

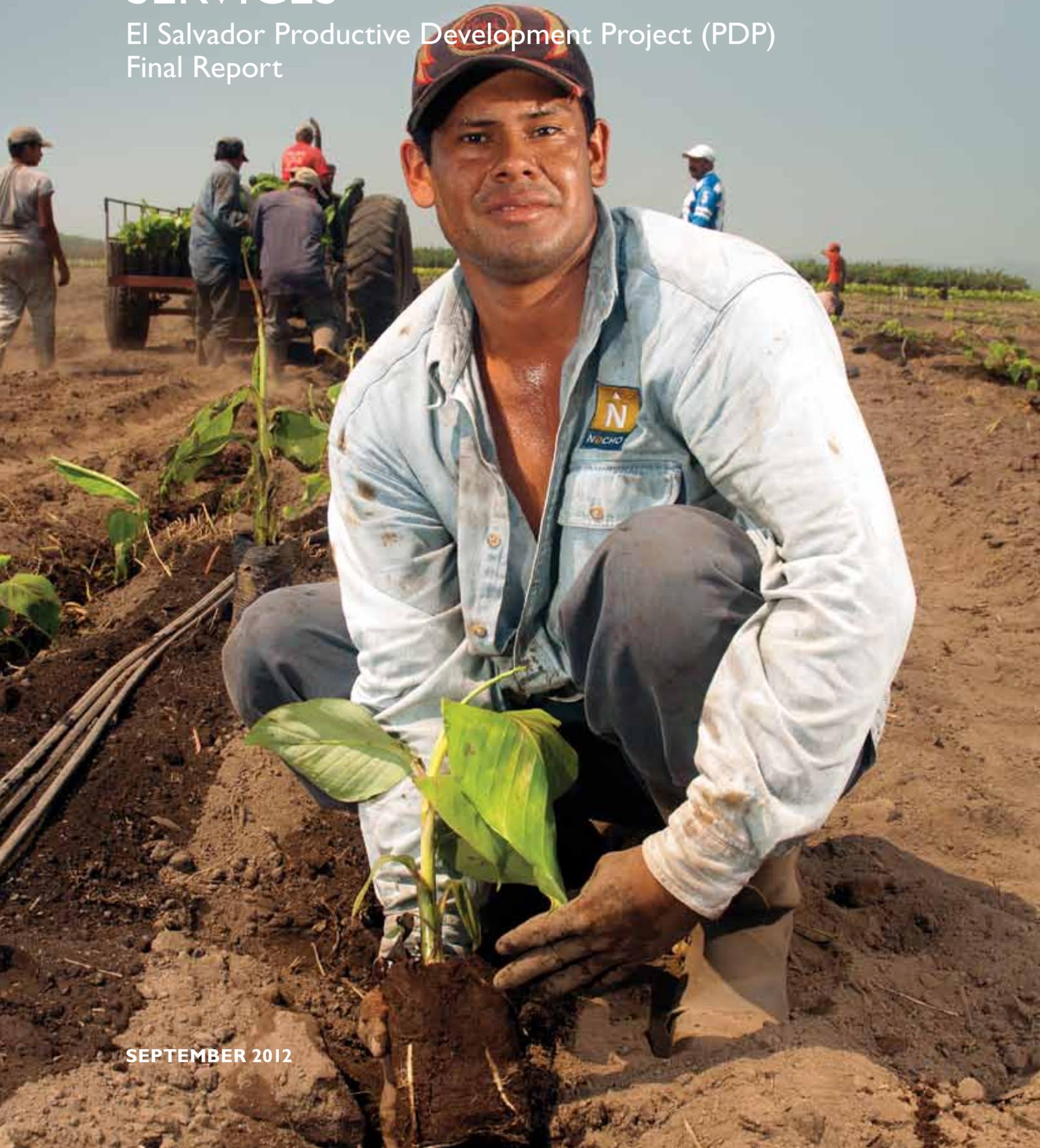


MILLENNIUM  
CHALLENGE CORPORATION  
UNITED STATES OF AMERICA



# PRODUCTION AND BUSINESS SERVICES

El Salvador Productive Development Project (PDP)  
Final Report



SEPTEMBER 2012



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Final Report

Contract No. 46





**Nancy Mejía, a young woman from the Northern Zone, poses in front of a refrigerated milk storage tank located in the Cassie Stern Center (Suchitoto municipality, Cuscatlán department).**

# CONTENTS

INTRODUCTION .....	1
RESULTS .....	7
BEYOND THE NUMBERS — THE STRATEGY .....	17
TOOLS THAT CONTRIBUTED TO SUCCESS .....	69
LESSONS FROM THE PDP EXPERIENCE .....	79
CONCLUSIONS.....	87
BEYOND PDP .....	91

**COVER:** Oscar Edgardo Moscoso, member of the San Carlos de R.L. Cooperative, plants a plantain seedling of the dwarf horn variety (El Paisnal municipality, San Salvador department).

PDP

**INSIDE COVER:** Vegetable plot in Cantón Las Pilas (San Ignacio municipality, Chalatenango department).

PDP

**BACK COVER:** A member of the horticulture technical team enters data about a vegetable plot, which will be uploaded to PDP's comprehensive monitoring system.

PDP



A farmer holds a tomato seedling that is ready to be transplanted.

## CHAPTER ONE

# INTRODUCTION

In 2006, the Millennium Challenge Corporation (MCC) announced that lower-middle-income countries<sup>1</sup> would be eligible for funds from the Millennium Challenge Account. The government of El Salvador created a high-level commission to work on meeting the eligibility requirements, and on November 8, 2006, MCC's board of directors selected El Salvador as a funding recipient, approving the country's proposal to help lift more than 150,000 Salvadoran men and women out of poverty and improve the standard of living for 850,000 people in the country's Northern Zone.

A month later, the Salvadoran Legislative Assembly unanimously ratified and approved

a grant agreement between the U.S. and Salvadoran governments. The government of El Salvador then created the Millennium Fund of El Salvador (known by its Spanish acronym, FOMILENIO) to manage the agreement.

A national program to promote sustainable development in the Northern Zone, FOMILENIO aims to contribute to poverty reduction through economic growth, with three objectives:

- Boost the production of goods and services and increase job opportunities (Productive Development Project)
- Increase education and skills among Northern Zone

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1. According to the World Bank, countries with per capita income less than \$1,025 are considered "low income." (Middle income is \$1,026 to \$4,035, upper-middle income is \$4,036 to \$12,475, and high income is \$12,476 or more). Source: <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>. Accessed August 2012.

MAP I. POVERTY RATES IN NORTHERN ZONE MUNICIPALITIES



residents so they can take advantage of employment and business opportunities and improve basic social infrastructure in their communities (Human Development Project)

- Reduce the time and cost of moving people and commodities within the region (Roads Connectivity Project)

Using a public consultation process, the government of El Salvador concluded that the Northern Zone is home to half of the country’s poorest municipalities (see Map 1) and is regarded as the region most affected by the civil war of the 1980s. For these reasons, its inhabitants need specific types of support to boost their development,

so that they can participate in the economic and social life of the rest of the country, and the region. The Northern Zone spans 7,500 square kilometers — one-third of the country’s total area — and its 850,000 inhabitants represent 12 percent of the country’s population. The Northern Zone comprises 94 municipalities in the departments of Santa Ana, San Salvador, Chalatenango, Cuscatlán, La Libertad, Cabañas, Morazán, San Miguel, and La Unión. It is an important source of water, energy, and biodiversity. Four electrical plants operating along the Lempa River generate one-third of the country’s power. The Lempa River also provides one-third of the water supply for the San Salvador metropolitan area.

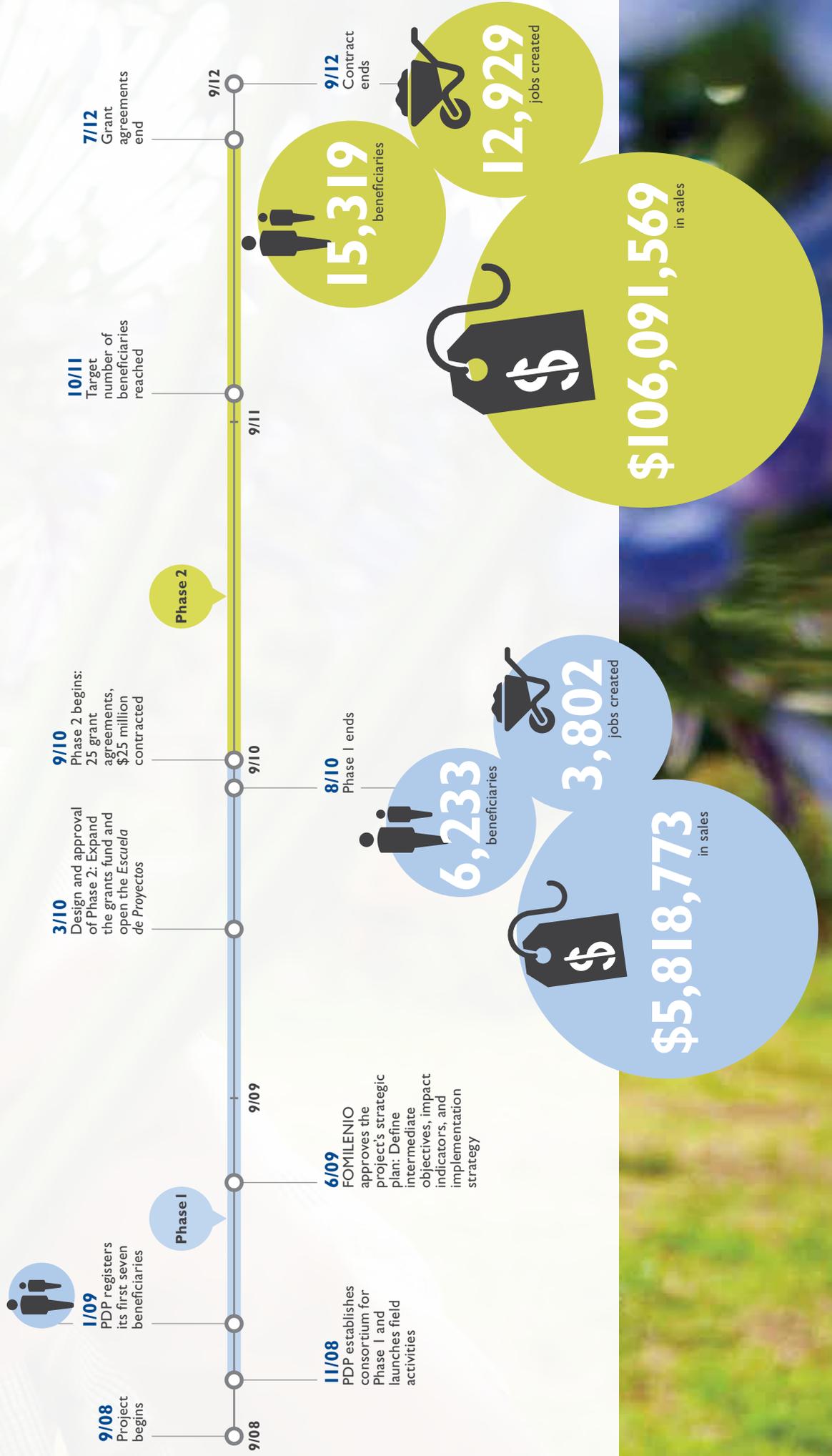


A spray irrigation system waters a vegetable plot in Cantón Las Pilas (San Ignacio municipality, Chalatenango department).



A horticulture program beneficiary prepares some flowers in Cantón Las Granadillas (La Palma municipality, Chalatenango department).

# PROJECT TIMELINE





A young Hass avocado fruit in Cantón Las Granadillas (La Palma municipality, Chalatenango department).

## CHAPTER TWO

# RESULTS

FOMILENIO contracted with Chemonics International for the Production and Business Services activity in September 2008, beginning a 48-month implementation period that ended on September 18, 2012.

During this period, Chemonics and its partners worked to increase the net annual income

from productive activities of 13,000 people in the Northern Zone by at least 15 percent and create at least 10,500 new jobs. These figures represent FOMILENIO's intended impact through this project. To grasp the magnitude of these targets, it is useful to describe both the situation in the Northern Zone when PDP started and the rea-

PDP aimed to boost production of goods and services and employment opportunities through activities in three areas:

### **Activity 1: Support for Production and Business Services**

Technical assistance and training for production systems development

### **Activity 2: Private Investment Support**

Investment loans through the Investment Trust Fund for the Northern Zone (FIDENORTE)

### **Activity 3: Financial Services**

Credit guarantees (PROGARA NORTE) and rural securities and guarantees

Technical assistance in financial services



Sebastián Menjivar, a papaya grower associated with the Business Development Demonstration Center in Cantón El Paraíso, carries papayas from his orchard (Chalatenango department).

sons the project team chose to work as it did.

Although the Northern Zone accounts for just one-third of the country's territory, it is home to half of El Salvador's poorest municipalities and generally has not managed to integrate into the economy of the rest of the country.

## **INSTITUTIONAL FRAMEWORK**

The Productive Development Project was created to help reduce poverty through economic growth in the Northern Zone. To spur economic activity that would boost incomes and demand for labor through productive initiatives and services tailored to rural settings, the PDP team identified three core

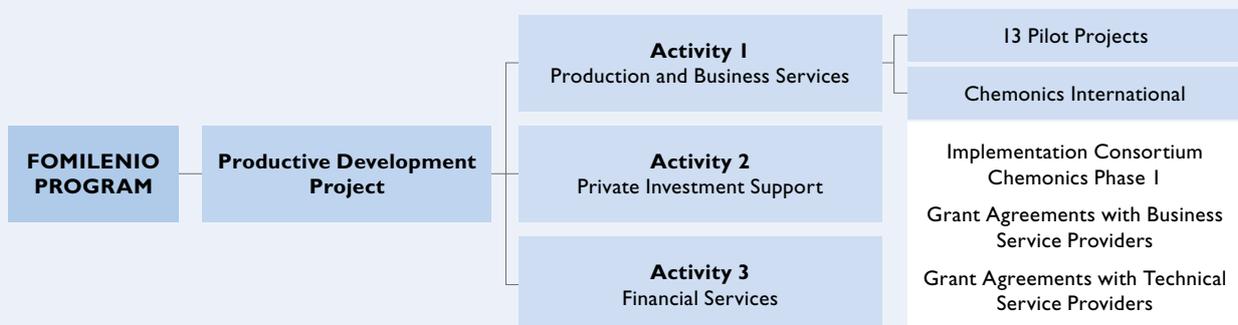
areas for its work: technical assistance and training services for production and business, investment support, and financial services.

Each area was set up as a separate activity with a separate budget and staff resources. Activity 1 initially consisted of 13 pilot projects implemented by national development service providers; Chemonics began its work in September 2008, in what was termed the “full implementation phase.” The Multisectoral Investment Bank (now BANDESAL) was the implementer for Activities 2 and 3.

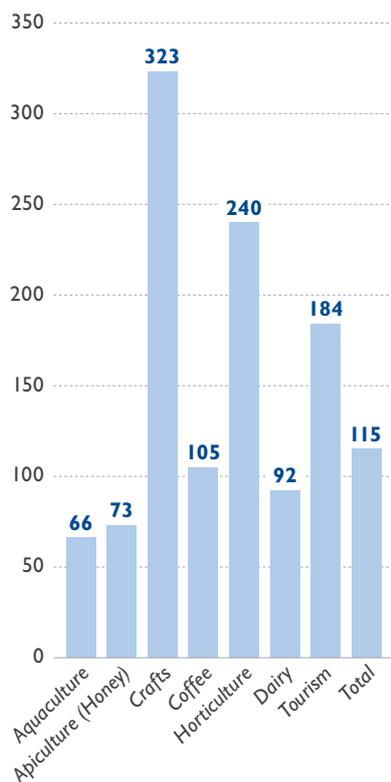
## EXCEEDING EXPECTATIONS

The project team’s original mandate was to contribute to boosting the annual net income of 9,500 men and women in the Northern Zone by 15 percent (referring to income from the productive economic activities targeted for assistance). For example, a dairy farmer earning \$3,000 a year would see his or her income rise to at least \$3,450. Increased incomes were expected to generate a greater demand for labor; the projected target was 7,800 new full-time equivalent jobs (at least 250 work-days a year). At the end of the second year, these pro-

**EXHIBIT I. PRODUCTIVE DEVELOPMENT PROJECT OPERATIONAL STRUCTURE**



**EXHIBIT 2. PERCENT INCREASE IN ANNUAL NET INCOME IN PDP-SUPPORTED VALUE CHAINS**



The exhibit above illustrates the increase in beneficiaries' annual income, calculated by taking annual net income after Year 4 vs. the annual net income they were earning when they began working with PDP (the baseline). This calculation only considers income from the productive activity in which each beneficiary participated.

