shift toward year-round production). For a number of firms, actions such as contracts with export companies, financial support, training, access to specialized machinery or a direct contact with buyers, have introduced the opportunity to smooth output flow over time and allow fuller utilization of installed production capacity.

- Income of participant artisans has increased in comparison to the non-participants. On average, yearly income of participants is \$ 2970 while income of non-participants is only \$ 1690. In peak months the difference reaches 53%.
- Participant producers have created the Chulucanas Artisan Association, which has received a revolving fund provided by CARE-Peru. This has facilitated year around production since artisans have no access to credit in the region, and are forced to use their own financial resources. Other program associates use the advance payment provided by buyers. This portion has increased over time due to the order size and the confidence gained by producers in their business as reliable suppliers.
- Associate producers (33% approximately) have gradually switched from direct sales to sales through export companies. This help to smooth seasonal production. However, at-workshop sales continue to be the most frequent sale mode.

Lessons learned from this intervention are:

- Enlargement of demand for a traditional product requires a serious technical adaptation so as to introduce changes in almost every step of the production process. These changes must follow consumers' taste, new treatments of raw material and fashion tendencies pushed by the industry at the international level. Specialized technical advising is very important to complete this process.
- The analysis of the production-consumption chain provides value information in order to select entry points that may increase sells for particular products. This opens new possibilities for institutional alliances and the involvement of key actors that facilitate access to new market segments or position in recently open markets.
- A permanent training program is a requirement to establish the social organization of production, introduce the needed technical change and, create management and entrepreneurial capacity. These are all key elements to ensure the industry sustainability.

Community dairy project to supply to school milk program in Paraguay

The Small Dairy Producers Committee and the Communal Development Board created a project to provide milk for schools snacks in the Department Presidente Hayes, Paraguay. This is a four year project (1999 – 2003) aimed at capturing the national budget allocation for schools snacks and, in the future, adding value to dairy production by processing milk, which is widely produced in the region.

The Departmental Government spends about \$ 300,000/year to provide school snacks to approximately 16,750 students in 51 schools in this region. Up to 1998, milk was obtained from several rural economic organizations (of large farmers) located in other regions in spite of the fact that Presidente Hayes Department produces livestock (2,100,000 head) and enough milk to satisfy school children's consumption.

Milk distribution was affected by two factors: the local price was low due to high transport costs, due to the same bad roads that make distribution erratic. The project aimed at redressing these problems with three steps.

First, at the input access level, the project provided improved milk cows to producers, fully subsidized by the Departmental Government.

Second, collection points needed a processing plant capable of storing milk for further distribution to the schools. Plants with capacity to process 1000 liters/day were selected for this purpose. With project funds a plant with capacity to process that amount of milk and producing 6000 kg of cheese/month and 16,000 liters of yogurt/year was built. The creation of additional plants with private capital is expected. However, the project decided to put in place a financing program to help investors who were interested in installing new milk processing plants.

Third, Small Dairy Producer Committees were formed by no more that 20 small producers each. One of the major project efforts was just the promotion and creation of this type of committees in the region. As part of the promotion of such committees, training on production, handling, breeding and management was provided on permanent basis by the project.

Sustainability of this project's effects seems difficult to achieve under the present circumstances. Although the milk price presently paid by the regional government is lower that the former market price, the milk producers appreciate the lower risk. However, the arrangement may change with a change in the regional government. Moreover, the participants have not yet moved into the production of yoghurt and cheese, which may be important to entering the private market. The project team has concluded that a long term production plan like the one included in this project

requires a deeper training component. A change of attitudes and a more managerial capacity are required to keep proficiency in the business.

Dairy Development: A Viable Alternative for RNFE Creation in Peru

In 1989, CEDER established a processing plant in Condesuyos with the financial support of the (U.S.) Inter-American Foundation and the Canada-Peru fund. In 1992 and 1995 new plants were opened in Puquina and Pampacolca. Today the Condesuyos and Pampacolca plants continue operating.

The two Provinces where this project is implemented are devoted to milk production. About 90% of the population derives income from milk and alfalfa production. GLORIA S. A. is the only large processor plant in the region. Market conditions are increasingly difficult to meet by small milk producers (2.3 ha on the average and less than 20 lt./day) unless they act collectively to benefit from scale production.

To address this challenge, efforts were made to create several social organizations to affect about 1,300 rural families with the idea of improving family income through milk processing, in such a way that the collective firm serves as the economic engine to absorb milk production and generate additional employment.

A strategy was designed to achieve the general objective. The strategy had three components.

