



USAID
FROM THE AMERICAN PEOPLE

ASSESSING THE IMPACT OF THE MICRO AND SMALL ENTERPRISE TRADE-LED GROWTH PROJECT OF USAID/BRAZIL

FINAL REPORT

JANUARY 2008

This publication was produced for review by the United States Agency for International Development. It was prepared by DAI.

ASSESSING THE IMPACT OF THE MICRO AND SMALL ENTERPRISE TRADE-LED GROWTH PROJECT OF USAID/BRAZIL

FINAL REPORT

Authors

Bonnie Brusky
Joana Monteiro

CONTENTS

- TABLES AND FIGURES..... III**
- ACKNOWLEDGEMENTS V**
- ABBREVIATIONS VII**
- EXECUTIVE SUMMARY IX**
 - INTRODUCTION IX**
 - DESIGN IX**
 - RESULTS..... X**
 - Cashew sub-sector X
 - Beachwear sub-sector xi
 - Honey sub-sectorxii
 - CONCLUSIONS..... XIII**
 - Project Hypothesesxiii
 - Relevance of the Methodologyxiii
- 1. INTRODUCTION 1**
- 2. DESIGN OF THE IMPACT ASSESSMENT 3**
 - 2.1 MODIFICATIONS TO METHODOLOGICAL TOOLS3**
 - 2.2 HYPOTHESES FOR PROJECT INTERVENTIONS AND CAUSAL MODEL..... 4**
- 3. RESULTS OF THE IMPACT ANALYSIS..... 7**
 - 3.1 CASHEW NUTS 7**
 - 3.1.1 Interventions..... 7
 - 3.1.2 Findings..... 8
 - 3.1.3 Conclusions..... 13
 - 3.2 HONEY 16**
 - 3.2.1 Interventions..... 17
 - 3.2.2 Findings..... 18
 - 3.2.3 Conclusions..... 23
 - 3.3 BEACHWEAR 24**
 - 3.3.1 Interventions..... 24
 - 3.3.2 Findings..... 26

3.3.3 Conclusions.....	31
4. CONCLUSION.....	33
4.1 DESIGN ISSUES.....	33
4.2 ELEVANCE OF IMPACT METHODOLOGY	35
ANNEX A: CASHEW NUTS CAUSAL MODEL.....	37
ANNEX B: HONEY CAUSAL MODEL.....	39
ANNEX C: BEACHWEAR CAUSAL MODEL.....	41

TABLES AND FIGURES

TABLES

Table E1. Study Sample	x
Table 1: Framework for Studying Impact.....	4
Table 2: Size and Division of Sample.....	5
Table 3: Comparative Data from Supported and Unsupported Mini-Mills.....	9
Table 4: Comparative Data from Supported and Unsupported Honey Processors	20
Table 5: Comparative Data from Supported and Unsupported Beachwear Firms.....	27
Table 6: Evolution of Beachwear exports Bahia vs. Brazil 2004-2006	28

FIGURES

Figure 1: Map of Municipality of Barreira, Ceará	7
Figure 2: Evolution of Exchange Rate (BRL:USD)	13
Figure 3: Map showing location of the municipality of Simplício Mendes, Piauí	16
Figure 4: Key Findings.....	34

BOXES

Box 1: Key Questions Guiding Impact Assessment	3
Box 2: Hypotheses.....	4
Box 3: Indirect Effects of Product Adjustment Intervention.....	11
Box 4: Key Questions	13
Box 5: Key Questions	23
Box 6: Data Collection Difficulties in Beachwear	26
Box 7: Project-inspired commercial relationships	30
Box 8: In their words: evidence of impact on producers	30
Box 9: Key Questions	31

ACKNOWLEDGEMENTS

The authors would like to acknowledge the fieldwork researchers and the authors of the background papers that served as input to this report: Jane Guimarães, Keuler Hissa and Willy Albuquerque. Special thanks to the consultants Rachael Botelho, Alexandre Darzé, Hugo Figueiredo, Lara Goldmark and Maurilo Oliveira for their comments.

ABBREVIATIONS

AAPI	Associação dos Apicultores da Micro Região de Simplício Mendes Beekeepers Association from Simplício Mendes Micro Region
BNDES	Banco Nacional de Desenvolvimento Econômico e Social National Development Bank
CAMPIL	Cooperativa Apícola da Microrregião de Picos Apiculture Cooperative from Picos Region
COOAPI	Cooperativa Apícola da Grande Picos Larger Picos Beekeeping Cooperative
EMATERCE	Empresa de Assistência Técnica e Extensão Rural do Ceará Ceará Technical Assistance and Rural Extension Enterprise
EMBRAPA	Empresa Brasileira de Pesquisa Agropecuária Brazilian Agricultural Research Corporation
FBB	Fundação Banco do Brasil Bank of Brazil Foundation
FNE	Fundo Nacional para Desenvolvimento do Nordeste National Fund for the Development of the Northeast
HACCP	Hazard Analysis and Critical Control Points
HMF	Hexametilfurfural
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis/Brazilian Institute for Environmental and Natural Resources
PCPR	Programa de Combate à Pobreza Rural Program for Combating Rural Poverty
PROINCO	Programa de Investimentos Coletivos Produtivos Program for Collective and Productive Investment
PRONAF	Programa Nacional de Fortalecimento da Agricultura Familiar National Program to Support Family Agriculture
SEBRAE	Serviço Brasileiro de Apoio às Micro e Pequena Empresa Brazilian Service Support for the Micro and Small Enterprises
SENAI	Serviço Nacional de Aprendizagem Industrial National Service for Industrial Learning
USAID	U.S. Agency for International Development
WTO	World Trade Organization

EXECUTIVE SUMMARY

INTRODUCTION

This report presents the final results of the impact assessment of the Micro and Small Enterprise Trade-Led Growth Project of the U.S. Agency for International Development, Brazil (USAID/Brazil). The Project ran for two years and three months, from October 2004 to December 2006. Its primary objective was to enhance job and income creation by promoting export-led growth among micro-and-small enterprises (MSEs) in Northeast Brazil.