The total represents average weighted net income for the value chains strengthened by PDP.

jections were expanded: PDP would be able to reach at least 13,000 beneficiaries (with the same increase in income) and contribute to the creation of at least 10,500 new jobs.

The project team worked in five sectors — fruits and vegetables, agroforestry, dairy, tourism, and handicrafts — with the option of incorporating other sectors that were likely to contribute to project targets. Specialty and conventional coffee, aquaculture, and apiculture (honey) value chains were added in August 2010. With forest resources in an advanced state of depletion, the team determined that the timber sector was too risky; rather than working directly in those value chains, PDP's forestry-related work sought to promote appropriate forest policies for the Northern Zone and the country.

The message from FOMILENIO's beneficiaries and civil society was clear, reflecting a combination of frustration and hope: "We are not interested in more of the same." Echoed in nearly every setting, this statement was a call for a different kind of program. No more projects that leave producers in the "same" situation, without clear progress or benefit to their incomes or family well-being. No more projects that seem (from the individual producer's perspective) only to benefit nongovernmental organizations (NGOs) and technical teams.

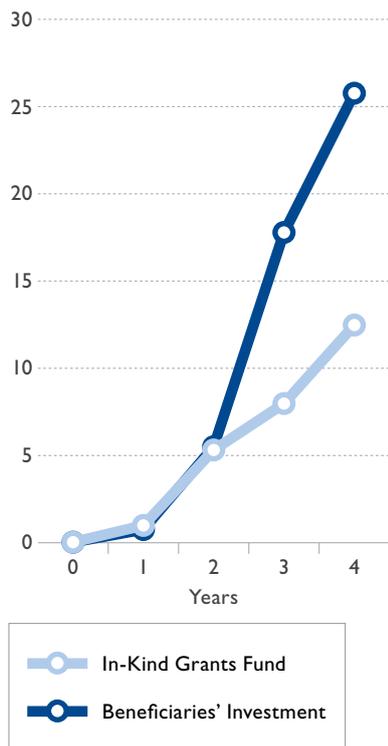
## A FOUNDATION FOR SUCCESS

PDP had sufficient resources, highly trained professional teams, qualified national and international advisors, and an adequate operational budget that could draw on two funding sources. In-kind contributions were used to set up demonstration areas that modeled and encouraged beneficiaries to adopt new technologies. Funds for productive projects followed the model of working through local service providers, used during the pilot phase.

In PDP's original design, beneficiaries were expected to be able to grow their investments by obtaining credit through FIDENORTE while reducing risks through rural insurance and guarantee systems set up through the project's other activity areas.

As the project evolved, more resources became available for the Production and Business Services activity and resources for Activity 2 were reduced; this shift led to the decision to raise the project's targets. Project funds for financing productive projects were also increased, from \$4 million to more than \$12 million. In addition, the project's sustainability mandate meant that it operated as an umbrella organization for national or regional (Central American) managing entities, which would be trained to continue providing services to other

**EXHIBIT 3. RELATIONSHIP BETWEEN BENEFICIARY INVESTMENTS AND IN-KIND GRANTS FUND (MILLION DOLLARS)**



The exhibit above shows the relationship between MCC's net investment in productive processes through PDP and direct investments of farmers in technology adoption. As the graph illustrates, beneficiaries' investment doubled the MCC funding aimed at promoting new technologies.

beneficiaries. In other words, local capacity building was a guiding principle for PDP's interventions.

### INITIAL FINDINGS

After the project's value chain specialists conducted diagnostic studies, they found that none of the target value chains was competitive in its own right. Most of the producers, microenterprises, and medium-sized enterprises that had invested in those value chains — or were using traditional production — were either losing money or not earning as much as they had anticipated. Many farms were going under, private investment was scarce, and productive resources were underutilized. Appropriate, modern, and efficient production technologies were not in use, except in a few areas that had been supported through previous interventions. Lack of competitiveness was mainly due to low productivity. For example, the team found that average daily milk production for traditional dairy farmers who had fewer than 10 cows was seven bottles per cow — well below the regional daily average of 15 bottles per cow found at well-managed dairy farms in the Northern Zone.

At the same time, there was a lack of market vision in productive processes. Almost no one was producing in the conditions required by the market. The land — especially farmland — was highly segmented.

Farm plots averaged less than 1 *manzana* (about 0.7 hectares), hindering the production of basic grains. In areas with access to water for irrigation, the PDP team found average plot sizes of one quarter of a *manzana*. Stock farms were far smaller than what is required for efficient, competitive production on dual-purpose cattle ranches.

Low productivity, limited access to productive resources, and scant market vision are discouraging, but they are not uncommon in the world's developing nations. In El Salvador's Northern Zone, these circumstances were exacerbated by major climatic risks, high levels of migration and the aging of the producer population, crime-related risks, and lack of productive infrastructure, especially for the post-harvest and processing stages. For example, most dairy producers' lack of access to cold storage for milk meant they had to sell much more quickly, leaving them vulnerable to predatory intermediaries and condemning them to perpetually low prices because they could not preserve the milk long enough to reach formal markets.

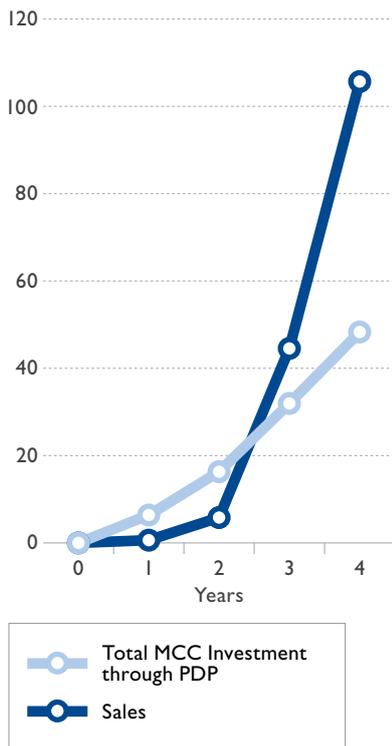
PDP also identified a vibrant domestic market stocked mainly by imports. With slight variations, certain characteristics were evident across value chains:

- A few well-organized wholesale buyers



Julian Oscar Escamía, a member of the San Carlos de R.L. Cooperative, cuts a bunch of dwarf horn plantains in Aguilares municipality (San Salvador department).

**EXHIBIT 4. RELATION BETWEEN DIRECT SALES FROM BENEFICIARIES AND THE TOTAL MCC INVESTMENT THROUGH PDP (MILLION DOLLARS)**



The exhibit above shows the direct impact in sales in the PDP-supported value chains, relative to MCC's total investments under PDP (the Chemonics contract, in-kind grants, and technical assistance grants). Each dollar invested by MCC generated \$2.20 in direct sales.

- A host of intermediaries provisioned locally and with imports
- Emphasis on price rather than quality
- Few formally established businesses; disorganized and scattered suppliers

During PDP's first two years, the team could not work in the Northern Zone regions or municipalities that showed the most potential, because the project began after the pilot projects had already begun activities in the same value chains. Exhibit 2 on page 10 describes the baseline situation for PDP beneficiaries and the value chains added during implementation (specialty coffees, tilapia, and honey), which all demonstrated strong potential to contribute to the economic development of the Northern Zone.

**MEASURING PDP'S SUCCESS**

PDP achieved all of its objectives, and not only in terms of figures (the project's overall results are listed in Exhibit 5). The team also tackled some of the root causes of low competitiveness in the Northern Zone's value chains — focusing on those that would benefit from a finite program working on productive processes in national and regional contexts.

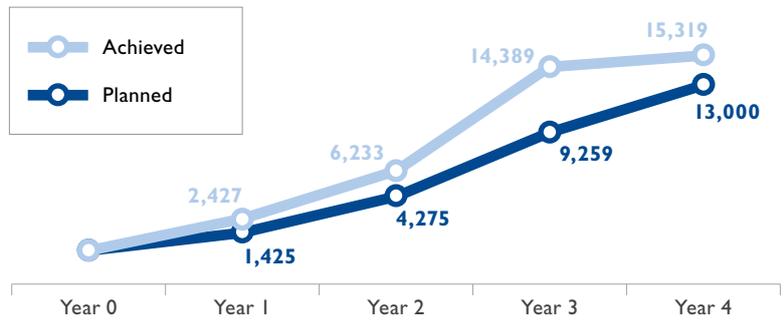
Such an undertaking requires relationships with thousands of people. Directly and indirectly, PDP's production and marketing work touched the lives of more than 15,000 people in the Northern Zone and forged many lasting relationships. PDP knew producers' businesses — what and how much they produce and sell, and how much and to whom it is sold — almost as well as they did.

**EXHIBIT 5. TARGETS AND OUTCOMES**

Performance Measure	Life-of-Project Target	Outcome
Beneficiaries	13,000	15,319
Jobs created	10,500	12,929
MSMEs* assisted	933	602
Hectares assisted	17,554	22,207
Sales	\$82,254,521	\$106,091,569
Private investment	\$10,112,974	\$27,058,024

\*MSMEs = Micro-, small, and medium-sized enterprises

**EXHIBIT 6. NUMBER OF BENEFICIARIES (SEPTEMBER 2008–  
SEPTEMBER 2012)**



By working through local partners, the PDP team made sure every participant benefited from at least one of its three production and business services — training, technical assistance, or small, in-kind contributions.

PDP also influenced beneficiaries’ business activities in at least one of the following areas: boosting productivity,

improving access to markets, or improving business management.

Based on this strategy, the project’s 15,319 beneficiaries saw their incomes grow, and an increase in economic activity that created 3,232,250 work-days. Exhibit 7 summarizes the number of beneficiaries in each project-supported value chain.



### EXHIBIT 7. PDP BENEFICIARIES BY VALUE CHAIN



Carmen Ortiz of the El Salvador Produce cooperative association prepares scallions for market.



Juan Ramón Rivera harvests his greenhouse tomatoes in Cantón Los Planes (La Palma municipality, Chalatenango department).

## CHAPTER THREE

# BEYOND THE NUMBERS — THE STRATEGY

To achieve the project's goals, PDP identified beneficiaries and encouraged them to accept technical assistance and small grants. In early 2009, after a review of the initial work plan, the team launched a new approach.

Adjusting the implementation process entailed risky decisions, a large dose of trust on the part of FOMILENIO, and a coherent, evidence-based proposal. In defining its strategy, the PDP team identified new paradigms and principles for defining success.

The team applied these new principles as they developed manuals on how to obtain and use project resources. Adhering strictly to these guidelines, PDP put \$19 million (through the Technical Assistance Fund and in-kind contributions) up for

competitive bidding for development projects in the selected value chains.

To begin, the PDP team conducted rapid assessments in each value chain, basing their work largely on previous studies by the Multisectoral Investment Bank of El Salvador and FOMILENIO, which were then validated by PDP's experts. The team spoke with stakeholders in every value chain — including trade associations, producers, banks and other financial institutions, wholesalers, intermediaries, retailers, processors, and transport companies — to glean information for program design. PDP then presented its findings to FOMILENIO and integrated them into a work plan, which was approved in June 2009. The team's interpretation of the rapid assessments was informed by the following elements:

**EXHIBIT 8. PDP DEVELOPMENT PARADIGMS AND PRINCIPLES**

<b>PDP's Initial Design</b>	<b>PDP: Re-imagined</b>
Technical assistance	Technology transfer
Design based on supply of services and capacity of national technical service providers	Design based on market demand and production needs to meet that demand
Project designed without producer involvement	Project designed by the producers
Technical service providers as the primary actor; beneficiaries are passive recipients of development	Beneficiaries and producer organizations are the main agents of development

- Real and specific market opportunities
- Competitive potential of the Northern Zone and specific regions
- Benchmarks in the target markets
- Bottlenecks limiting competitive access to target markets
- Accessible, replicable technology to address bottlenecks

PDP also conducted economic assessments of technological innovations and sketched an outline for each program.

As the project team continued providing field-based technical assistance and promoting increased productivity, they used the findings from the assessments in meetings with producer groups that had responded to the announcement. This group included some beneficiaries that had been

receiving project assistance from the outset.

PDP issued its first public request for proposals in July 2009 under its new market- and beneficiary-driven model. After holding several workshops and informational meetings in the Northern Zone on how to submit requests for productive assistance, PDP received 89 project ideas. Realizing that they would have to support the producer organizations and MSMEs in preparing their proposals, the team set up the *Escuela de Proyectos* (Projects School) to help potential applicants define their assistance needs. From that time on, no project proposal was submitted for FOMILENIO's approval without the beneficiaries' involvement and consent.

**PDP'S "TERRITORIAL" APPROACH**

To boost competitiveness within a defined geographic area, PDP's work necessarily incorporated natural and productive

## ESCUELA DE PROYECTOS: A SHIFT TOWARD PARTICIPATORY MANAGEMENT

The *Escuela de Proyectos* was a PDP-sponsored initiative, led by producers and MSMEs in the Northern Zone, which developed project proposals using a participatory approach and ongoing consultation with beneficiaries.

resources, private investment levels, and technology. The project team used geographic information systems and satellite information to analyze each area's potential. Map 2 on page 20 offers a detailed view of soil types in the Northern Zone — one example of how the project used technology to understand beneficiaries' needs and potential. Using this type of information as a baseline, PDP's staff carried out field visits and consultations with producer groups and established organizations to clarify each target area's competitive potential. Local government support was crucial in helping to legitimize PDP's presence and win the people's trust.

PDP designed specific interventions for each program based on the local potential identified during the mapping and consultation exercises, subdividing the Northern Zone according to its physical and social productive features, mainly in the dairy and horticulture value chains.

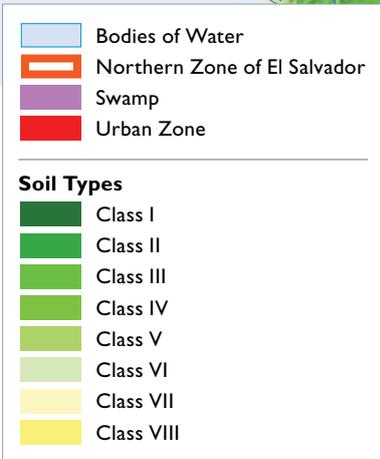
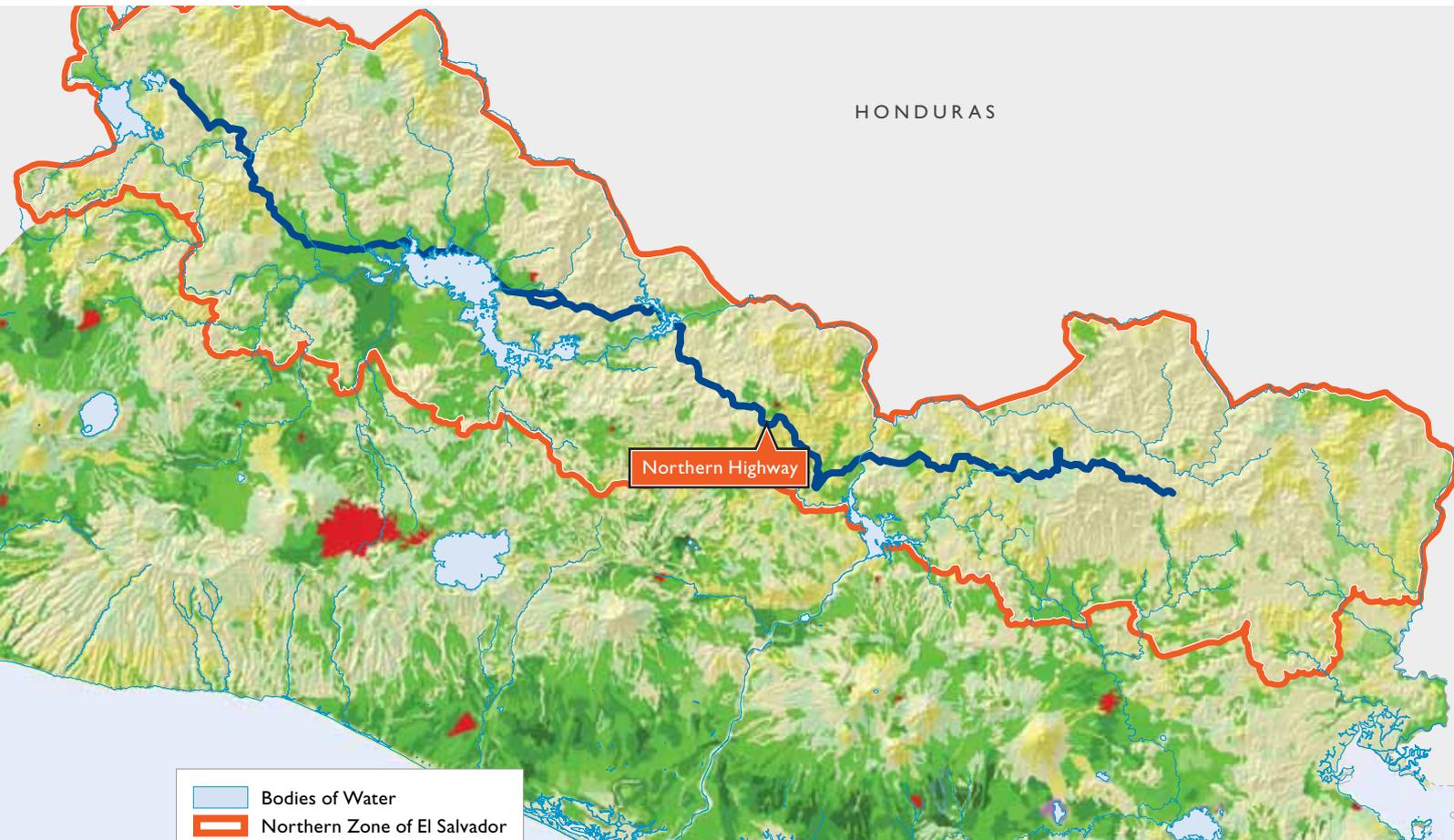
The team's research also informed decision-making related to the forest products value chain. In light of the

advanced state of deforestation and erosion of genetic forest resources PDP recommended that FOMILENIO pursue public consultation on forest policy, rather than productive projects. At the heart of this recommendation was a shift from a forest-timber approach to one focused on environmental service provision.