First, the project improved milk production (hence input access for the RNF activity). Milk production of the target population constitutes the most important input for the processing plants. Due to the size of the target population, processing plants were created with a relative small number of associates. The Condesuyos group selected a cooperative to formalize the association of 23 members, while the Puquina plant decided to group the 27 members in a corporation. The project did the following: (1) improvement of irrigation facilities by constructing reservoirs and canals, (2) animal breeding (insemination), (3) alfalfa production, (4) animal health campaigns, (5) farm management training, (6) credit.

Second, the project built three plants. The initiation of the processing plants demanded inputs of different kind: construction of the plants and processing equipment. The project provided a good proportion of physical materials that were not available at that time in the local market. Training that included visits to other processing plants was an important input. Training was centered on technical aspects of production as well as on organization and management of the initial plants. A number of farmers were selected to receive technical training. Most of them started their own processing plants once experience was capitalized. Training on management was provided to a relatively large number of processors. It was complemented with a technical assistance service to new processing plants in order to standardize final products, as required by regional urban markets.

Third, the project team at the Condesuyos Plant developed a door-to-door marketing strategy in Arequipa (important regional urban center) based on personal contacts of the rural families and project team. This process allowed all actors to become familiar with tastes and demand requirements to compete in the market. A more conventional strategy was implemented when the other two additional plants entered production: discount rates based on orders size, free sample in new city districts and supermarkets, discount for cash sales, discount for on-time payments, etc.

As an impact of the economic results of the processing plants, 35 new small processing plants that belong to 55 families were created to process about 7117 tons of milk/year. These and two of the original plants buy milk from approximately 800 small producers.

Sustainability is expected to be obtained from good economic results, social organization, ecological sound activities and management capacity to deal with processing firms and market stabilization. Punctual project components such as training, entrepreneurial organization, marketing strategies and financial support are functional tools needed for reaching expected sustainability factors.

As mentioned before, economic impact is an important project product: regional milk price increased in \$ 0,04/lit which benefits over 800 milk producers, total value product adds up to \$ 2,033,571/year, 100 new jobs in the production side and 120 part time jobs on the commercialization side were created, average salary for new jobs is \$ 1542, and the 55 families that owns processing plants have increased annual income by \$ 5165.

Production, Processing and Commercialization of Agricultural Products, Venezuela

In 1998, the Venezuelan non-profit Polar Foundation (created by a large food company) initiated a three-year project in the Miranda State, Venezuela, with the objective of strengthening the socio-economic level of a particular population through the organization of a mechanism to produce, process, and market selected agricultural products. It is directed to small farmers and artisan women with little schooling. Three components constitute the core of the project: production of agricultural products, processing of horticultural products, and marketing of processed products.

The basic strategy was the creation of incentives to link different steps with the agro-productive chain. The central idea concentrated on making room for new non-agricultural jobs required for such integration. Four major incentives were set: (1) Training and group organization, (2) sequential implementation stages, (3) a subsidy fund, and (4) support to marketing at different stages.

Training was twofold: basic principles for social organization and managerial/entrepreneurial capacity, and technical skills in production and marketing. It resulted in the creation of a civil organization with the participation of man and woman. Specialized consultants were required to strengthen this process. As a permanent activity, training takes about 80% of the annual operation budget.

Schematically, the sequential implementation steps of the project are the following:

Stages	Experimental	Semi-commercial	Commercial
Primary production	Consolidation of present production patterns	Product diversification with a multi-strata approach	Product specialization Storage and classifying centers Own transportation
Transformation	Production in Greenhouses	Product diversification Adapting the production plant Complying sanitary conditions	Rural agroindustry Sanitary licensing Product diversification and growth

Commercialization	Individualized sales Vendor teams Temporary selling centers	Attention to local public Permanent vendor teams Permanent selling centers	Attention to regional public Direct and intermediary sells Publicity campaigns
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The project is presently in the semi-commercial stage, based on the decision and capacity of actors to undertake production, transformation and commercialization.

A revolving fund was created to solve the producer's financial needs that appear as much as the project started the experimental stage and then when it moved into the semi-commercial stage. The fund received seed capital from the project and charges positive interest for loans to users. It has solved a working capital problem and seems to decrease its importance when the project moves to a more commercial stage.

Marketing is a key factor that requires capacity of the civil organization and intermittent technical support to overcome particular bottlenecks. The project has supported technical assistance in this topic, including the participation of vendors, local governments, NGOs and intermediaries. This is a process in which progress has been made as to generate enough income for the producers/processors to pay back their loans to the revolving fund.

In addition to the progress and results of individuals, the project reports the involvement of new 59 direct and 17 indirect persons to the RNF production activities, in two years of operation. This yields an equivalent of 20 full time jobs that in turn generates an investment/RNFE relation of \$ 6973.