The Project's activities focus on four regional sub-sectors, of which three were assessed for impact: beachwear in Salvador, Bahia; cashew nuts in Barreira, Ceará; and honey in Simplício Mendes, Piauí. In each of the sub-sectors, four intervention areas were emphasized: (1) brokering commercial linkages; (2) upgrading; (3) facilitating access to financial services; and (4) identifying barriers to sector competitiveness.

The purpose of this report is threefold: (1) evaluate the results obtained from the Project's interventions; (2) validate the design of the Project, and (3) to test the relevance of the impact methodology for analyzing the results of private sector development projects limited resources and a limited timeframe. The research took place over two data collection rounds: a baseline round in August-October 2006 and follow-up round in July 2007-October 2007.

DESIGN

A mixed mixed-method research was used to assess two key questions:

1. To what extent was the Project successful in promoting MSE access to the global market?
2. What was the Project's impact on job and income creation in the value chains where interventions occurred?

To answer these questions, a series of indicators were formulated to analyze impacts on **export activity** and **access to credit** at the level of Project-supported MSEs, and **employment** at the MSE and microproducer (i.e. the individuals who produce the raw materials for the MSEs) levels.

The data collection tools for the baseline and follow-up research consisted of individual semi-structured interviews, focus group discussions (FGDs), and short individual questionnaires (the latter used to gather basic quantitative data on income and production levels from FGD participants). In the follow-up round, the focus groups with microproducers in the beachwear sub-sector were replaced with individual interviews due to difficulties forming homogeneous discussion groups.

Table E1 offers an overview of the study sample.

TABLE E1. STUDY SAMPLE

	Beachwear		Cashew Nuts		Honey	
	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Project-supported firms	12	13	21	21	1	1
Control firms	18	12	3	3	2	2
Focus Groups (FG)	8	8	11	5	8	6
Individual data forms	57	NA	77	23	68	41

There are slight differences between the firm samples in rounds 1 and 2; however, none were considered significant enough to compromise findings.

- In beachwear, a firm joined the Project after the baseline was completed and is included in Round 2. In the comparison group, only 12 of the 18 companies participated in Round 2: two had changed sectors, two were unreachable, and one was traveling during the interview period.
- In the cashew sector, one of the mini-mills participating in Round 1 ceased operations prior to Round 2. A different mini-mill with similar characteristics (in terms of size and operations) that had not been interviewed in Round 1 due to logistic difficulties was subsequently included in Round 2.
- Difficulties reuniting the same microproducers in the honey and cashew sub-sectors in Round 2 resulted in a fewer FGDs and individual questionnaires. Because the same microproducers could not be compared between the two rounds, the individual questionnaires for these two sub-sectors were ultimately not used in the analysis.

RESULTS

CASHEW SUB-SECTOR

Interventions in the cashew sub-sector involved the organic certification of a group of microproducers, efforts to increase credit lines and find new financing sources for the three Project-supported firms, and the development of new market channels for exporting. It was expected that these interventions would lead to increased export sales of a higher value-added (organic) product and increased investment in equipment to increase the volume of processed nuts. In turn, these outcomes were expected to result in increased income for microproducers (cashew farmers) and increased firm employment levels.

Key findings:

- Supported firms reported processing more nuts and employing more people at the end of the Project period, although for reasons unrelated to the Project.
- Organic certification did not take place.
- Export volumes among supported firms dropped considerably between Round 1 and 2, as did the number of export clients.

- The comparison firms' exports dropped, as did their processing volumes and employment figures.
- In terms of access to finance, only one firm was able to take advantage of one of the multiple finance opportunities facilitated by the Project. The loan enabled the firm to invest in new equipment.
- There were no changes to producer income or the level of employment.

Overall, expected outcomes and impacts were not achieved. Three factors explain the lack of observed success: (1) the depreciation of the dollar, making exporting financially unviable for the small-scale, cash-strapped firms supported by the Project; (2) governance issues among the key actors in the sub-sector's value chain, which, among other things, impeded the Project from completing the organic certification process; and (3) the short timeframe of the Project combined with the seasonality of the sub-sector, which made it difficult to observe certain impacts (e.g.: new equipment purchases or processing volumes) that need more time to become apparent.

Nonetheless, the analysis identified a number of positive indirect effects the Project has had on the region's agricultural actors, including a demonstration effect that has led to a number of other value chains to pursue organic certification.

BEACHWEAR SUB-SECTOR

Interventions in the beachwear sub-sector involved developing an export strategy for the firms that had never exported, upgrading the product line and optimizing processes for all the firms (novice and experienced exporters), and brokering new market channels for exporting. It was expected that these interventions would lead to increased export sales of higher value-added products, as well as increased productivity and buyer loyalty leading in turn to result in increased income for the microproducers (outsourced embroiders and seamstresses) and increased firm employment.