During the PDP implementation period, a national forest policy was developed in conjunction with civil society and submitted to the Salvadoran government. Exhibit 9 on page 21 illustrates the consensus-building process that was used to develop the proposal. As of August 2012, the proposal was before the executive branch.

In addition to designing specific interventions for each value chain it supported, PDP developed productive projects for related value chains, beginning with a productive unit (a farm, workshop, or tour operator) and then working through a *centro de desarrollo empresarial demostrativo* (business development demonstration center) — a model productive unit used for disseminating technology.

MAP 2. SOIL TYPES IN THE NORTHERN ZONE

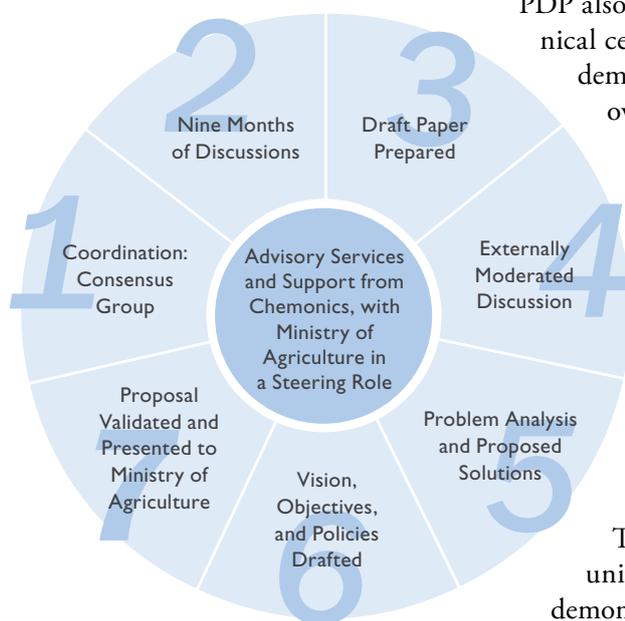


About 25 productive units are grouped around each demonstration center, and their owners or managers attend *escuelas de campo* (field schools) or classes at the demonstration units at scheduled intervals.

The field schools were the core of PDP’s technology transfer model, replacing the traditional approach of providing technical assistance during visits to individual farms. A productive specialist was responsible for

each field school, working with two assistants (recent graduates of a university or technical program related to the field school’s area of focus). The productive specialist conducted most of the training sessions, with the assistants conducting follow-up visits to confirm that producers were using the new technology on their farms. After 10 to 15 months of training, a producer had a significant level of mastery over the productive phase and was ready to take over man-

**EXHIBIT 9. CONSENSUS-BUILDING PROCESS TO DEVELOP THE FORESTRY POLICY**



agement and development of his or her business.

PDP also offered technical certification to demonstration center owners, many of whom doubled as local promoters of technology and were in a position to provide ongoing support for local productive processes.

The productive units, including the demonstration units, could choose to concentrate their offerings in *centros de acopio y servicios* (collection and service centers), some of which operated with PDP's support. These centers formed part of the *centros de negocios y multiservicios* (business and multiservice centers) or were connected to the market. PDP's work created or strengthened these centers in the dairy, handicrafts, horticulture, coffee, and tilapia value chains.

The productive units, demonstration centers, and collection and service centers were essential elements of PDP's strategy for creating and strengthening productive capacity in the Northern Zone. The business and multiservice centers contributed to the project's business strategy. Exhibit 10 on page 22

describes the main functions of each entity.

Working with organized producer groups to clarify how productive projects would be implemented, PDP used this format to organize its activities in the dairy, horticulture, tourism, and handicrafts value chains, and in three new value chains: coffees, aquaculture, and apiculture. After receiving project terms of reference, FOMILENIO's pre-certified service providers prepared project proposals, and implementers were selected by FOMILENIO and producer committees. According to the producers, this was the first time they had been given the opportunity to select the service providers and professionals that would be responsible for technology transfer and training; it was also their first access to transparent information about the budget for each activity.

The producer committees operated throughout the life of the productive projects and participated in monitoring and supervision alongside PDP's technical team.

As a result of this process, FOMILENIO signed 25 grant agreements with local service providers for five projects, 22 for technical aspects and three for business services. In this way, all available funds were allocated two years before PDP closed and results were assured, even though the expected results had been increased significantly.

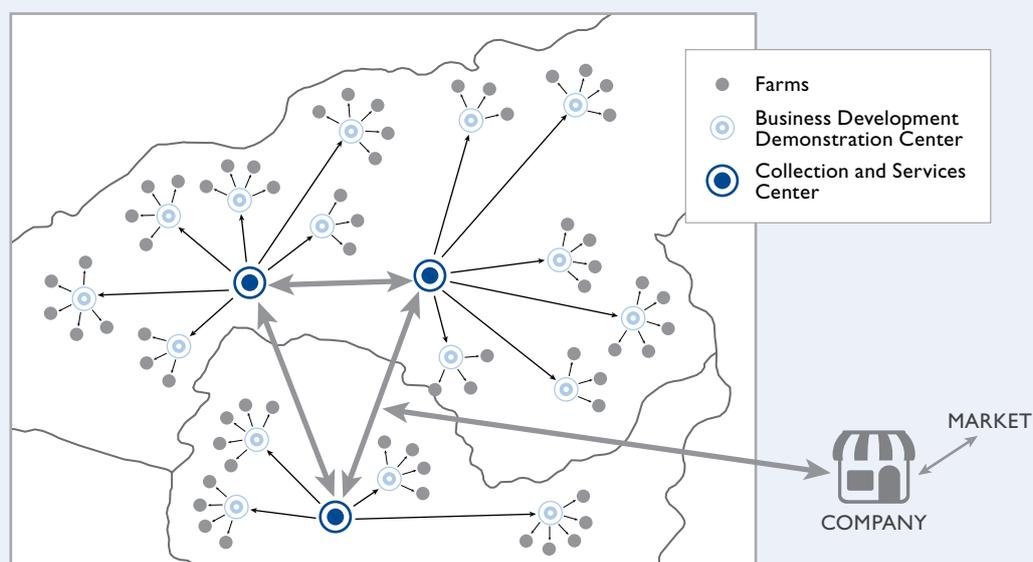


A member of PDP’s horticulture technical team records follow-up information from Federico Quijada’s tomato plantation in Cantón Los Planes (La Palma municipality, Chalatenango department).

**EXHIBIT 10. INTERVENTION MODEL**

Productive Unit	Business Development Demonstration Center	Collection and Services Center	Business and Multiservice Center
Beneficiary-owned	Model farms and business development schools	Collection and distribution centers for agricultural inputs and products	Business and multiservice centers
	Technology transfer	Collection of inputs for the development of production systems	Planning
	Capacity building and knowledge transfer	Collection, classification, and quality control of horticultural products	Business management Collection, classification, and packaging
Primary production		Collection	Processing and marketing
Development intervention strategy			Business strategy
Technical service providers		Business service providers	

## EXHIBIT II. TERRITORIAL INTERVENTION MATRIX



PDP

### HORTICULTURE PROGRAM

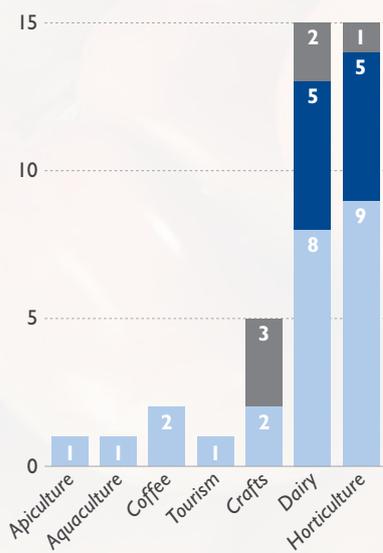
El Salvador is a net importer of fruits and vegetables, many of which can be produced competitively at the local level. This was common knowledge long before FOMILENIO, but despite the efforts of a number of programs, attempts to harness the enormous potential of the domestic market had not been successful, at least not on an adequate scale.

The fruits and vegetables value chains were conceived as separate programs, but their similarities — and the overlap in wholesalers, retailers, logistics, and beneficiaries — led PDP to integrate them as a single

“horticulture” program. The combined value chain became the largest PDP-supported program, accounting for nearly half of the total project costs and beneficiaries and demonstrating significant results:

- The program enabled 84 percent of producers to include fruit or vegetable production among their activities for the first time.
- FOMILENIO’s investment in horticulture generated \$25,043,144 in incremental sales and leveraged \$17,922,860 in investments from small and medium producers for the development of their businesses.

**EXHIBIT 12. NUMBER OF OPERATIONAL AND MONITORING STRUCTURES BY VALUE CHAIN**





These tomatoes were gathered at the Río Chiquito Collection and Services Center in the northern region of Chalatenango.

A natural resources assessment confirmed that there were no ecological barriers to producing an array of fruits and vegetables in the Northern Zone. On the contrary, the differing altitudes in the region are conducive to a diverse supply of produce during much of the year. The one important obstacle to harnessing the potential for increased productivity was farm surface area. Conditions are best on the smallest plots: the size of a *minifundio*, or small land holding, correlates directly with soil quality and climate for horticulture. However, the small farm size prevalent in the region represents a challenge for technical assistance and access to markets.

To tackle these limitations, PDP designed a program to create economies of scale through associations, which would act as conduits for technical assistance, training, inputs, and marketing services. The project team supported the establishment and operation of El Salvador Produce, a cooperative that included more than 40 producer

associations, and promoted a strategic partnership between El Salvador Produce and Grupo Calleja, which owns some 86 supermarkets in the country and is committed to supporting domestic production. USAID was also brought into this partnership, funding a public-private partnership through its Global Development Alliance. At the time, this partnership between two U.S. cooperation agencies (USAID and MCC) was the only one of its kind in the world.

PDP established 245 business development demonstration centers, which were visited by more than 7,400 producers (men and women) for training in the type of horticulture production most appropriate for their areas. As a result, 10,601 additional hectares of fruits and vegetables were farmed during the life of the project, producing 107,851 additional tons of produce. Nearly all of this (94 percent) was sold on the domestic market; the remaining 6 percent went to on-farm consumption.

### EXHIBIT 13. HORTICULTURE PROGRAM ACHIEVEMENTS

Indicator	Life-of-Project Achievement (09/2012)	Project Target	Percent of Target Achieved
Beneficiaries	7,482	6,200	121%
Jobs created	8,122	6,800	119%
MSMEs assisted	70	20	350%
Hectares assisted	10,601	8,374	127%
Sales	\$25,043,144	\$15,180,427	165%
Private investment	\$17,922,860	\$5,570,252	322%



Vegetable farmer José Florencio Villeda harvests radishes on his plot in Cantón Las Pilas (San Ignacio municipality, Chaltenango department).

PDP worked with beneficiaries to install farm technology and establish producer technical assistance services that raised the quality and productivity of horticulture. Project contributions included the following:

- Installing 598 hectares with irrigation and 224,000 square meters of greenhouses. The project also built macro- and micro-tunnels, planted
- 3,622,856 fruit seedlings, and introduced \$143,000 worth of high-quality seeds. This represents an investment of \$17,922,860 in assimilating recommended technology and crop establishment and management by PDP's beneficiaries.
- Installing and certifying 12 plots farmed with good agricultural practices (GAP) to

serve as sources of technology dissemination and models of environmentally friendly production. Five of these plots were certified, one for each region in the Northern Zone, and four of the 12 plots were installed on commercial farms, each with a surface area of more than 5 hectares.

- Setting up five collection and service centers, three of which were still operating commercially when PDP ended. One of these, known as the Business and Multiservice Center, is equipped with cutting-edge technology for post-harvest management and refrigerated transportation. The center is owned by producers' organizations through El Salvador Produce.

PDP encountered significant challenges in structuring the supply (in other words, organizing producers and their production flow). Although this may be the most effective

way for small-scale producers to gain a significant market share and strengthen their bargaining capacity, their preference for negotiating directly with intermediaries made it difficult to persuade them to direct their supply through the collection centers.

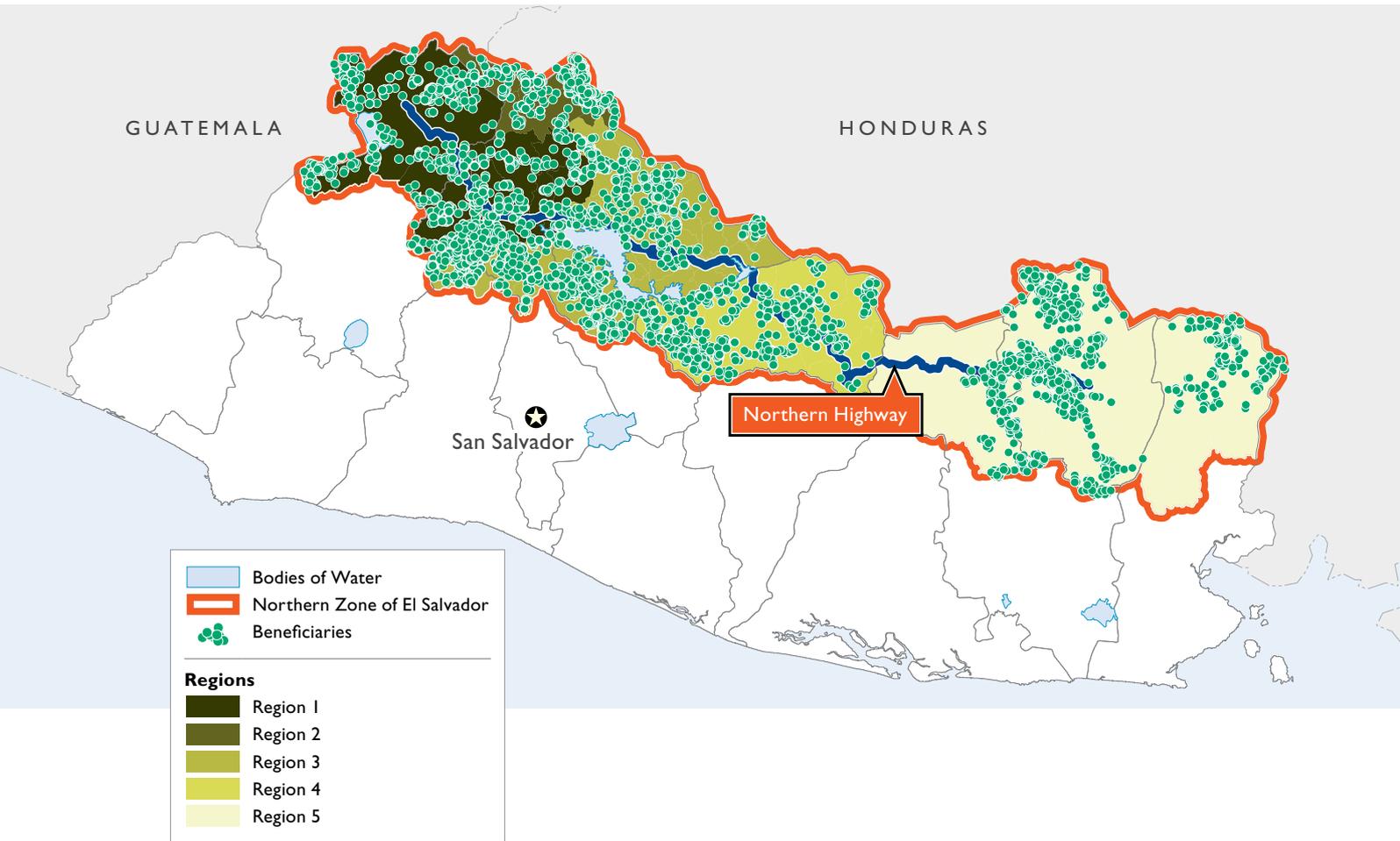
Demand in El Salvador remains high. Despite significant increases, however, production still cannot meet that demand. Meanwhile, small local markets that usually provision themselves in San Salvador can now stock locally. This is part of what made it difficult to structure the supply, but it means that PDP's beneficiaries are doing good business.

PDP also promoted private investment to encourage the creation of more medium or large commercial farms, and selected avocado, pineapple, plantain, and greenhouse tomatoes as the crops with the best export potential. The project team

**EXHIBIT 14. FOMILENIO AND PRIVATE INVESTMENT IN SPECIAL PROJECTS FOR CROP ESTABLISHMENT**

	<b>FOMILENIO</b>	<b>Private Investment</b>	<b>Total Cost</b>
Pineapple: 10 <i>manzanas</i>	\$96,000	\$54,000	\$150,000
Papaya: 13 <i>manzanas</i>	\$51,000	\$40,000	\$91,000
Plantain: 50 <i>manzanas</i>	\$180,000	\$220,000	\$400,000
Avocado: 10 <i>manzanas</i>	\$20,000	\$20,000	\$40,000
Total investment	\$347,000	\$334,000	\$681,000
Percent of total investment	51%	49%	100%

MAP 3. DISTRIBUTION OF HORTICULTURE PROGRAM BENEFICIARIES



also identified private investment models for greenhouse tomatoes. As Exhibit 14 illustrates, PDP partnered with farm owners and one cooperative to establish 83 *manzanas* of commercial crops.

### DAIRY PROGRAM

Before PDP, dairy production in the Northern Zone was hindered by low prices, fierce competition with Honduran and Nicaraguan products, low productivity, expensive food inputs, and a lack of specific policies to protect and support the sector.

By the time PDP ended, this situation had reversed. Salvadoran dairy producers were commanding high prices and demand was steady. PDP’s dairy sector beneficiaries were better able to harness market advantages than their peers who did not have access to support for production, nutrition, hygienic milking practices, efficient organizational management, and agribusiness.

PDP’s dairy program boosted producers’ net incomes, created jobs, and improved productivity and sales. The program’s success

## EXHIBIT 15. DAIRY PROGRAM ACHIEVEMENTS

Indicator	Life-of-Project Achievement (09/2012)	Project Target	Percent of Target Achieved
Beneficiaries	4,391	3,780	116%
Jobs created	3,251	2,705	120%
MSMEs assisted	142	19	747%
Hectares assisted	9,843	7,417	133%
Sales	\$66,209,692	\$53,648,288	123%
Private investment	\$4,292,843	\$1,938,063	222%

can be attributed to a combination of factors that helped enhance the competitiveness and market presence of dairy farmers in the Northern Zone. Dairy farms increased their productivity significantly with PDP's assistance: net annual milk production increased by 12,207,833 bottles.

The quality of the milk supply improved as volume increased. Each year, 24,712,740 bottles were classified as having been produced with “hygienic practices” (ideal for human consumption). Most of the country's most-developed dairy industries (members of the Salvadoran Association of Dairy Farmers and Industries) regularly source milk from the Northern Zone. This was rare before PDP.

Working with 4,391 dairy farmers, who owned a combined total of 42,041 head of dairy cattle, PDP installed

488 new milking parlors and 79 milking machines. The dairy program covered 9,843 total hectares, including the installation of 1,538 hectares with improved pastures, 364 hectares with spray irrigation systems, and 542 hectares of grasslands for ensiling. The project team also established 144 business development demonstration centers to transfer technology through field schools and on-farm technical follow-up.

To help improve market access, PDP worked with two cooperative ventures to outfit 81 refrigerated tanks with a daily capacity of 200,000 bottles, transported in six refrigerated tanker trucks also provided by the project. The two producers' cooperatives, Sociedad Ganadera de la Zona Norte and Lácteos Morazán, are ready to tackle new challenges and continue competing in domestic markets. The “Agribusiness Program” section at the end of this chapter describes PDP's work to strengthen these ventures.





**PDP beneficiary Rosa Mérida Meza, a dairy farmer, is interviewed by a member of PDP's technical team, for the project's monitoring system.**

### **GLASS OF MILK: A TRUE PARTNERSHIP**

Public-private partnerships like the Glass of Milk program — involving dairy farmers, large enterprises, and the state — are possible when all sides benefit from the outset and there is a clear plan guided by experts.

This new capacity to supply high-quality milk emerged alongside a Salvadoran government policy to improve the health of public school students in the country's poorest municipalities. This fortunate timing helped bring about the presidential Glass of Milk program, which uses milk produced exclusively by members of Sociedad Ganadera de la Zona Norte

and processed through La Salud Cooperative. The program is a successful public-private partnership with significant social value.

To complement its other inputs, PDP trained personnel at different levels to ensure access to technology: 47 specialists working in the Northern Zone trained 36 new professionals

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**“ Our hope has  
been restored,  
and for this  
we thank  
FOMILENIO  
and the  
technical  
service  
providers. ”**

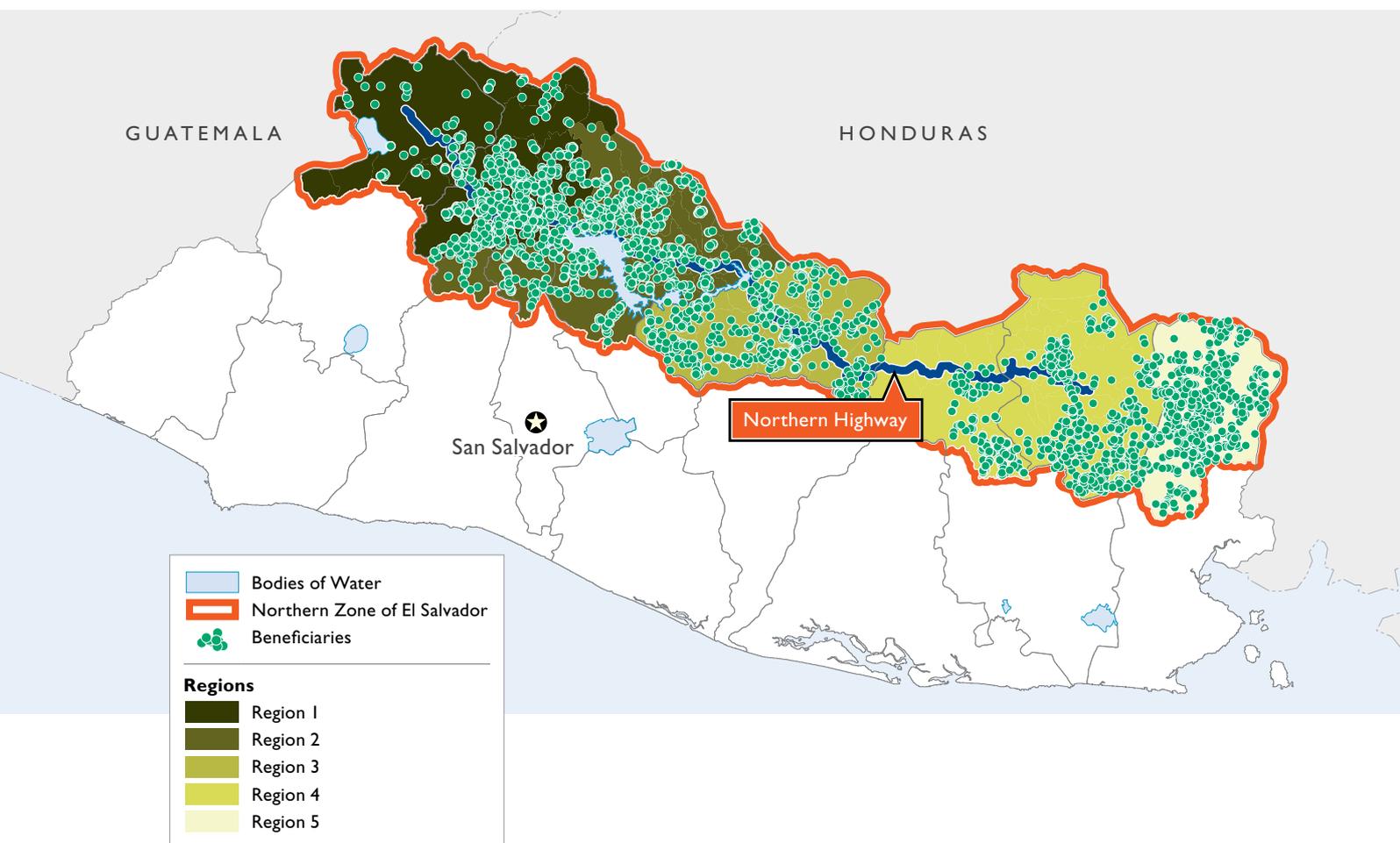
**SAÚL AGUILAR,  
CATTLE FARMER,  
AGUILARES MUNICIPALITY,  
SAN SALVADOR  
DEPARTMENT**

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MAP 4. DISTRIBUTION OF DAIRY PROGRAM BENEFICIARIES



in PDP's technology package and 287 community promoters in dairy herd management. They also trained 37 insemination technicians. These human resources are now available to ensure continual technological advancement and help foster sustainability for PDP-promoted businesses.

### HANDICRAFTS PROGRAM

In El Salvador, most producers and vendors of rural handicrafts are women, who turn to handicrafts because they do not have access to other productive resources or opportunities to earn income. Many of the skills

needed to produce hand-crafted products are passed from parent to child over generations (especially from mother to daughter). In El Salvador, a typical example is mat- and hammock-weaving.

The PDP team selected handicrafts as a project-supported area mainly for the reasons outlined above: a large group of women needed and wanted to improve their incomes, but had little or no access to land, water, or capital for agricultural production. In addition, there were clear market opportunities and clear potential to increase participants' incomes.

**“ Our handicraft collections are a joint effort of artisans, designers, and technical support, which allows us to position ourselves in the market of innovative handicrafts. ”**

**MARISOL RAMÍREZ,  
MANAGER,  
ACOPROARTE,  
EL RENACER,  
CHALATECO**

PDP identified artisans’ organizations and workshops that were doing good business in the Northern Zone as sources of good practices and as management models that could be replicated or, better yet, connected with individual artisans.

PDP’s initial assessment of the handicrafts value chain identified several challenges: limited local raw materials, lack of innovation in designs, and obsolete marketing methods.

In keeping with its overall strategy, the project team sought to boost productivity, improve market access, and support the business management capacity of cooperative ventures working in handicrafts. PDP selected the two most established handicraft businesses, El Renacer Chalateco and Moje, and 148 craft workshops for support. Of the workshops, 74 were run by individual artisans and 74 represented groups of artisans.

PDP’s approach was to strengthen its beneficiaries’

capacity to design new products and use modern marketing techniques. The project team designed the handicrafts program based on good practices in technology transfer, potential for sustainability, and the following principles, drawn from the initial assessment:

- Market opportunity
- Use of locally available raw materials (new and recycled)
- Methods easily assimilated by small-scale artisans in terms of cost and process
- Cost-efficiency (generates net income)
- Uniqueness

PDP’s team culled marketing techniques from the fashion industry, such as seasonal collections and national events to present new designs to wholesalers and the general public, as well as more traditional industry techniques such as participation in fairs, sending samples

**EXHIBIT 16. HANDICRAFT PROGRAM ACHIEVEMENTS**

<b>Indicator</b>	<b>Life-of-Project Achievement (09/2012)</b>	<b>Project Target</b>	<b>Percent of Target Achieved</b>
Beneficiaries	1,192 (1,009 women)	889	134%
Jobs created	289	209	138%
MSMEs assisted	124	69	180%
Hectares assisted	-	-	-
Sales	\$1,214,428	\$995,646	122%
Private investment	\$756,554	\$354,100	214%



Two PDP beneficiaries from the Pájaro Azul workshop mark out a pattern for an item of clothing (Suchitoto municipality, Cuscatlán department).

The development model based on select markets, as in the fashion industry, is also effective for crafts. Borrowing a strategy used in the high fashion industry, seasonal collections are created for pre-identified niches, with a supply of designs tailored to the requirements of those niches.

to importers, and direct contact with individual wholesalers.

PDP's original design did not anticipate in-kind contributions for this value chain. Recognizing the limited investment capacity of small-scale artisans and others entering the business for the first time, however, the project team sought FOMILENIO's approval for resources to provide small equipment and other supplies. These donations helped boost workshops'

productivity and facilitated technology assimilation through ACOPROARTE (a social and economic development cooperative) and Moje (an artisans' organization) using a revolving fund model.

Through its work with 1,192 artisans, nearly all of whom (1,009) were women, PDP created the equivalent of 279 new jobs and generated more than \$1 million in incremental sales for its beneficiaries.

### OTHER VALUE CHAINS

Support to aquaculture, coffee, and apiculture were not part of FOMILENIO's original design for PDP. Project support for these value chains emerged after the decision not to participate directly in the forest products value chain (except for three small experiences with timber processing and sales and an effort to promote bamboo farming and processing). Instead, the project team selected three other value chains that relate to or are dependent on forests or non-timber forest products: aquaculture, specialty and traditional coffees, and apiculture.

### Aquaculture

The PDP team identified aquaculture, mainly tilapia, as an alternative for small- and medium-scale producers in the Northern Zone. Small tilapia farming projects can be viable and competitive, especially given the existing and potential demand. PDP identified a significant market demand — nearly 50 percent of domestic demand for tilapia was not being met. The team also found potential market opportunities in Guatemala and Mexico, where demand was so high that it could triple the Salvadoran supply.

MAP 5. DISTRIBUTION OF HANDICRAFTS PROGRAM BENEFICIARIES



The project team identified groups of tilapia producers in the Northern Zone, most of which were producing without the benefit of technology, resulting in poor yields. The situation seemed to fit PDP's criteria for support:

- Market opportunity and producers were present.
- Producers were somewhat organized, and were open to improving their productivity and sales.
- Productivity was low, but technology was available.

There was some risk to working in this new value chain. Unlike other value chains, PDP had no choice but to work with existing producers; the team could not encourage people to start this type of business, mainly because of the development cycle for this productive activity and the timing in the project period. Another risk was the maturity of the organizations

in the sector. PDP had neither the time nor the resources to start from scratch. Bearing these limitations in mind, PDP began shaping this productive project in June 2010.

After meeting with producer groups and conducting initial assessments, PDP worked with participants to design a productive project to boost on-farm productivity and improve marketing and sales. The project team worked through an association of producer organizations, equipping it with infrastructure and equipment for fish cleaning and packing, cold chain handling, and distribution.

In December 2010, in collaboration with 17 organizations and 530 tilapia producers, PDP launched the Increased Competitiveness of the Aquaculture Value Chain in the Northern Zone project. PDP's assessment had revealed that some producers were more established than others, and that tilapia production was not the main

#### EXHIBIT 17. AQUACULTURE VALUE CHAIN ACHIEVEMENTS

Indicator	Life-of-Project Achievement (09/2012)	Project Target	Percent of Target Achieved
Beneficiaries	530	519	102%
Jobs created	240	129	186%
MSMEs assisted	-	-	-
Hectares assisted	-	-	-
Sales	\$2,458,849	\$1,576,539	156%
Private investment	\$815,560	\$658,960	124%



**Claudia Portillo of the Cerrón Grande Dam Fishermen's Association harvests tilapia for market.**

PDP's model for developing the aquaculture value chain focused on ensuring more efficient production and fewer losses through sampling, registries, use of measurement instruments, and proper feeding. The project also promoted higher densities, additional sales of value-added products, and self-managed business development.

source of income for all beneficiaries. Using this information, the team created customized assistance packages to meet the needs of more established producers and less developed ones.

Both types of producers faced technological limitations that undermined their productivity, and PDP's work focused on remedying this situation. Lacking registries or sampling, producers had no information about the biomass present in the water. Several other problems hindered production:

- Improper food management, especially management of protein content for each

growth stage, and improper feeding practices.

- Long production cycles significantly reduced the yield in each pond or cage.
- Water quality is crucial for tilapia development. Water must be tested regularly, but most producers did not have access to basic testing instruments or know how to use them.
- With few producers using aerators to oxygenate their ponds, stocking density was very low (just four fry per square meter). Pond management did not include proper





Jenny López and Claudia Portillo of the Cerrón Grande Dam Fishermen's Association spread a net they use to harvest pond-raised tilapia.

post-harvest practices, and producers were not using geomembrane (plastic) or high-density polyethylene liners to prevent pond runoff.