Key findings:

- Export volumes increased slightly among supported firms and decreased among comparison firms.
- The number of regular clients increased eightfold (from 5 to 40) among the supported firms and dropped from 20 to a single client among comparison firms.
- New commercial relationships were established and new orders placed.
- The average price per piece (bikini, swimsuit) reported by supported firms remained stable, while it increased in the comparison group.
- Both supported and comparison firms reported an increase in employment of salaried workers.
- The supported firms reported an increase in the number of outsourced embroiders by 54%, while comparison firms saw a reduction of 11%.
- Microproducers reported increased income levels and work intensity.

Most expected outcomes and impacts were achieved. The supported firms acknowledge a greater understanding of exporting and production processes. New commercial relationships have been fostered. Data indicates a greater number of export markets in 2006 than 2004. Micro-producers indicate a positive evolution in terms of income and their own skills. Finally, all parties demonstrate greater confidence in

their abilities to produce high-quality beachwear. It is too early to tell if buyer loyalty has been affected, and the data was too limited to evaluate sustainable change to productivity levels.

HONEY SUB-SECTOR

Interventions in the honey sub-sector involved efforts to improve productivity and quality by the introducing new beekeeping techniques and new equipment, revising packaging and labeling, negotiating new credit lines for the supported firm, developing new market channels, building management capacity; and monitoring production and exporting procedures to ensure order fulfillment and on-time delivery. It was expected that these interventions would increase productivity, product quality and the number of international clients, thereby leading to increased production, sales and export prices. These outcomes in turn were expected to increase producer incomes and employment at the firm level.

Key findings:

- The supported firm reported a drop in production levels in 2006 due the lack of rain, followed by a return to its typical levels in 2007 when climatic conditions improved.
- One comparison firm reported a dramatic decrease of production levels, due to a change in business focus. The other comparison firm increased its production levels considerably in 2006 by bringing in honey to process from other states. It returned to its normal level in 2007, once it returned to processing local honey.
- The two quality indicators—humidity levels and percentage of light honey—did not change for the supported or comparison firms. The supported firm saw no change in humidity levels during the Project period because the necessary equipment was not acquired until August 2007. No efforts were ultimately made to increase the proportion of light honey, as 2006 and 2007 sales were of bulk honey, where color does not matter.
- The supported firm diversified its international client base, exporting to three new clients in 2006. It did not maintain these clients in 2007. Neither comparison firm managed to export in 2006 or 2007.
- No significant change was registered in employment at any of the three firms.
- The supported firm increased access to finance by securing three new loans. One comparison firm accessed public subsidies.
- Most microproducers (beekeepers) did not report increases in productivity or income, although they testified that beekeeping had gone from a “complementary” activity to their main production systems (corn and bean crops) to a “main” activity, thanks to the knowledge they had acquired and expectations that new techniques would yield results in time.

The interventions achieved impact on some levels. Three new international buyers and one new domestic buyer were secured in 2006, although not maintained for the 2007 season. Credit access enabled an equipment purchase that, in time, is expected to improve the quality of processed honey. There were no increases in sales, volume processed, employment, or producer income. Climatic conditions depressed production levels in 2006, while high operating costs at the supported firm, combined with the depreciation of the US dollar throughout 2007, made it difficult for the firm to sell its production. It is too early to tell if the Project will lead to sustainable increases in productivity and quality of honey.

CONCLUSIONS

PROJECT HYPOTHESES

The Project set out to promote the integration of MSEs into the global market. The interventions were appropriate for reaching these goals, but in the case of the cashew and honey sub-sectors, they were not enough to help the sub-sectors overcome fragilities caused by macro-economic fluctuations, value chain governance, and the vagaries of weather, all of which ultimately diminished Project impact.

Overall, the Project timeframe was too short to produce significant impacts, especially given the seasonality of the sub-sectors supported. Initial contacts with the supported MSEs began in October 2004. Management changes to the Project team slowed down implementation in 2005. The first season during which impacts could be felt was in 2006. The exception was the honey sector due to its early production season (June) in which progress on market linkages was made in early 2005.

Finally, the overall objective—to create income and jobs at the producer level—was ambitious in light of the resources available for interventions. Many of the larger questions that require longer term, bigger budget projects—value chain governance and organizational strengthening, for instance—could not be addressed adequately, and ultimately these issues got in the way of achieving greater impact.

RELEVANCE OF THE METHODOLOGY

The methodological tools were largely effective for assessing and crosschecking firm impacts. Nonetheless, given that increased producer revenues and employment were the primary expected impacts of the Project, the evaluators felt the tools were not appropriate for accurately measuring producer income and employment intensity.

The methodology resulted in an analysis that has provided useful information on the complexity and limitations of this type of Project. It uncovered elements that impeded or contributed to successful achievement of the impacts defined in the causal model. It made it possible to determine the origin of these elements, such as project design, uncontrollable external forces, or interpersonal relationships. Moreover, the analysis shows the paths *not* to take in similar projects in the future, and it indicates some of the pitfalls to watch for.

However, the methodology does not appear to have captured the nuances of this type of Project. Because of its small scope, its focus on sub-sectors with only one production season per year and export-orientation (thus making it vulnerable to economic fluctuations), it was foreseeable that quantitative results on income and job generation would not be visible within the evaluation's timeframe. For this reason, the implementers approached the Project as a process-oriented, experimental initiative aimed at bringing together local development actors and not just a series of discrete activities that would generate quantitative results on jobs and revenues. The evaluation methodology was not able to measure the results of this “process” aspect in which impacts—dialogue among actors, new alliances, stronger interpersonal and inter-institutional relationships—are necessarily qualitative and, arguably, subjective.