- In the processing stage, producers could not add value to their products without a processing plant (to scale, gut, pack, and market fish on ice) or refrigerated transportation.
- Business management was poor. The sector was not united through a representative organization that could pursue business deals.

In keeping with its overall strategy, PDP sought to boost productivity, create added value, improve market access, and build capacity for business management among aquaculture associations, fishing associations, and cooperatives farming tilapia in ponds and cages. The team tackled bottlenecks in the value chain, taking into account each organization's level of development and introducing practices such as registries and sampling at two-week intervals. PDP also provided water quality testing equipment and aerators to allow producers to increase production density, and demonstrated the use of geomembrane liners.

In addition, PDP supported the establishment of a business association for small-scale tilapia producer associations, enabling them to generate added value through a processing plant that was equipped and upgraded

with project funds. Not every group was interested in participating in this new organization, mainly because of the location of the processing plant, which is owned by all of the participants rather than a single group.

The plant has facilities for fish scaling, gutting, packing, ice production, and a refrigerated transportation service. The plant was installed through a concession arrangement on the lands of an organization with the largest number of tilapia-producing members and affiliates of the business association in El Paraíso, Chalatenango. In this way, PDP leveraged funds from the Italian Ministry of Foreign Affairs. An Italian NGO will continue the work PDP started, bringing the tilapia producers' organization to the point of sustainable management.

Through these interventions, PDP generated more than \$725,915 in incremental income from \$2,187,271 in sales of more than 2.5 million pounds of fish. More than 240 permanent jobs were created in the process of boosting competitiveness in the chain.

### **Specialty Coffees**

In recent years, El Salvador has distinguished itself in the specialty coffee market, mainly for its high-altitude and medium-altitude coffee. In 2007 and 2011, the winners of the Cup of Excellence — the specialty coffee competition and auction held throughout the world — were from *canton* El Túnel,

**EXHIBIT 18. SPECIALTY AND TRADITIONAL COFFEES VALUE CHAIN ACHIEVEMENTS**

Indicator	Life-of-Project Achievement (09/2012)	Project Target	Percent of Target Achieved
Beneficiaries	610	600	102%
Jobs created	311	301	103%
MSMEs assisted	3	-	-
Hectares assisted	828	828	100%
Sales	\$2,012,663	\$650,000	310%
Private investment	\$2,290,994	\$917,501	250%

Chalatenango, the mountainous region in the Northern Zone. Roberto Ochoa of La Montaña farm and Ignacio Gutiérrez of La Roxanita farm both placed with a Pacamara variety. Coffee producers from the Northern Zone participate in the Cup of Excellence every year, and their coffee always places in the top 10 to 15 best specialty coffees in the country.

PDP’s assessment revealed the following barriers to improving coffee producers’ incomes:

- Deficient harvesting and post-harvest processing methods and technology
- Lack of access and oversight in final processing
- Lack of familiarity with marketing mechanisms in the specialty coffee market
- Practices detrimental to environmental conservation

PDP found strong potential for high-quality coffee, at least in the pre-harvest stage. After the harvest, however, a series of inadequate practices undermined that quality, narrowing producers’ options in the generic coffee market. Much of what was happening (and continues to happen) has to do with traditional sales from the farm through generic coffee exporters, where the emphasis is on export volume rather than quality. In addition, producers lacked a platform for ensuring quality in production, processing, and marketing.

The PDP team selected the coffee value chain due to the high quality of the coffee produced in the Northern Zone and the potential to correct the problems that were keeping small-scale producers from making a qualitative and quantitative leap in their business dealings. By providing access to training programs based on final product quality; incorporating



**Specialty coffee producers Angelino Landaverde and Rosa Élica Flores are satisfied with the quality of coffee beans dried on African style beds in La Palma municipality (Chalatenango department).**

simple wet processing technologies, state-of-the-art technology for dry processing, cupping laboratories, certified cuppers, and promotion and marketing programs targeting specialty coffee; and bringing in buyers to deal directly with producers, PDP successfully positioned the Northern Zone in the world of specialty coffees, making the marginalization of the region's coffee sector a thing of the past.

PDP-supported producers received technical assistance and training in the production and marketing of “honey” coffee and “natural” coffee. These production methods

reduced wet processing times by introducing manual, ecological pulping machines, and virtually eliminated the cost of water use. Pre-drying costs decreased significantly with the reduction in spending on machinery and equipment for traditional wet processing. In addition, concrete and adobe drying patios were no longer needed, having been replaced with low-cost infrastructure such as African-style drying beds. By introducing wet processing techniques that did not use water or electricity and keeping residual water from polluting local watersheds, PDP also contributed to environmental conservation.

**“Honey” coffee** processing consists of harvesting the bean at peak maturity, so that the pulp is removed without water. This process avoids the fermentation stage of wet processing, and the coffee is dried as pergamine (“parchment”), retaining a large concentration of sugars in the bean.

**“Natural” coffee** is harvested at peak maturity and transferred directly to African beds for drying, bypassing the pulp removal, fermentation, and washing stages.

An important part of the new marketing strategy was direct involvement in the export business to penetrate international specialty coffee markets. PDP’s team held face-to-face negotiations between producers and roasters from around the world and succeeded in introducing Salvadoran coffee in specialty coffee houses in the United States, Australia, Europe, and Asia.

With PDP support, coffee producers built more than 38,700 meters of African-style beds for coffee drying, produced some 6,091 quintals of specialty coffees (1 quintal is equivalent to 100 pounds, or about 45 kilograms), and sold them at a higher price than traditional coffees. This boosted producers’ overall incomes by \$1,605,860, creating 219 new jobs in the process.

#### **Traditional Coffee**

Although PDP focused on specialty coffee production, the training and technical assistance the project team provided also enhanced coffee production in general through a second project in a micro-region of northern Morazán. The 104 farmers PDP supported in improving the productivity of their traditional coffee in Morazán sold \$406,803 of pergamine, gold grape, roasted, and ground coffee, increasing individual income almost \$4,000 and creating 92 jobs. These farmers also installed their own roasting

and packing plants, increasing the value of their products and improving their business management practices.

#### **Apiculture**

With their small farms, most of PDP’s beneficiaries had little access to productive resources. Management of beehives for honey production, however, only requires small plots of land and uses a resource that is available in primary and secondary forests in the Northern Zone: flowers. In addition, the country’s climate is conducive to apiculture nine months of the year, making this a competitive value chain.

PDP’s assessment revealed low domestic consumption of honey and honey products; the national beekeeping industry relied mainly on exports. The assessment also showed that although there were enough companies involved in honey production, collection, bottling, and export to make El Salvador competitive, those companies were unable to meet international demand because they could not obtain the quality they needed from local producers. This meant producers in the Northern Zone were missing opportunities to connect with exporters mainly because they could not meet quality and safety standards for export. Other limiting factors included the size of their apiaries, the dispersed locations of beekeepers, and the lack of links between

beekeepers, honey processing plants, and export firms.

PDP’s assessment also showed that if the apiaries with the greatest potential were connected to exporters, smaller apiaries would have more opportunities for sales in local and domestic markets.

Producers in the Northern Zone had the potential to make the qualitative and quantitative improvements that would help them meet this demand. The challenge was to forge sustainable ties between those producers and the market. PDP’s work was designed to boost the incomes of 420 beekeepers in the Northern Zone (350 producers using honeybees and 70 using stingless miliponine bees) by creating new jobs, improving honey yields, and enabling honey producers to penetrate and compete in the market by promoting their participation in other parts of the value chain.

The PDP team pursued technology transfer initiatives to increase honey yields, improved

honey processing and added value in collection and service centers, organized production, and designed training and technical assistance plans. To ensure successful, replicable technology transfer, PDP prioritized training, technical assistance, and distribution of inputs, materials, and equipment in the following areas:

- Colony division methods
- Year-round colony management in tropical zones
- Artificial feeding
- Melting techniques for honeycombs and cappings
- Beeswax extraction, laminating, and stamping
- Hygienic honey harvesting, extraction, bottling, storage, and transportation

PDP also strengthened the capacity of the National Apiculture Commission as an umbrella organization for beekeepers.

#### EXHIBIT 19. APICULTURE (HONEY) VALUE CHAIN ACHIEVEMENTS

Indicator	Life-of-Project Achievement (09/2012)	Project Target	Percent of Target Achieved
Beneficiaries	420	405	104%
Jobs created	44	40	110%
MSMEs assisted	-	-	-
Hectares assisted	-	-	-
Sales	\$1,351,217	\$1,027,321	132%
Private investment	\$553,007	\$363,598	152%



Beekeeper Fidel Chinchilla checks a hive frame in an apiary administered by the National Apiculture Commission of El Salvador (Hacienda Colima, Suchitoto municipality, Cuscatlán department).

MAP 6. DISTRIBUTION OF “OTHER VALUE CHAINS” PROGRAM BENEFICIARIES



To boost honey collection and processing, honey value, and honey marketing, PDP supported two producer organizations, ACOPIDECHA and ECOMORAZÁN, and strengthened their processing centers. Besides collecting the honey produced in each area, these processing centers have a strategic operational role in the distribution of inputs and equipment to beekeepers. PDP supplied ACOPIDECHA and ECOMORAZÁN with equipment for honey extraction, decapping, homogenization, and bottling, and with vehicles to help them pursue their market-

ing strategies. PDP invested \$513,165 in this value chain.

An important milestone was the establishment of a queen bee production center, funded by PDP and equipped with facilities to produce virgin and fertilized bees, on an ecological reserve in Chalatenango department. With breeding stock imported from Italy, a laboratory for queen larvae grafting and insemination, three 90-hive clusters, and distribution logistics in place, the center is able to provide beekeepers with genetic material to renew queen bees on an ongoing basis. The queen

bee center boosts productivity, reduces the aggressiveness of colonies of Africanized bees, and prevents bees from swarming and abandoning their hives. The center will remain under the administration and management of the National Apiculture Commission, whose administrative and technical capacity was strengthened with PDP's support. Through these efforts, PDP has extended apiculture beyond the Northern Zone.

As a result of these interventions, 420 honey producers sold more than \$1,438,483 worth of honey, equivalent to about 433,795 kilograms. The honey was produced in more than 12,900 hives, with per-hive yields increasing from 17 to 19.5 kilograms. With project support, the beekeepers' incomes grew by \$532,767.

### **TOURISM PROGRAM**

El Salvador's Northern Zone features many natural and cultural attractions that tour operators and associations can draw on to market their products and services. When PDP began working in tourism, the team discovered an untapped potential that needed support to attract more tourists, especially more affluent tourists.

The project team selected this value chain for its market potential and for its potential to generate employment and income. In addition to being a catalyst for environmentally sustainable development, tourism inherently

promotes economic activity in a region.

PDP's tourism program boosted the competitiveness of tourism service providers in the Northern Zone by enhancing their products and services, improving market access, and strengthening business management. The team focused on five geographic areas:

- Metapán – Santa Rosa Guachipilín
- The highlands of Chalatenango, including the municipalities of La Palma, San Ignacio, and Citalá (known as the Ruta Fresca)
- Suchitoto and adjacent municipalities in the Cabañas department
- The lowlands of Chalatenango, including numerous municipalities such as Dulce Nombre de María, Concepción Quezaltepeque, Azacuapa, and others
- Ruta de la Paz en Morazán, made up of seven municipalities

The initial assessment detected several bottlenecks: low-quality tourism products and services, lack of structured tourism products, poor tourism development management, and failure to promote tourist attractions.

PDP assisted tourism service providers, focusing on the needs

## EXHIBIT 20. TOURISM PROGRAM ACHIEVEMENTS

Indicator	Life-of-Project Achievement (09/2012)	Project Target	Percent of Target Achieved
Beneficiaries	574	487	118%
Jobs created	662	306	216%
MSMEs assisted	261	-	-
Hectares assisted	-	-	-
Sales	\$7,773,277	\$9,148,000	85%
Private investment	\$265,107	\$149,400	177%

and maturity of each business category, such as lodging and restaurants. Accessing funds from an in-kind donations fund, the project provided nearly 140 beneficiaries with light equipment and materials (such as cooler chests, microwaves, radios, tour guide kits, first aid kits, and kitchen utensils) for demonstration, to encourage them to adopt technology that would improve their services. Through these efforts, PDP helped disseminate standards to influence the quality of tourism products and services. Spending on equipment and materials to support tourism development in the Northern Zone amounted to \$109,199.

Tourism associations and committees were already operating in PDP's target areas in the Northern Zone, but they were poorly organized and had limited ability to collaborate with other groups on tourism development. They also lacked a business vision. Working with these groups and engaging other local stakeholders, PDP strengthened the associations' capacity for

teamwork and bolstered their ability to implement their work plans. A business vision was consolidated through the formation of the *Red*, a tour operators' association for the Northern Zone. Made up of 10 companies working together to develop tourism products and negotiate business deals, the *Red* has become a marketing channel for tourism service providers.

Before PDP, the Northern Zone did not have multi-destination tourism products, and it only had a limited supply of structured products. In the least-developed tourist areas (Metapán – Santa Rosa Guachipilín and the lowlands of Chalatenango), the vision for tourism development did not include the region's environmental, cultural, and productive riches. PDP equipped the *Red* with tools to organize tourism products in multi-destination packages and by geographical area. It also assisted municipalities in Metapán and the lowlands of Chalatenango to develop concept papers presenting a unified vision for tourism.



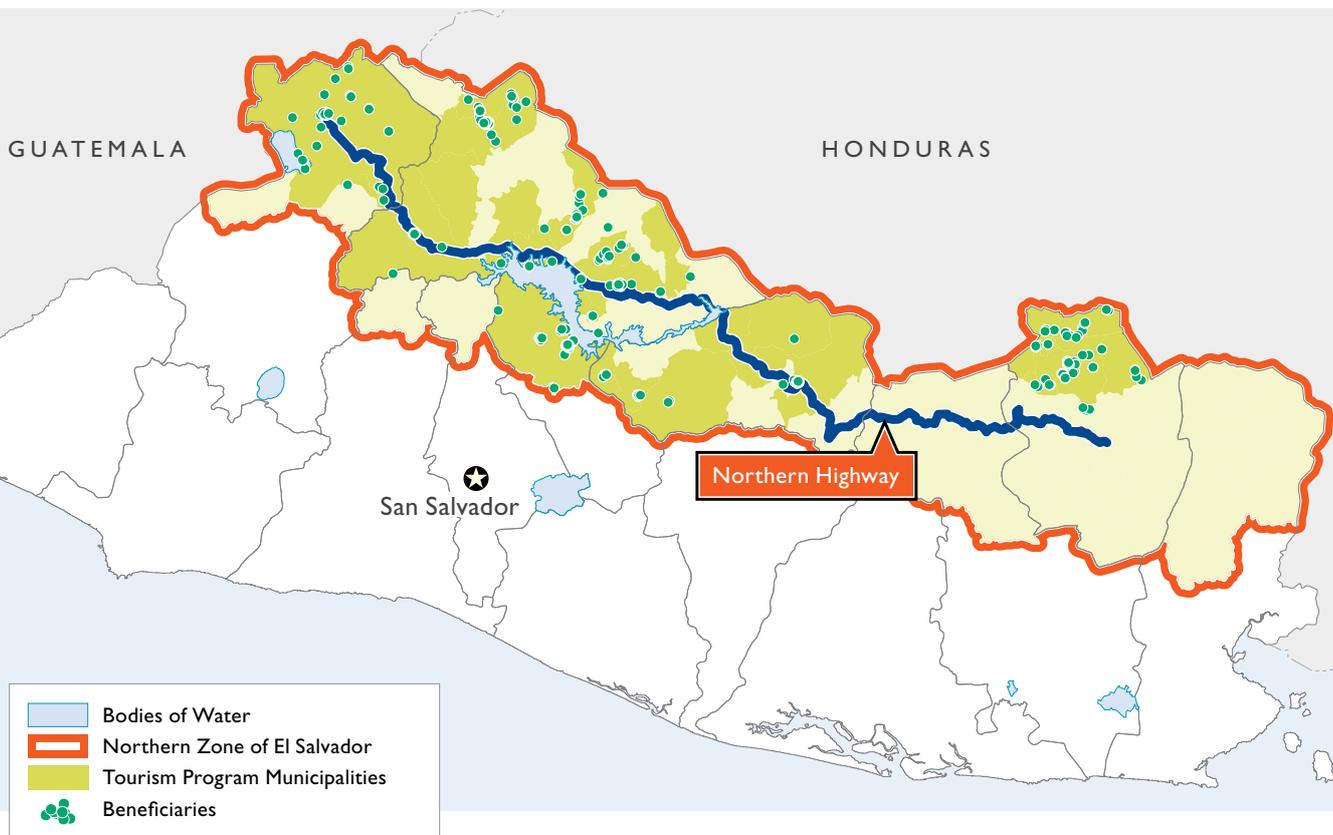
Carlos Martínez and other boat operators from Puerto San Juan, Lake Suchitlán, used the grants they received from PDP to improve services to tourists visiting the lake (Suchitoto, Cuscatlán department).