In short, the evaluation offers some useful lessons that would have otherwise gone undocumented, but the methodology does not provide an adequate assessment of what the Project has truly accomplished.

Determining whether this methodology is appropriate for a certain project depends, above all, on the likelihood of the project to produce quantitatively **measurable results** within the set timeframe. This methodology would probably be most effective in sectors that do not have short, annual production and

sales seasons, so that firm owners have a chance to test out and refine new knowledge and skills over a period of time. Other conditions needed for this methodology to be relevant:

- Data for the impact indicators can be collected **reliably** and **readily** (data that is already tracked and registered by firms).
- Firms accept, **as a condition** to participating in the project, to be **transparent** in sharing required data. Meeting conditions 1 and 2 would require the project team to conduct pre-selection interviews with potential participants and to have a clear idea of the data needed to monitor results.
- This, in turn, requires a **critical mass** of both potential participant and comparison firms from which to select participants so that project teams do not have to “make do” with firms that are not fully committed to the project or its evaluation. This critical mass is also important to avoid biases that can occur in small samples and to ensure that the comparison groups are as similar to the experimental group as possible.

1. INTRODUCTION

This report presents the final results of the impact assessment of the Micro and Small Enterprise Trade-Led Growth Project (referred to hereafter as the “Project”) of the U.S. Agency for International Development, Brazil (USAID/Brazil). The Project ran for two years and three months from October 2004 to December 2006. Its primary objective was to enhance job and income creation by promoting export-led growth among micro-and-small enterprises (MSEs) in Northeast Brazil.

The Project’s activities focused on four regional sub-sectors: beachwear in Salvador, Bahia; cashew nuts in Barreira, Ceará; honey in Simplício Mendes, Piauí; and açai in Belém, Pará.¹ Selected based on their potential and readiness to export, these sub-sectors were the object of various activities to promote the integration of MSEs into global markets. Four main intervention areas were emphasized: (1) **brokering commercial linkages**; (2) **upgrading** (i.e. improving the products, processes and functions of MSE exporters and their suppliers); (3) **facilitating access to financial services**; (4) **identifying barriers to sector competitiveness**.

The Project included a monitoring and evaluation (M&E) component designed to evaluate the impacts of the first three of these activities, as they directly targeted MSEs. The impact methodology was developed by USAID under its Accelerated Microenterprise Advancement Project (Business Development Services Knowledge and Practices component) and adapted to this Project.

The purpose of this report is threefold:

1. Evaluate results obtained from the Project’s interventions.
2. Validate the design of the Project.
3. Test the relevance of the impact methodology for analyzing the results of private sector development projects limited resources and a limited timeframe.

The research took place over two data collection rounds: a baseline round in August-October 2006 and follow-up round in July 2007-October 2007. The Baseline Research Report amply documents the Brazilian economic backdrop, the project description, the impact assessment design, the organization of each sub-sector studied, and the characteristics the participating firms and producers involved in each case. To avoid redundancy, this report will not dwell on most of these aspects, as the intention is the present the main conclusions regarding impact, Project design and the relevance of the methodology applied.

The report is organized as follows:

- Section 2 revisits the impact assessment design, considering slight changes were adopted in light of challenges encountered in the first round of data collection (documented in Section 4 of the Baseline Report). It will also review the hypotheses that underlie the Project’s interventions, the key questions guiding the impact assessment and the indicators used to inform analysis.

¹ The açai sector, however, is not included in the impact study. At the time of the design of the impact assessment, the activities in the açai sector were being rethought due to a tense political situation in the producing region.

- Section 3 presents the results of the impact analysis for each sub-sector in roughly the same format: activities, expected outcomes, actual outcomes, observations, overall firm findings, and overall producer findings.
- Section 4 offers a summary of the results, reflects on some of the Project design issues and concludes with an analysis of the impact methodology and its relevance.

2. DESIGN OF THE IMPACT ASSESSMENT

The impact assessment was designed to answer the following key questions.

Box 1: Key Questions Guiding Impact Assessment

- To what extent was the Project successful in promoting access to the global market?
- What, if any, were the eventual impacts on job and income creation in the value chains where interventions occurred?

To answer these questions, analysis was conducted at two levels: the MSEs (referred to here as “exporting firms”) and microproducers.² The Project’s reduced scope and short timeframe combined with the seasonal nature of the sub-sectors limited the possibility of generating widespread, quantifiable results. Therefore, a mixed quantitative-qualitative approach of semi-structured individual interviews and focus group discussions (FGDs) was applied to a relatively small sample. Interviews were used at the firm level to collect quantitative and qualitative data to measure impact, while the FGDs with producers were primarily used to explain impacts. Focus group participants also filled out short questionnaires with basic quantitative data on income and production levels. Comparison groups were used solely at the lead firm level, since these firms were the Project’s principal focus of intervention.

2.1 MODIFICATIONS TO METHODOLOGICAL TOOLS

As a whole, the data collection tools were deemed appropriate, with one exception. During Round 1, evaluators encountered difficulties forming homogeneous focus groups of microproducers in the beachwear sub-sector due to a lack of accurate information about this segment. Moreover, producer-level findings in this sector pointed to a highly transient labor force, raising concerns that it would be difficult to relocate the same producers to interview for the second round of data collection. Consequently, evaluators opted to replace the FGDs with in-depth case studies of the two categories of microproducers that work most commonly with the supported firms: embroiderers and seamstresses.

² Microproducers refer to the individuals who produce the raw materials for the exporting firms (beekeepers and cashew farmers) or who are contracted to produce for the exporting firms (seamstresses and embroiderers, in the beachwear sector).