A panoramic view of Suchitoto — a popular tourist destination in the Northern Zone — with the cupola of Santa Lucia church in the foreground.

MAP 7. DISTRIBUTION OF TOURISM PROGRAM BENEFICIARIES



Prepared by international consultants through a participatory process, these papers led to initiatives such as a limestone tour in Metapán and the development of a marketing image that has rebranded municipalities of the Chalatenango lowlands as “*pueblos festivos*,” (festival towns).

PDP sponsored familiarization trips (site visits for tourism operators) and press trips, business roundtables, and tourism events. The project team also helped develop or refresh brands, encouraged participation in trade fairs and missions abroad, and provided promo-

tional materials to 270 tourism service providers. These activities helped publicize the attractions in the Northern Zone and boosted tourism levels.

### AGRIBUSINESS PROGRAM

Under its agribusiness program, PDP worked with three business cooperatives: El Salvador Produce, Ganadera de La Zona Norte, and Lácteos Morazán.

To ensure that incremental production of fruits, vegetables, and dairy products could compete in the domestic market and be profitable, PDP’s strategy incorporated farmer-

owned businesses that were in a position to channel access to competitive markets. This strategy was designed to improve the availability of food and reduce dependency on imports, particularly because there was a defined market segment that was willing to pay more for quality.

For large, formal buyers — the supermarkets and dairy industries that were supplied by thousands of producers — an inefficient intermediation chain is unappealing. In this context, PDP's approach was to establish efficient, formal intermediaries that were producer-owned, able to concentrate and structure supply from planning to the point of sale, and capable of serving thousands of small-scale producers. The project team supported the establishment of two trading companies, one for fruits and vegetables and another for refrigerated raw milk, and strengthened an existing dairy products company. These companies were integrated into PDP's horticulture and dairy programs.

Following its overall strategy for value chain development, the PDP team established specific plans for each program and subregion and set up business development demonstration centers and collection and services centers. These structures were linked with the business and multiservice centers owned by cooperative associations.

For agribusiness development, PDP's two-pronged approach supported marketing and supply of inputs. Given the small scale of beneficiaries' productive activities, the team realized that the only way to create economies of scale was to gradually set up a revolving fund, beginning by channeling materials and inputs from companies through PDP's in-kind donations fund.

One of the main competitiveness strategies was to establish potentially profitable business initiatives with a broad social base and a view to optimizing the sustainable use of natural resources for the benefit of farmers.

Each trading company was set up as a cooperative association to ensure broad membership and distribute the benefits among the largest possible number of owner-members. This approach gives the cooperatives a strategic advantage by ensuring a continual supply of raw materials at mutually beneficial prices and conditions.

Fruit and vegetable farming in response to a growing domestic consumption and export market has been one of the most important rural activities in other Central American countries. In the 1980s and 1990s, according to a 2008 study by USAID/Central America, exports in these categories increased tenfold in neighboring Guatemala

and Honduras. Pea, mustard, and okra exports alone exceed 40,000 metric tons annually. Honduras exports 20,000 metric tons of melon annually — an estimated value of \$130 million. The United Nations Food and Agriculture Organization lists the main destinations for this produce as the United States, Canada, England, and Germany. Due to the world economic recession and competition from other countries — including China, Ecuador, Mexico, and Peru — exports from Guatemala and Honduras declined between 5 and 8 percent beginning in 2008.

One result of this broader panorama is that El Salvador became a consumer market for fresh produce, offering an attractive outlet for un-exported produce and surplus crops.

Milk and dairy production followed a different pattern. Despite trade barriers for raw materials, raw milk and some cheeses from Nicaragua and Honduras account for a large part of the market of products that are homemade or not registered at the border. For most dairy products, the raw material yield accounts for more than 85 percent of the total cost; therefore, the price of milk is critical to the success or failure of the consumer market. El Salvador is a growing marketplace in this category: a 2011 health market study revealed that four out of five Salvadorans consume dairy

products, and net purchases have increased by more than 5 percent in the past four years.

These factors have delayed consolidation of the local fruit and vegetable processing industry in innovation, compliance with standards, and distribution infrastructure, and stalled growth in exports of dairy products, because the unavailability of high-quality raw materials at competitive prices reduces their competitiveness. The PDP-supported cooperative societies face a complex set of circumstances, but they also have a critical role to play in harnessing the productive potential of the Northern Zone.

#### **El Salvador Produce: On the Path to Profit**

The Business and Multiservice Cooperative Association of the Northern Zone R.L. de C.V., known as El Salvador Produce, was legally incorporated on April 26, 2010, and formally launched its operations that November. Dedicated to the collection, processing, distribution, and marketing of fruits and vegetables, El Salvador Produce promotes the cultivation of crops with high market demand by assisting its members to obtain inputs, equipment, and materials. The association also promotes the well-being of its members by offering group health, safety, and legal and accounting services, and channeling profits into areas that boost business productivity. Its

membership of 41 small producer associations represents more than 2,000 farmers.

El Salvador Produce has five collection and service centers with adequate facilities for product intake, storage, washing, and packing. It also houses a unit for supply administration and equipment inventory. PDP equipped the association with refrigerated transportation that has a capacity of 20 metric tons per day, and with basic equipment for collection and handling. The center has created between 35 and 40 permanent jobs and up to 50 work-days for preparing and packing orders. It also provided five farm vehicles, as well as office and administrative equipment for the seasonal business and multiservice centers.

The association's products are headed for the formal market segment, especially large retailers such as supermarket chains and restaurants, with a broad range of products. Its portfolio includes eight buyers in this segment. Most of El Salvador Produce's products are sold under its own brand name (a percentage is processed with private brand names). Average market placement was 65 percent for 2012, the last year of PDP. For a variety of reasons, the remainder was sold in local markets, where prices are typically 50 percent lower.

Integration at the high end of the commercial chain (such as supermarkets) requires strict adherence to quality standards and the ability to meet order deadlines and volumes at least 90 percent of the time. El Salvador Produce's highest average during the life of PDP was 75 percent due to several factors, including lack of synchronization between planting cycles and weekly demand; dependence on bargain prices (especially for products from Guatemala) among major clients, which tend to put in orders with 48 hours' notice; and aggressive individual buyers who use cash payments and other methods to buy already committed product.

When PDP closed, El Salvador Produce was filling less than 2 percent of the demand from its main client. There was immediate purchase availability at least three times higher than the demand, indicative of the considerable growth potential in this market.

Between September 2011 and August 2012, El Salvador Produce sold products from producers who delivered at least one of the 59 types of produce considered to be first, second, or third quality. (Quality ratings are based on size, shape, maturation, external damage, color, and taste.) Of these products, 18 to 20 were supplied based on a minimum purchase volume of 2 metric tons. The products were



An employee of the Rio Chiquito Collection and Services Center prepares scallions for transport to El Salvador Produce.



sold at a profit, with an average 30 percent differential between the purchase price and the sale price in the formal market, yielding gross revenues of more than 15 percent. Although the operation began with a 30 percent loss (the difference between weight purchased and weight sold), by the end of the initiative losses had been reduced to about 8 percent, demonstrating that El Salvador Produce had established control over processing, distribution, business administration, and inventory rotation.

The association's monthly sales totals, which began at about \$15,000, had reached a steady average of \$65,000 when PDP closed in September 2012. Once El Salvador Produce has finished installing its processing facilities, infrastructure, transportation, and equipment, its annual sales are expected to reach \$1.4 million. This figure exceeds the break-even point of \$130,000 and represents a net margin of about \$0.06 per pound.

#### **Ganadera de la Zona Norte: Grade-A Milk Sales**

La Sociedad Cooperativa Ganadera de la Zona Norte de R.L. de C.V. — the Cattle Cooperative Association of the Northern Zone — was established on June 25, 2010, and launched regular buy/sell operations in February 2011, after signing a contract with the presidential Glass of Milk

program of El Salvador. This business and multiservice center has a membership of 25 groups representing 1,083 small-scale cattle ranchers in the Northern Zone. Its board of directors includes five members and two alternates.

Ganadera de la Zona Norte is dedicated to the collection, processing, distribution, and marketing of raw milk. It promotes good herd management practices for reproduction, nutrition, and hygienic milking by making supplies, equipment, and other inputs available to its members at below-market prices. The association also provides legal, technical, and bookkeeping support to help improve the performance of its member cooperatives.

Ganadera de la Zona Norte began with 32 member-owned refrigerator tanks, each with a capacity of 2,000 to 4,000 bottles, and achieved an initial installed milk collection capacity of 39,000 bottles per day. By the time PDP ended, capacity had climbed to about 107,000 bottles a day, with 62 refrigerator tanks to collect milk and distribute it in areas strategically selected for raw milk delivery in compliance with national quality and safety standards. The association also had four refrigerated cistern trucks for milk collection and distribution, each with a daily capacity of 60,000 bottles.

In addition to creating between 20 and 30 permanent jobs Ganadera de la Zona Norte has a centralized collection and distribution plant, a permanent analysis laboratory, and a mobile analysis laboratory. It is equipped with office and administrative equipment and light vehicles for travel by administrative and field staff.

The association's services are geared toward the industrial market segment: milk processing plants that produce dairy products or pasteurized milk in volumes of 10,000 to 100,000 bottles each day. Its portfolio includes eight buyers whose orders vary in quantity with the time of year. (The raw milk supply cycle, with higher production in the rainy season and lower volumes in the dry season, is due mainly to the availability of forage for dairy cows.)



One of Ganadera de la Zona Norte's most important clients is the government of El Salvador, which it supplied for two years as the presidential Glass of Milk program was starting. This government initiative aims to reduce chronic malnutrition in rural areas by giving a daily glass of liquid milk (packaged in 250 milliliter, ultra-high-temperature containers) to every public school student in the poorest municipalities. The program served 250 schools in its first year and was expected to reach 600 schools in 2012.

Traditionally, only 5 percent of milk production in the Northern Zone is destined for formal markets. About 25 percent goes to small local processors, 40 percent goes to informal intermediaries, and nearly 30 percent is retained for local consumption. Ganadera de la Zona Norte has an important role in linking small- and medium-scale producers with the formal market, which offers better prices but also has higher quality and safety standards.

With the processing industry's growth potential and growing internal demand, El Salvador's market often experiences shortages in the supply of liquid milk. In 2011 and 2012, two factors made these shortages more frequent: reduced dairy imports from Nicaragua drove up domestic consumption, and two tropical storms battered the region. Because of these factors, the association was able to fill only a fraction of the orders it received during its start-up period.

During this period, Ganadera de la Zona Norte sold milk from at least 40 different providers. Under Salvadoran law, the product had to meet the "A" quality standard to be sold in the formal market (with a price differential of 5 to 10 percent between the purchase and sales prices).

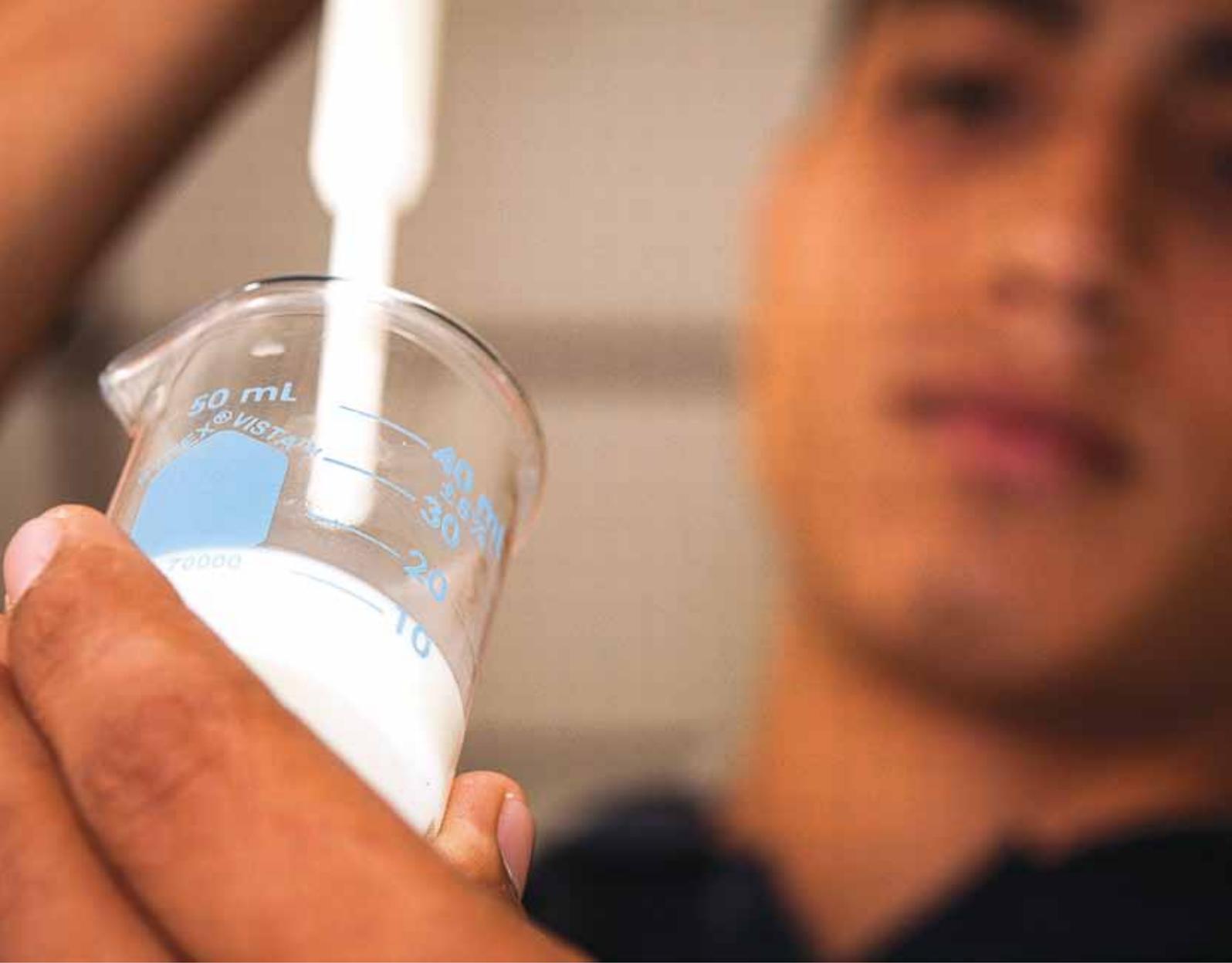
Initially, Ganadera de la Zona Norte's total monthly sales



**Edwin Daniel Meza, a milk collector from Lácteos de la Zona Norte, shows the level in the collection tank to Noel de Jesús Iraheta Vásquez, head of the Cassie Stern Center.**

averaged less than \$75,000. By the end of PDP, the associations total monthly sales had climbed to a sustained average of \$175,000. Once it has finished setting up its infrastructure, collection facilities, and equipment for smaller processes and enhanced quality control, the association is expected to bring in annual sales of \$3.5 million,

exceeding its equilibrium point of \$3.3 million (a net margin of about \$0.035 per bottle) and representing gross earnings of more than 7 percent. The small margin between the sale price and the purchase price indicates that this is a business with considerable production volumes and good cost management practices.



Francisco Portillo checks the quality of the milk that dairy farmers have supplied to Lácteos de la Zona Norte.

### **Lácteos Morazán: A Bright Future**

Established in 2008, the Sociedad Cooperativa Lácteos Morazán de R.L de C.V. collects and processes milk and dairy products. The members of this cooperative association include individuals (mainly local dairy farmers), producer associations, and other institutions linked

to the sector. Initially, Lácteos Morazán's membership included just four dairy farming organizations, but by the end of PDP, the cooperative had increased its membership to 16 organized groups representing at least 1,700 small producers in the region.



For the first few years, organizational, operational, and market-related problems meant Lácteos Morazán fell short of its production and sales targets, despite having more than \$1 million in infrastructure and equipment in place for pasteurized milk production. The association had obtained this infrastructure from the U.S. Department of Agriculture and had received technical and financial assistance from other international funds channeled through a local NGO, ADEL Morazán.

In 2010, Lácteos Morazán became a PDP-supported business and multiservice center for the eastern part of the country.

Working with an established operation offered advantages — the means of production were already in place — but it also brought other issues into play, such as a longer process for finalizing grant agreements (given the board members' varying perspectives). After about eight months of negotiating and creating an organic structure, Lácteos Morazán formally launched operations in the second half of 2011 with the purchase of raw milk for processing into cheese and cream. This period laid the groundwork for the association to administration of the technological package (services, equipment, and inputs) PDP provided to beneficiaries in the area.

Lácteos Morazán has 19 milk-cooling tanks with a total daily

capacity of 39,000 bottles, and transportation infrastructure for milk collection and distribution — two cistern trucks that keep temperatures below 5°C — of up to 17,000 bottles per day. The association has created between 10 and 20 permanent jobs. PDP provided office and administration equipment, two light vehicles, three trucks equipped with Thermo King mobile refrigeration systems, and equipment to process and produce pasteurized milk and different types of cream and cheese. PDP also invested in equipment and infrastructure for quality analysis and support systems, including a vapor generating boiler and water treatment plant.

Lácteos Morazán has two product lines: liquid raw milk destined for the industrial and semi-industrial milk processing market, and dairy products. Although its main focus is the formal market segment, Lácteos Morazán also offers products for local farmers' markets on a seasonal basis, due to its location and local demand. Its portfolio includes two clients for raw milk and more than 20 retail buyers for dairy products through an outlet store and two sales routes in the Paracentral and Eastern zones.

The unique situation in this part of the country — small-scale producers with little technology and fierce competition from local farmers' markets that do not monitor quality standards

— has hampered efforts to consolidate minimum volumes of “A” quality raw material (4,000 to 5,000 bottles per day).

Supply, as negotiated with interested buyers, has grown at a conservative pace. Current and potential clients’ feedback, however, indicates that orders could expand if greater quantities are obtained from the farms.

Between 2010 and 2012, all of the milk Lácteos Morazán purchased for processing and direct sales met clients’ quality standards, which are generally more rigorous than national minimum standards. Combined product sales are expected to feature a price differential of 15 percent (relative to the purchase price) for liquid milk — 30 percent for cheese and cream. These figures suggest a profitable venture with average gross earnings of more than 20 percent. Unlike Ganadera de la Zona Norte, value-added products play an important role in profit. Given taxes and the origin of the milk, the minimum margin can only be achieved in the formal market — mainly in urban areas.

Lácteos Morazán’s total cumulative monthly sales in 2011 were just \$110,000. A major factor in boosting sales is the opening of two public outlets, one in San Salvador and another in Jocoro Morazán, where the association has placed eight cheeses and two

creams under its brand name. Another factor is the establishment of a processing plant for institutional clients, such as supermarket chains, that order cheeses to be produced under their own private brand names. Once it is fully functioning, this plant could generate sales of \$1.5 million, using more than 75 percent of its capacity, with minimal additional investment.

## HUMAN CAPITAL

In the process of establishing El Salvador Produce, Ganadera de La Zona Norte, and Lácteos Morazán, PDP’s investments targeted several areas that are crucial to commercial success.

The project team began by regularizing the legal status of each business and supporting the establishment of the associations that became each company’s partner-owners. One important activity was to strengthen the boards of directors, improving their ability to engage in decision-making, strategy development, and conflict management for consensus-building. PDP’s support helped improve policies and procedures, develop organizational charts and align functions, and create incentives and rewards for personnel and producers.

To assist Lácteos Morazán, the more established of the three associations, PDP met with the company’s partners and owners to amend the owners’ statutes



María del Carmen Rosalba de Mejía, a milker from the Cassie Stern Center, displays the milk in a collection tank.



Andrés Orlando Sola cuts wood in the Renacer Chalateco/ACOPROARTE workshop in La Palma (Chalatenango department).

so that other associations could join. The PDP team was directly involved in reorganizing the following operational, financial, administrative, and business activities:

**EXHIBIT 21. BUSINESS FUNCTIONS**

<b>Processes</b>	<ul style="list-style-type: none"> <li>• Setup and adaptation of accounting systems, financial analysis spreadsheets, inventory and warehouse management systems, and collection routes and procedures</li> <li>• Construction and implementation of process lines and distribution routes</li> </ul>
<b>Clients</b>	<ul style="list-style-type: none"> <li>• Design and implementation of communications and marketing campaigns</li> <li>• Development of protocols to comply with U.S. National Science Foundation certification standards</li> <li>• Market testing of new presentations and products</li> </ul>
<b>Cattle Ranchers Congress</b>	<ul style="list-style-type: none"> <li>• Business roundtables with the country's main industrial processors</li> <li>• Written and radio advertisements</li> <li>• Meetings with the government to implement the Glass of Milk program</li> </ul>
<b>Finance</b>	<ul style="list-style-type: none"> <li>• Call for capital to expand company activities and obtain partner buy-in</li> <li>• Cost control and reduction programs</li> <li>• Long-term loan contracts to leverage funds</li> </ul>



Leticia Valdivieso de Mancía paints a piece of wooden furniture in the Renacer Chalateco/ACOPROARTE workshop in La Palma (Chalatenango department).

## CHAPTER FOUR

# TOOLS THAT CONTRIBUTED TO SUCCESS

### MONITORING AND EVALUATION SYSTEM

For PDP, monitoring was an important decision-making tool that the project team saw as part of the day-to-day routine. Monitoring was a means of detecting errors so they could be corrected and identifying successes so they could be replicated.

When redesigning PDP's work plan in the first quarter of 2009, the team focused on fine-tuning its strategy and creating a logical framework that would serve as a plan for implementation, incorporating the project's overall methodology and the hierarchy of objectives and indicators.

PDP measured its progress using indicators for impact, effects, products, and activities. Impact indicators included factors such as "enhanced income of a certain number of beneficiaries

and job creation." Indicators for effects included increased productivity, better market access, and improved business management. Product-related indicators covered sales, surface area under cultivation, head of cattle producing, handicrafts workshops, tourist establishments, business development centers, and collection and processing centers. Indicators for activities measured training events, meetings, field visits, promotional events, and operational field schools.

The project team developed a system that replicated the logical framework as a database for aggregating information and generating reports and graphic elements to illustrate the monitoring and evaluation data the team collected. The satellite information obtained during the initial assessment was used to create a platform — fully

## A SYMBIOSIS BETWEEN ACADEMIA AND FOMILENIO'S PRODUCTIVE PROJECTS

Among PDP's successes was its work to link universities with FOMILENIO's productive initiatives. The School of Economics and Business and the National University of El Salvador were both involved in the design of development projects. By sharing its methodology with students at these academic institutions, PDP placed a wealth of academic expertise at the service of producers in the Northern Zone. One tangible result of this connection was the host of proposals developed through the *Escuela de Proyectos*. For National University students, work on productive projects met the thesis requirements for a master's degree in business consulting. In fact, the best master's thesis was based on a project written for pineapple producers from northeastern El Salvador.

integrated with the database — for geo-referencing (mapping) project results.

This ambitious system was fully integrated as PDP completed its second year. The team had uploaded data and information from 100 percent of the productive projects, taking special care to preserve the overall logical framework even as they refined it for each productive project. This link allowed them to monitor progress with a higher degree of precision. Each of the 25 service providers submitted quarterly reports, reporting with an accuracy rate of more than 85 percent on a set of indicators that covered more than 10,000 beneficiaries.

With four modules for planning, monitoring indicators, human resources management, and budget management, the system evolved to a degree that the project team could not have anticipated. Chemonics is now using this system as a model

for best management practices, and El Salvador's Ministry of Agriculture has adopted it for oversight and reporting on the Family Agriculture Plan.

### SPECIAL FUNDS MANAGEMENT

In designing an approach that would enable initiatives to flow from the market and the beneficiaries to FOMILENIO for funding, PDP's challenge was to create instruments and methodologies that encouraged stakeholder participation.

Initially, no manuals or procedures were in place for implementing a competitive grants program; the project operations manual was not suitable for special funds management. To fill this gap and ensure participation at all stages of each productive project, the PDP team developed a set of tools, tailored to the needs of beneficiaries in the Northern Zone:

- A procedures manual for the Productive Initiatives Fund, including a proposal-writing guide
- An operations manual for the Productive Development Support Fund
- A manual for the in-kind donations fund
- A revolving fund manual
- A warehouse storage manual
- Rules for assigning and using goods provided for “temporary use”
- Rules for management committees and regional boards

innovative approaches to applying for available funds, such as shared fundraising and direct proposals from other programs.

The project team also designed a customized procurement system tailored to FOMILENIO’s requirements. Although the project’s role was confined to monitoring, it became clear that the information from PDP’s procurement system was more accurate than FOMILENIO’s data. The new system also facilitated ongoing auditing of each project in a way that enabled better inventory management.

### COMMUNICATIONS

#### Service Promotion

PDP began with two campaigns to inform interested individuals and groups about how to access its productive and business services, including the

To ensure that the fundraising model was suited to FOMILENIO, PDP incorporated

EXHIBIT 22. SERVICE PROMOTION CAMPAIGNS



## EXHIBIT 23. CAMPAIGN OUTCOMES

Campaign 1	Campaign 2
18,199 requests received (5,490 women, 12,709 men)	89 requests for productive assistance presented
15,619 requests approved (4,600 women, 11,019 men)	10 projects funded by the Productive Initiatives Fund

requirements and procedures for participation.

By disseminating results, success stories, and other information about its work, PDP made a significant contribution to boosting FOMILENIO's image and empowering its beneficiaries. PDP used traditional communications networks, including the 33 national and local media outlets, to produce 135 reports, supplements, articles, and other materials from press trips, conferences, and releases. The project also used nontraditional communications, such as social networks, to disseminate information nationally and internationally about its progress, achievements, and beneficiaries.

- Launched in early 2010, the Production and Business Services website ([www.pdp-fomilenio.gob.sv](http://www.pdp-fomilenio.gob.sv)) provided information to users from El Salvador, the United States, Guatemala, Colombia, and Mexico.
- PDP established a Facebook page ([www.facebook.com/fomileniopdp.chemonics](http://www.facebook.com/fomileniopdp.chemonics)) and a YouTube channel ([www.youtube.com/user/fomileniopdp](http://www.youtube.com/user/fomileniopdp)), both of which had an important role in disseminat-

ing the project's work. The Facebook page gained 1,220 "friends." On YouTube, 99 project videos received 64,995 views.

- PDP distributed 37 bulletins to the Chemonics contacts list, on the Web, and on Facebook.

In addition, local and national fairs, events, and field tours, including missions by the MCC, USAID, and the U.S. Congress, provided important opportunities to disseminate information to national and international audiences.

### Market Price Surveys, Processing, and Dissemination

Through a cooperation agreement with the Ministry of Agriculture, signed September 5, 2009, PDP strengthened the Market Information Division in the ministry's General Bureau of Agricultural Economy in two key ways:

- High-level technical assistance to ensure proper functioning of the Commodity Price Database, a software program developed by Chemonics. The Ministry of Agriculture can use the

## EXHIBIT 24. COMMUNICATIONS RESULTS

Product Reports	Text Messaging Campaigns	
31,000 reports from price sources for fruits and vegetables sold in the “La Tiendona” wholesale market	4,100 text messages that delivered market price information to producers, made possible by a partnership with the communications company MOBILE	1,300 public service bulletins broadcast weekly between 4:30 a.m. and 5 p.m. on Radio Cadena Cuscatlán, a national station with one of the largest listening audiences

software to provide national producers with accurate and timely information on the prices of agricultural products in wholesale markets.

- A subcontract with the Honduran Agricultural Research Foundation — which has the most experience using the Commodity Price Database and gathering field data through the Honduran Agricultural Products Market Information System — to train bureau employees and monitor database functions during the project.

### GENDER, SOCIAL INCLUSION, AND ENVIRONMENTAL PROTECTION

Each FOMILENIO program incorporated three crosscutting issues: gender equity, social inclusion, and the environment. PDP’s implementation strategy aligned each of these issues with the overall objectives of income generation and job creation. This approach made it possible for the project team to incorporate these important issues into each productive project, while maintaining its focus on achieving PDP’s primary targets.

In Phase 1, the project subcontracted with the El Zamorano Pan American Agricultural School to plan and implement actions in each of the crosscutting areas.

### Gender and Social Issues

In Phase 1, working with El Zamorano, PDP held a workshop series to strengthen women’s leadership in productive activities and launched a public awareness campaign focused on eradicating child labor throughout the Northern Zone. The awareness campaign was designed to raise awareness about children’s and adolescents’ rights to education, health, and development — and their right to live in an environment free of threats to their safety.

In Phase 2, the technical and business service providers implemented activities in each crosscutting area. Beneficiaries participated in awareness and training sessions and field visits on gender equity, eradication of child labor, and occupational safety. PDP printed informational materials on these issues, distributing them to 12,000 beneficiaries, and developed a compilation of 18

gender-related success stories. These efforts contributed to new understanding, higher incomes, and improved prospects for the future.

PDP's most important contribution to gender equity was in giving more women the ability to participate in productive activities. In the Northern Zone, women's participation in activities such as farming tends to be low. The project's support allowed 4,462 women (29 percent of the beneficiary population) to gain access to the technology needed to create worthwhile jobs, products, and services.

#### **FIVE CRITERIA FOR ENVIRONMENTAL MANAGEMENT**

- The market
- Rational use of agrochemicals, and only as a last resort
- Environmental law
- Rational use of water and soil
- Processing in compliance with legal standards

#### **ENVIRONMENT**

PDP's work to boost net income and employment focused on the adoption of new technology. By proposing and installing new technologies based on the sustainable and rational use of natural resources on farms and in processing plants, the project created incentives for competitive agricultural practices that meet domestic and international legal environmental requirements.

For agricultural value chains, PDP applied several criteria for environmental performance: recommending the exclusive use of authorized agrochemicals — and only as a last resort; applying a legal framework based on U.S. and Salvadoran environmental law; and requiring a preliminary assessment to define the regions and environmental impacts. Based on these

assessments, PDP determined that water and soil were the two key resources that stood to be the most affected. For processed commodities, the project team focused on compliance with environmental law in all processing stages and in the disposal of solid and liquid waste.

PDP provided training and broadly disseminated information on best practices in agriculture, manufacturing, and hygiene. The team provided legal guidance to help beneficiaries prepare required environmental documentation for producing and processing different products, and made provisions for the final disposal of solid and liquid waste in compliance with environmental law. PDP also disseminated legal requirements to its stakeholders, emphasizing the importance of adhering to them in all applicable activities.

To ensure the rational use of agrochemicals and encourage environmentally sound management of soil and water resources, PDP provided training and information to technical personnel, operators, and farmers; promoted integrated pest management; and tailored the Pesticide Evaluation Report and Safer Use Action Plan to the selected crops. The team monitored the proper use of authorized agrochemicals in the field and ensured and verified the implementation of preventive, mitigative, or corrective measures to prevent negative effects on soil, water, vegetation,

MAP 8. DISTRIBUTION OF FEMALE BENEFICIARIES



	Bodies of Water
	Northern Zone of El Salvador
<b>WOMEN IN PDP PROGRAMS:</b>	
<b>4,462</b>	
	Aquaculture: 208
	Apiculture: 121
	Crafts: 1,009
	Coffee: 194
	Forest Products: 36
	Horticulture: 1,914
	Dairy: 666
	Tourism: 314

and human health. PDP also promoted increased vegetation cover by planting trees, shrubs, legumes, and squash.

PDP adhered to lawful processing methods for each product, standards for final disposal of solid and liquid waste, best hygiene practices, and industrial security measures. The team developed the following instruments to monitor the environmental impact of field activities:

- Environmental assessment checklist for projects
- Guide to identifying and describing environmental impact

- Mitigation measures table, objectively verifiable indicators, and scenario analysis with and without the project

- Environmental considerations and proposed mitigation measures
- Specific, environmentally focused logical framework
- Monitoring and evaluation forms

A main action was the installment of 12 demonstration plots based on good agricultural practices. Producers, marketers, and consumers in El Salvador are increasingly interested in

GAP encompasses all activities involved in growing, managing, harvesting, and post-harvest management of agricultural products, and is geared toward ensuring product safety, environmental protection, and adequate working conditions along the supply chain.

products grown or processed using GAP because they contribute to the public good, boost the competitiveness of agro-industry, and instill confidence in Salvadoran products in both domestic and international markets.

The application of GAP was premised on PDP's commitment to ensuring that its field activities adhered to sustainable agricultural practices, optimized project and environmental resources, and complied with domestic and international market requirements and trends.

To implement a GAP system for fruits and vegetables, PDP

offered technical guidance based on certification protocols such as GlobalGap and USGap. These guidelines contributed to environmentally sustainable, hygienically acceptable, and economically feasible practices that are improving the competitiveness of crops produced in El Salvador.

Implementation of good practices was possible because producers were open to change and continuous improvement, and because technical support staff were committed to ensuring proper monitoring and satisfactory implementation of those practices.