2.2 HYPOTHESES FOR PROJECT INTERVENTIONS AND CAUSAL MODEL

The Project's interventions were designed on the basis of the hypotheses detailed in Box 2.

Box 2: Hypotheses

1. Targeted assistance to link MSEs through horizontal and vertical linkages along a value chain is critical to the success and growth of a sub-sector, as well as for the sub-sector to compete in the global market.
2. Project activities will contribute to helping MSEs access markets and increase sales through:
 - adapting products to demand,
 - marketing MSEs' products,
 - promoting commercial contacts,
 - improving access to finance for production and/or commercialization, and
 - increasing productivity.
3. Increasing small enterprises' access to export markets stimulates sales volume and, hence, production, and this create more jobs within the supported firms, both in terms of intensity of work and the number of people employed.
4. Because the lead firms selected for assistance involve large numbers of microproducers (as suppliers of finished and semi-finished products) and hire low income workers, the increased sales will benefit small microproducers and the poor through expanded opportunities to supply goods and services to the lead firms, increased employment, and increased income.

Quantitative and qualitative indicators measuring (1) export activity of firms, (2) employment at the firm and producer level and (3) access to credit at the firm level were elaborated to analyze these hypotheses (Table 1).

TABLE 1: FRAMEWORK FOR STUDYING IMPACT

Levels of Analysis	Domains of Impact	Indicators of Change
Exporting firms	Exports	<ul style="list-style-type: none"> • Quantity of exports • Average sales price • Types of products exported • Number of clients and /or sales channels • Access to different markets (countries) • The position of the clients within the commercialization chain
	Employment	<ul style="list-style-type: none"> • Number of regular employees • Intensity of work throughout the year • Percentage of women in the employed labor force • Number of outsourced workers
	Access to credit	<ul style="list-style-type: none"> • Volume of new loans

Levels of Analysis	Domains of Impact	Indicators of Change
Microproducers	Income	<ul style="list-style-type: none"> • Average sale price of goods produced • Perceptions of changes to income flows • Relative importance of the activity as a contributor to household income
	Production	<ul style="list-style-type: none"> • Quantity of goods produced • Intensity of work throughout the year • Incentives for investment in production
	Power relationships	<ul style="list-style-type: none"> • Diversification of buyers • Perceptions of level of dependence on middlemen

A causal model depicting activities, expected outputs, incomes and impact was also designed for each sub-sector and served to organize the impact analysis in section three (see the appendices for causal models).

2.3 Sample

Table 2 presents the number of firms and producers interviewed in each of the subsectors:

TABLE 2: SIZE AND DIVISION OF SAMPLE

	Beachwear		Cashew Nuts		Honey	
	Round 1	Round 2	Round 1	Round 2	Round 1	Round 2
Project-supported firms	12 ³	13	21	21	1	1
Control firms	18	12	3	3	2	2
Intermediaries	NA	NA	3	0	0	0
Large companies	NA	NA	1	0	1	0
Focus Groups	8	8 ⁴	11	5	8	6
Individual data forms	57	NA	77	23	68	41

As in the baseline, the sample includes the entire population of supported exporting firms, except for three beachwear companies whose key members were unavailable during the data collections period. These three firms ultimately dropped out of the Project for diverse reasons.

There are slight differences between the firm samples in rounds 1 and 2:

- In the beachwear subsector, a firm joined the Project after the baseline data had been collected and is included in Round 2. In addition, only 12 of the 18 comparison firms participated in Round 2: two had changed sectors, two were unreachable, and one was traveling during the interview period.
- In the cashew sector, one of the mini-mills participating in Round 1 ceased operations prior to Round 2. A different mini-mill with similar characteristics (size, functioning) that had not been interviewed in Round 1 due to logistic difficulties was subsequently included.

³ In the baseline report, this figure was incorrectly reported as eleven. The correct number is twelve.

⁴ Individual interviews.

None of the above differences are considered significant enough to compromise the findings.

The differences between the focus groups and individual data forms conducted in Rounds 1 and 2 are more dramatic.

- In the cashew sector, the number of producers interviewed was considerably smaller than in Round 1 since some producers refused to participate and others had moved to other communities. The producers' refusal to participate appeared to be the result of frustration: several meetings had already been organized in the region by governmental organizations and had rendered no concrete results.
- The honey sector presents similar difficulties. On average, one out of six producers that participated in Round 1 did not participate in Round 2. Like in the cashew sector, some had moved or were out of the locality the day the research was conducted, while a small number refused to participate, expressing frustration with attending the many meetings organized by governmental agencies and support institutions, with no results in sight.
- As the individual data forms were collected for focus group participants, the decreased number of participants resulted in fewer data forms.