Farmers affiliated with San Carlos de R.L. Cooperative stand in the midst of their crop of dwarf horn plantain (Aguilares municipality, San Salvador department).



Daniel Antonio Alas transports a crate of plantains to El Salvador Produce's facilities (El Paraíso municipality, Chalatenango department).

## CHAPTER FIVE

# LESSONS FROM THE PDP EXPERIENCE

### TEN KEY LESSONS

*The selection process is critical to success.* Not all small producers are in a position to participate in a project like PDP. It is important to identify areas where competitiveness is possible without project assistance and concentrate on the market as the start and end points. The goal should be net business growth in each value chain rather than the number of beneficiaries.

*All that glitters is not gold.* Similarly, when choosing service providers, it is important to pay close attention to each institution's experience and capacity, particularly the expertise required by the implementation strategy.

*Follow the market.* Demand-driven projects are no place for experiments, because they are based on the producers' circum-

stances and local productive capacity. It is not appropriate to carry out research, attempt to prove hypotheses, or allocate poverty-reduction grants that do not contribute to sustainability. Projects must follow the demands of the market and provide assistance that enables small producers to take advantage of market opportunities. Rather than interfering in the market, the project should support market access.

*Work with known quantities.* An entity that was successful in another area may not excel at implementing a development program. Work with those that have already earned their reputations in the sector and have the trust of the target beneficiary group.

*Poor producers can develop a business vision — as long as their basic diet is ensured.* By diver-

sifying production through horticulture while continuing to produce basic grains for food security, PDP distributed the economic risk and fostered an entrepreneurial vision.

*Coordination is possible.* Public-private ventures involving organized producers, large corporations, and the state (and, in some cases, international cooperation) must be based on agreement about the benefits to all and a clear process, facilitated by experts, throughout implementation.

*Contextualize project interventions.* Unrealistic expectations raised by a project can result in less profitable private investment. As PDP demonstrated in its support to the tourism sector, it is important to thoroughly examine the context and pinpoint opportunities to develop potential in each value chain. El Salvador is not an internationally recognized tourist destination, so PDP focused on tourist products tied to regional corridors and demand from specific groups, such as Salvadorans living abroad.

*Recognize the role of the state.* A comprehensive market-driven approach includes the government's role in setting sector-specific standards and regulations, promoting development through public policy, and providing security for private investment. This role includes managing the risks and effects of climate change. For PDP, it was critical to facilitate interaction and dialogue with stake-

holders through roundtables, management committees, and conferences, so that solutions were implemented based on the needs and competence of both the public and the private sectors.

*Link beneficiaries to results.* Timely access to the funds is crucial — and contingent on the producers' participation and ownership of productive projects. PDP stressed the inclusion of beneficiaries in decision-making processes, using recognized mechanisms such as management committees to tie them genuinely into decision-making processes.

*Subsidies must be specific.* Project grants to producers should use a competitive process (for example, requiring matching funds) and amounts that will meet specific needs or provide specific technology packages. Offering subsidies where they are not needed creates dependence and discourages effort, both of which run counter to the philosophy of competitiveness in the market.

## **KEY FACTORS FOR SUCCESS**

### **Innovation and Technology Transfer**

- Training is essential for results and sustainability. The Escuela de Proyectos and the interactions between technical staff and producers played a critical role in transferring the capacity to identify problems and find relevant, market-oriented solutions. This participatory approach

empowered producers by instilling a “Yes, we can!” attitude.

- The business development centers PDP introduced became communities of learning for producers in each “micro-region” — no-cost vehicles for knowledge transfer between technical staff and producers and between the producers. The centers also strengthen social bonds by giving people the opportunity to get to know one another as they collaborate on an activity with a shared vision of improving their lives.
- PDP’s geographic approach facilitated technology transfer through field schools and stratification of producers based on their productive potential. Such an approach focuses technical assistance and builds trust in the service provider while facilitating the shared use of machinery and equipment.
- Continual promotion of good production practices is essential to the operations of newly formed businesses, which require products of standardized quality from the greatest possible number of producers. Without this support, they have little chance of competing with the informal market.

#### **Market Linkages**

- It is possible to influence market rules to enable poor, small-scale producers to obtain substantial returns on their investments by creat-

ing commercial and business relationships to supply large, well-situated buyers such as Super Selectos and Walmart.

- Beyond the benefits for those who adopt the market access approach, the businesses created by PDP and managed by producer associations also regulate market prices (as verified in the dairy, horticulture, and coffee value chains). They influence fairer prices by consolidating the supply from many producers. The project team confirmed that these benefits extended to nonparticipating producers, who used the prices paid by PDP-supported businesses as a benchmark in their own price negotiations.
- Focusing on a limited number of products based on market demand and potential for low-cost market access makes it possible to have a more sustainable impact on the value chain and, therefore, to have a lasting effect on income and jobs.
- A development model premised on select markets is valid for handicrafts. The model applies the same strategy used in the fashion industry, such as seasonal collections targeting niche markets.
- Tailoring supply to high-priced niche markets, such as specialty coffees, was only possible when private operators partnered with PDP’s team, serving as technical

service providers to help producers improve their market access and position with sufficient volume and high-quality products.

- The public-private partnership is a solid approach to creating associative businesses. Having supermarket chains such as Super Selectos as the main buyers builds confidence that the venture can forge a path to the market and sustain its presence there. Similarly, by situating itself as a buyer to foster the development of a sector (for example, through a business arrangement like the Glass of Milk program), a government can create a source of income that offers stable prices and payments and has a positive social impact.

### **Business Management and Competitive Association**

- Participation is more than physical presence; beneficiaries must be involved in decision-making throughout the project cycle. The management committees showed that the owner of the project is the organized producer whose capacity to exercise his or her rights and perform his or her duties has been strengthened. Under these conditions, it is possible to ensure ownership, operations, and sustainability.
- Associations should be governed by a business philosophy, and decision-making should be led by the partners who risk the most in the company's financial

operations, without excluding anyone from participating in decision-making. Boards of directors should include those who have made the greatest social and financial investments in a venture. The project must have an exit strategy — a secure means of transferring the company's assets to the producers, accompanied by sound post-project financial instruments to ensure that assets remain stable for a reasonable period of time and are not misused or sold.

- Business management, with its longer-term vision, should be separate from project management, which is initially defined by the donor. Project costs should be kept separate from business costs, to improve business performance and make a better impression on potential investors.
- Capital and operational financing of businesses should occur on the investors' terms. In addition, stockholding and sales should be a part of the business from the outset; they are also useful in vetting potential partners. From its inception, the business' ability to access financial products from commercial banks should be strengthened. Working capital should be included in the project structure, but only until more sustainable, longer-term financing can be accessed.
- It is important to examine factors related to organizational culture when using

existing companies as models to support market access for associated producers. Former projects may have instilled the expectation of fresh funding from the new project rather than a commitment to benefiting the producers. Market assessments play a key role in defining these factors; they can also indicate the need for an early exit strategy if the company is not adopting the project's philosophy.

### **Project Management**

- Project management must be comprehensive and ensure that the intervention is sequential and systemic. To ensure producers have timely access to the resources they need for competitiveness, the implementing entity and management committees should have decision-making authority over human, technical, and material resources (equipment and other donations).
- The project must be regarded as a temporary player to ensure sustainability and avoid creating unrealistic expectations. Its role and intervention strategy should be clear to the permanent stakeholders, and its exit should be planned carefully, concentrating on results that are replicable and can ensure sustainability.
- Project management tools that track progress toward results and the ability to find timely and effective solutions to problems along the way

are important. For PDP, this meant creating an integrated platform for strategic and operational planning, results-based organization, and monitoring and evaluation to inform timely decision-making and ensure the incorporation of lessons for continuous improvement.

- Working with small NGOs and local consulting firms is challenging. They often face managerial, technical, administrative, and financial constraints that make it difficult for them to manage medium-sized projects. PDP spent considerable time and effort to make sure these partners had incorporated best management practices, but three of the eight local organizations that implemented productive projects were unable to fulfill their agreements. Working with the local offices of NGOs and international entities is a more efficient route, even though it can be harder to persuade them to adopt new approaches. Their existing capacity — especially in administration, finance and specific types of technical support — facilitates productive project management, particularly when time is of the essence.
- By designing market-driven strategies and a rigorous methodology for productive project implementation, it is possible to align a large number of technical service providers and their human resources. Well-structured

terms of reference help avoid fragmentation; although they limit creativity, they also ensure fair competition, a consistent approach, and successful outcomes.

- When construction is involved, the time frame must be lengthened and synchronized with productive operations. PDP's work with processing plants — an integral part of the business model — was not finished until the end of the initiative. This increased operational costs and difficulties with value-added production. The most effective approach is to follow the natural progression: begin with smaller operations and build on them in an organic manner.
- To avoid confusion in handling the client's image, it is important to have a branding

manual that provides clear guidance for messaging in activities and communications materials.

- Monitoring and evaluation, though it is an effective oversight mechanism, is more powerful when it is used for results-based learning and management. PDP's integrated system facilitated internal and external communications and motivated technical service providers to meet their targets.
- Information quality is essential for building confidence that a project is on the right path. Information must follow a clear path from its origins with the producer and his or her plot or herd, and be handled by experts who are aware of its importance for decision-making processes.





Bunches of scallions are branded and ready for delivery to the formal market by El Salvador Produce.

## CHAPTER SIX

# CONCLUSIONS

Built-in sustainability — achieved through the following elements — is essential for any innovation to improve the competitiveness of a value chain.

### TECHNOLOGY

In the context of sustainability, technological innovation must result in a final product that responds to the demand for quality, volume or quantity, season, and availability. Of these demands, quality is paramount.

Technology must be cost-efficient. A producer who adopts technology should be able to market a product at a lower cost or produce at a new level of quality that brings a higher price.

Technology must be replicable. Once an innovation is installed, other actors in the same part of the value chain should be able to emulate the innovator. The main

criterion for replicability is the availability of the good or service in related parts in the value chain. For example, using cardboard boxes to export a fruit without a local manufacturer or importer of those boxes will make it difficult for others to replicate this innovation in their businesses. Similarly, local professionals with expertise in a particular area must be available to ensure the transfer of that expertise to others.

Access to capital is a must to cover the producer's initial cost or investment in machinery, equipment, supplies, or technical assistance. The project's role is to facilitate and, in some cases, cover this cost for demonstration purposes. More permanent funding sources (such as private investment or bank loans) are required to cover this cost in the medium and long term.

## **A CLEAR ROLE FOR GOVERNMENT**

The state must provide incentives for innovation and adoption of technologies that boost the competitiveness of the value chains. Without regulation of goods and services, it is nearly impossible to make progress in breaking down obstacles to the efficient and sustained growth of value chains.

The state must promote transparency and formalization of business activities to ensure fair competition and create incentives for the efficient, ethical, and sustainable use of productive resources.

This regulatory role is especially important for food security and safety. A country that does not produce enough food is vulnerable to an influx of food products that do not meet basic quality standards to protect people's health.

Regulations must include sanctions for the production, marketing, and sale of products that do not meet minimum quality standards, whether those products are foods, handicrafts, or tourist services. Ideally, there should be incentives for adhering to regulations governing the production of goods and services in the value chain, including tax or credit incentives, technical assistance, or other fiscal measures that do not directly subsidize production costs, except for demonstration purposes. For example, production and handling of hygienic milk add to costs for producers and other stakeholders along the value chain. At the same time,

because the products are sold mainly in the domestic market, hygienic practices ensure safer products that have a direct impact on Salvadoran health and nutrition. Without regulations, enforcement, and penalties related to hygienic milk handling and transportation, it is unlikely that significant numbers of dairy farmers will adopt these innovations. When poor practices are the norm, the public has no choice but to consume poor-quality products or turn to imports. Worse yet, substandard products will continue to be imported and sold in public markets, discouraging technological innovation and process improvements.

## **INCENTIVES FOR PRIVATE SECTOR PARTICIPATION**

Understanding that much of the demand channeled toward producers and producer cooperatives comes from major buyers in the private sector, PDP focused on the relationship between these stakeholders. The project team promoted technological innovations to improve the productivity and quality of local products and services and encouraged wholesale buyers to give preferential treatment to these products to save foreign currency, reduce dependence on imports, support the local economy by generating more income and jobs, and ultimately create a climate of improved security and social harmony in El Salvador.

A project design like this one must also guarantee that the private buyer — the exporter, supermarket, industrial plant, or

tour operator — can make deals that are comparable to or better than imported products. At the same time, the hope was that the private sector would be deliberate in its support for local products, at least until the project-supported businesses had made progress in organizational development.

If the private sector is unwilling to support these processes by placing orders with local producers, paying promptly, and agreeing to price differentials that reflect higher quality, it will be difficult to sustain and expand innovations. A private sector that is only interested in the best deal and is not willing to join small-scale producers in investing in

the future will do little to address the food crisis or rural unemployment. PDP's partnership with Super Selectos demonstrates that it is possible to attract private enterprise to development efforts and work together toward common objectives.

When a project such as PDP ends, the sustainability of its actions depends more on government and the private sector, which represent demand, than on the producers. The state and the private sector should create and maintain a climate that encourages quality and productivity and ultimately promotes durable and replicable technological innovation.



Gerardo Sánchez of Santa Barbara Cooperative displays a watermelon crop in Cantón El Paraíso (Chalatenango department).

## CHAPTER SEVEN

# BEYOND PDP

In development, “sustainability” is often used to describe the future after a project ends, but the term can have different definitions. Conscious of this context, the PDP team made an effort to define sustainability as thinking through specific actions that would make sure parts of the project’s work really would continue after September 18, 2012.

The team asked itself two questions as it carried out its work:

- *Who will make sure these services are available to project beneficiaries in the future?*

**Outcome: Sustainability of Services.** Technology transfer through technical assistance and inputs in the areas of primary production, marketing, and business management.

- *How can we make sure businesses will continue to produce the goods and services they improved or learned about with PDP’s assistance — and how will they sell those products and do good business?*

**Outcome: Sustainability of Businesses.** Through the project’s interventions, the new and increased supply produced by beneficiaries penetrated the market, and they were able to make good deals.

Rather than waiting to tackle these issues, PDP addressed each concern in the design of productive programs. To a certain extent, this meant it was not necessary to take deliberate actions to keep businesses operational or ensure that people can continue to obtain services.

In designing each program and value chain, in addition to providing basic technical assistance and inputs, PDP integrated companies that could concentrate the producers' supply and channel it to the market. For value chains in which there were no such companies, PDP took the risk of creating them. The overall approach was to trust Salvadoran capacity to recognize opportunities and translate them into good business.

PDP helped equip its beneficiary companies with the means to continue providing basic services to producers seeking marketing, technical assistance, and finance inputs: strategic partnerships with large buyers, revolving funds for supplies, infrastructure and working capital, and skilled human resources.

The project team also strengthened the capacity of local service providers, applying instruments and methodologies to support rural economic development more efficiently and effectively. These steps ensured that new interventions in the geographic area or in the target value chains would preserve the inclusive rural business approach and the methodology based on geographic concentration of supply.

Many beneficiaries are new to this type of business and have only recently come to regard

farming or handicrafts as a means of feeding their families and generating a surplus. They were unable to fully master the production and sales techniques that would guarantee success. In addition, for a variety of reasons PDP was unable to connect all of its beneficiaries with cooperatives or anchor firms — for some beneficiaries' businesses and services, sustainability is not guaranteed. It was with this group in mind (as well as those who did not participate in the project) that PDP designed a replication process to enable other development actors to replicate the factors that boosted incomes and created jobs for more than 15,000 PDP beneficiaries in the Northern Zone.

To ensure that replication initiatives would resemble the PDP model, the project team met with stakeholders to identify lessons from the implementation process and define the aspects that should be included in future interventions:

- Shared vision of development among all stakeholders in the value chain
- Programs and projects to boost the value chain's competitiveness (emphasis on productivity, business management, and market access)
- Technological innovation and technology transfer

- Participation and empowerment (competitive bidding opportunities, beneficiary participation in project design)
- A business approach

PDP was fortunate that the Ministry of Agriculture and Livestock presided over the FOMILENIO Investment Committee, which was responsible for approving the productive projects. After carefully studying the strategy and results, the ministry was inspired to replicate the model in its own programs. One of the components of its Family Agriculture Plan (the national food

security strategy) is now based on the design of PDP programs. This is the best example of how PDP's work is being replicated and sustained in El Salvador.

Although the future is always uncertain, PDP has made every possible effort to ensure that higher incomes will be maintained, that the new jobs will last, and that the Northern Zone will continue to have access to technical assistance (from the Family Agriculture Plan and the businesses the project created and supported), marketing (through the companies and the market itself), and business management support.