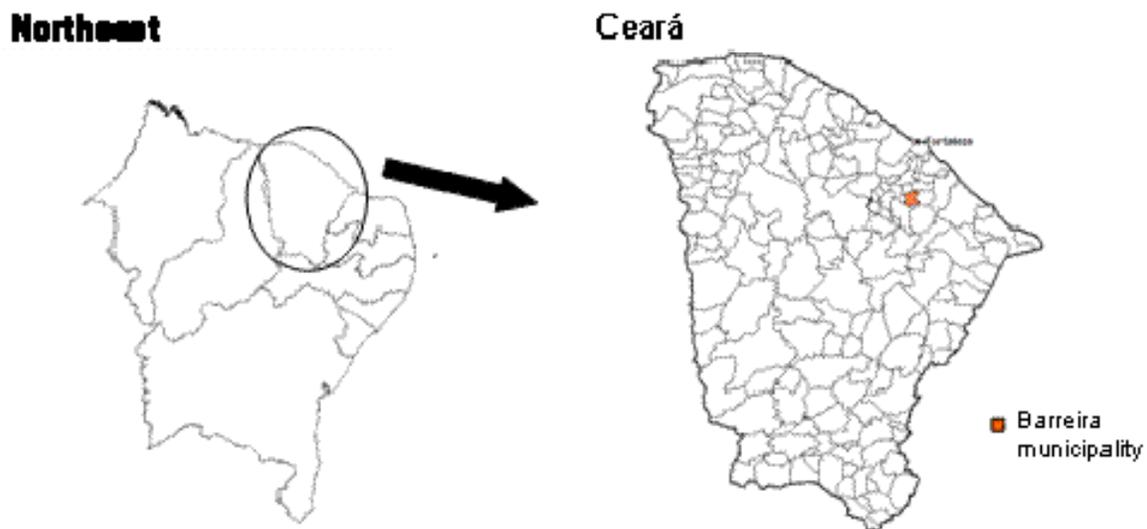
Despite the difference in number of participants, the producers' profiles and testimonies were homogenous and coherent with Round 1 findings. The research team deemed the data gathered sufficient to explain project impacts at the producer level in a qualitative fashion. Because the same microproducers could not be compared between the two rounds, however, the individual data forms documenting quantitative information were ultimately not used in the analysis.

3. RESULTS OF THE IMPACT ANALYSIS

3.1 CASHEW NUTS

Brazil's cashew nut industry represents about US\$ 164 million in annual exports, with the majority going to the United States.⁵ Cashews are cultivated and processed throughout the Northeast region, mainly in the poorest micro-regions, such as the municipal district of Barreira, the Project's focus. With about 20,000 inhabitants and 100 kilometers distant from Fortaleza, the Barreira region is considered the cashew nut production center in the state of Ceará (see Figure 1). In Barreira, a large number of small processing units, or mini-mills, are concentrated. In Barreira there are 24 mini-mills processing cashew nuts, most of them working intermittently, and almost all of them are linked to the three biggest mini-mills in PA-Rural, Única and BCaju. These three mini-mills already access foreign markets and play a leading role in the region. PA-Rural, Única and BCaju were the firms supported by the USAID/Brazil program.⁶

FIGURE 1: MAP OF MUNICIPALITY OF BARREIRA, CEARÁ



3.1.1 INTERVENTIONS

Based on the findings of a *detailed* sector analysis, the Project set out to increase competitiveness of the Barreira nut sector by focusing on (1) adding value at the production stage; (2) increasing access to working capital; and (3) improving market access.

⁵ SECEX/MDIC, 2007.

⁶ Lagoa Nova mini-mill was among the supported firms in the round 1 impact assessment but dropped out of the Project early on.

The causal model for cashew nuts (Appendix 1a) details four interventions. Ultimately, three of these were pursued from October 2005 to January 2007:⁷

1. Product adjustment (adding value to production), involving the facilitation of new product packaging and new organic product and certification.
2. Access to finance, involving the negotiation of credit limit increases for Única and BCaju and accessing investment lines from public banks.
3. Commercial linkages, involving the development of alternative market channels/buyers and producer participation in trade shows.

This section briefly describes these interventions. Their results are presented in the following section.

Product adjustment. The Project supported an organic certification process in view of creating a product with higher value-added. To start the process, the Project contacted Instituto Biodinâmico (IBD), the premier certifier of organic produce in Brazil. IBD agreed to support the process and, at the initiative of the Project, opened up offices in the capital city Fortaleza. Other partners were brought into the process, including the parastatal institution responsible for promoting micro and small business (SEBRAE/CE), the public agricultural technical assistance body (EMBRAPA) and regional development agencies.

With assistance from SEBRAE, the Project selected a pilot group of 50 cashew producers in Barreira to be trained by IBD and EMBRAPA in organic cultivation techniques. Seven mini-mills including PA-Rural and Única were selected at the same time to be advised on upgrades required to process organically. The Project would also facilitate these ‘mini-mills’ access to differentiated credit lines that would permit upgrading. The whole process began in March 2006 and was slated for completion in December 2006.

Access to finance. The Project made concerted efforts to attract commercial banks and the regional development bank (Banco do Nordeste) to the Barreira mini-mills through frequent meetings. Contacts were also made with a large trading company in the state capital with extensive export experience to provide financial, logistical and commercial services to the Barreira mini-mills.

Commercial linkages. To develop new market channels, the Project contracted a North American consultant to identify market segments, consumer preferences and purchasers. The Project also financed the participation of two key actors from Barreira in international (US) food fairs, as well as developed the promotional material (folders, photos) for this occasion. A trade mission comprised of one of the firm owners, a local trade consultant hired by the Project and a US-based agro-food specialist also hired by the Project was sent to New York and Miami to identify new clients.

3.1.2 FINDINGS

This section presents the key quantitative indicators collected for the impact analysis according to each domain of impact (Table 1: Framework for Studying Impact). A brief discussion of the indicators is followed by a qualitative analysis of each of the three interventions that seeks to contextualize the quantitative findings.

⁷ The fourth, monitoring and supporting production and logistics, proved unnecessary as the sectoral analysis found that logistical issues surrounding order fulfillment did not pose a bottleneck in the cashew sector.

3.1.2.1 Comparative quantitative data

TABLE 3: COMPARATIVE DATA FROM SUPPORTED AND UNSUPPORTED MINI-MILLS

		08/2004 – 07/2005		08/2006-07/2007	
		Supported Firms	Comparison Firms	Supported Firms	Comparison Firms
Productivity	Processing in the last harvest	640 tons	470 tons	1000 tons	420 tons
Exports	Number of firms that exported	2 out of 21	1 out of 3	3 out of 21	0 out of 3
	Volume exported ⁸	208-256 tons	22 tons	128-176 tons	0
	Value exported (US\$)	1,185,000 ⁹	110	724	0
	Number of foreign clients	11	2	2	0
	Destination markets	USA, Canada, Middle East, Peru/Colombia	USA, Italy	USA, Lebanon	0
	Average export price ¹⁰	US\$ 1.20 - US\$ 3.50 per pound	N/A	US\$2.03 per pound	0
	Origins of the nuts	Producers, intermediaries and other mini-mills	Own production, producers and intermediaries	Producers, intermediaries and other mini-mills	Own production, producers and intermediaries
Employment	Average no. of people employed throughout the year	350	66	371	43
Finance	Origin of resources used to buy nuts	Own capital, financing, partnerships with producers	Own capital, re-invested profits and partnership with producers	Own capital, financing, partnership with producers	Own capital, reinvested profits and partnership with producers
	Number of firms which used credit in the last 12 months	1	0	1	0

Productivity. Productivity in terms of the volume of cashews processed *in natura* went up considerably in the supported group, while it decreased in the comparison group. This difference, however, is not due to the Project. One mini-mill, Única, reported much higher volumes of processed cashew, going from 16 tons/month during high season to 51 tons/month during the same period. The reason for this increase was the development of several new partnerships in 2005/2006 between Única and firm in Rio de Janeiro.¹¹

⁸ Firms were unwilling to provide the exact volume of exports. Figures reported here are based on firms' reported estimates.

⁹ Round 1 data is slightly different from what was reported in the Table 6 of the Baseline Report, since one of the exporting mini-mills, Lagoa Nova, closed during the Project. Round 1 data has been adjusted accordingly.

¹⁰ In Table 6 of the Baseline Report, export prices were mis-reported at US\$ 5 per pound due to a translation error. The correct prices are reported here.

¹¹ Única did not mention any of these partnerships during the round 2 data collection, which they deemed to be confidential. The information that follows was only collected after a series of follow-up calls made to Única. The person who provided this information was not, incidentally, the head of Única but a salaried employee who works as production manager.

This firm supplied a significant volume of cashew in natura to Única, absorbing 50% of the expenses incurred by this increase in volume (including new employees). The profits from processing and commercializing the cashews were also shared 50-50. In addition to this partnership, Única created ties with an Indian company with cashew plantations in Ceará. The Indian company covered Única's expenses (salaries, taxes) in return for Única processing the cashews.

Exports. This increase in **volume of nuts** processed did not accompany an increase in volume exported. The interviewees were evasive in giving hard data on the number of containers exported, but conceded that it was less than in 2004. The **value of exports** was much lower in 2006 than in 2004, but this is partly due to the depreciation of the US Dollar (nearly 37%, see Figure 2 below) that occurred during this period. While the actual price per pound remained relatively stable between the two periods, the losses incurred by the exchange rate **negatively affected the profitability** of exporting cashews.

Employment. Despite the decrease in export sales in 2006, there was a slight increase (5%) in employment among the supported firms, compared to a 34% decrease among the unsupported firms. The increase was limited to Única. This difference does not appear to be due to the Project, but rather can be attributed to Única's new partnerships, which enabled the firm to process more at the partners' expense.

Finance. Although there were no changes to the number of supported or comparison firms' accessing finance, one mini-mill that had not previously accessed credit, PA-Rural, was approved for a loan from a donor-backed São José Project that permitted it to make significant investment in upgrading processing operations.¹² The following section details this development, which was directly related to the Project.

The quantitative data indicate the Project had no direct impact on productivity, exports or employment but some impact on access to finance. The following analysis by intervention attempts to understand why these impacts did and did not occur.

3.1.2.2 Analysis by intervention

Intervention 1: Product adjustment.

The Project launched the organic certification process with a pilot group of producers and local partners. It was expected this process would result in a product of higher value, thus helping to increase export sales and the prices paid to producers. As the data in Table 3 indicates, there was no increase in export sales. FGDs with producers confirmed that prices paid for cashews *in natura* in fact dropped between 2004 and 2006. They also reported that cashew production accounted for a smaller portion of monthly income than in 2004. In sum, the expected impacts were not achieved. Why?

The simple answer is that the pilot group was not certified. A cursory look into what happened suggests that an excessively slow bureaucratic process was to blame. The full version, however, reveals more complex causes. Halfway into the producer selection process, the Project handed the reins over to institutional partner SEBRAE (while still remaining the main interlocutor of EMBRAPA and IBD). Once the producers were chosen, a Memorandum of Understanding (MOU) needed to be signed between SEBRAE and PA-Rural, which was chosen to be the primary processor of the first organic produce. However, once the MOU was ready to be signed, the PA-Rural president became evasive and avoided the signature process.

¹² World Bank-supported Project that aims to combat rural poverty by supporting associations with income and employment-generating potential.

In fact, the president of PA-Rural (a non-profit association) is also owner of the for-profit mini-mill, Barreira Amêndoas. Furthermore, he has intimate ties (investment partners, friends) to a large cashew-nut producer and processor from the neighboring state Piauí. The Project's certification activities in Barreira caught the attention of the cashew sector as a whole, including this Piauí-based entrepreneur who contacted his Barreira colleague. Ultimately, the two concluded a deal that would permit Barreira Amêndoas to process and export organic cashews produced on the plantations of the Piauí entrepreneur. The two entrepreneurs were processing and exporting organic cashews in less than 12 months. Meanwhile, PA-Rural stonewalled the Project and its partners, who were unable to move forward without the signed MOU.

Parallel to this, a large processor from Fortaleza also was drawn by the Project's efforts in Barreira and decided to certify a group of producers on its own. The firm skimmed the most productive producers from the Project's pilot group and got them certified by IBD in a matter of months, leaving the Project with a smaller, less productive group than had been initially selected. As of writing (11/2007), the group still has not been certified.

Despite this turn of events and the absence of direct impact due to this intervention, the indirect impacts (Box 3) have been significant.

Furthermore, important lessons have been learned. First, there is a need to create measures to ensure accountability of all partners throughout the duration of a Project. Performance-based indicators or project milestones need to be defined up front by all partners involved, as do the corrective actions to be taken if these indicators are not met. While personal relationships cannot be controlled, project partners can be expected to respect their obligations—as long as these obligations are clear from the outset.

Secondly, while the bureaucratic aspects of collaborating with government partners can, on the one hand, make interventions less agile or even penalize them in the short-term, well-formed coalitions offer greater potential for impact in the long-term. Although the Project's small group of cashew producers has not been certified, hundreds of other producers around Ceará have. SEBRAE and EMBRAPA are already pursuing new value chains to certify with IBD, indicating the sustainability of the Project's indirect impacts.

Box 3: Indirect Effects of Product Adjustment Intervention

- A permanent IBD presence. The Project's efforts attracted IBD to Fortaleza where it set up an office, making it easier for other actors to seek out organic certification.
- Increased awareness. Key agricultural and enterprise players like EMBRAPA and SEBRAE have integrated the importance of adding value to produce as a way to increase farm gate prices.
- Geographic expansion. These two elements combined have led other cashew producers and processors in Ceará (not just the Barreira region) to get organic certification.
- Demonstration effect. Experience in cashew sector has encouraged actors in other Ceará-based value chains (bananas, leaf vegetables) to be certified by IBD.

Intervention 2: Access to finance.

The Project successfully negotiated with public and private commercial banks and the regional development bank to increase the credit lines for the mini-mills. Negotiations were also concluded with a trader in Fortaleza, who agreed to offer a credit line to one of the supported firms. It was expected that facilitating access to finance would result in new investments in processing equipment, which in turn would increase volumes of processed nuts and exports. Despite these successful negotiations, however, the firms did not take advantage of this access.

Única and BCaju could not conclude negotiations with the banks or the value chain trader due to poor financial health (which worsened during the course of the Project due to the exchange rate). The financial providers deemed the mills' profit margins too small, especially in light of the bleak perspective for exporting with the depreciation of the US dollar. In the case of PA-Rural, it was discovered rather late in the game that the credit lines negotiated by the Project could not be used for associations.

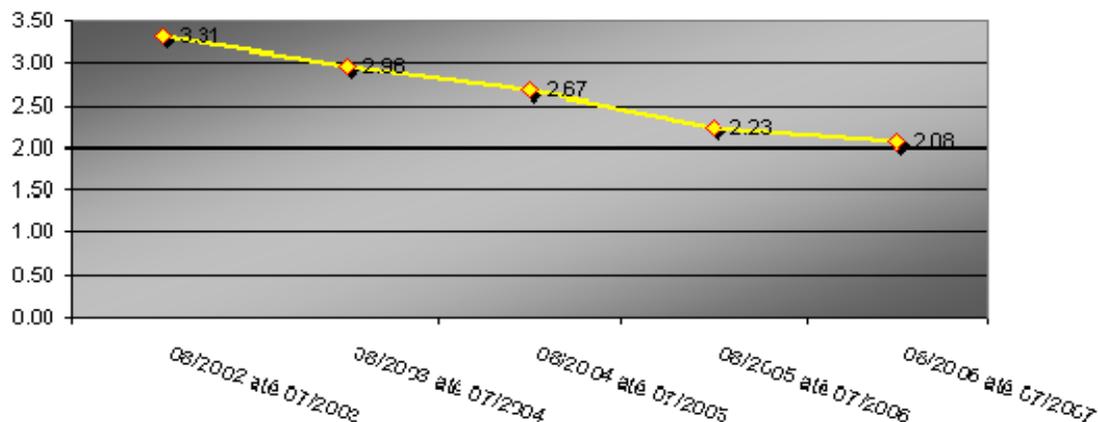
PA-Rural did manage to access financing via a poverty reduction project that supports associations with income-generating potential. While PA-Rural pursued this financing on its own, the fact that the association was receiving TA from a USAID-backed project gave it the credibility needed to edge out the other one hundred-some candidates. PA-Rural requested financing to upgrade its processing equipment so as to be able to process organically. The equipment was purchased in October 2007 meaning that any increase in processing and export volumes will not be detected by the Project.

In sum, the impact of this intervention is mixed. PA-Rural did purchase new equipment thanks to financial access, but the Project timeframe was too short to observe the effects of this accomplishment. The other mills have not been as lucky, for reasons that have as much to do with their own financial management as a glitch in the Project design. Had the mills' financial situation been observed more closely throughout the duration, the Project team may have been better equipped to seek out appropriate credit lines. At the same time, the extreme reticence on the part of the mills to share their financials made this kind of monitoring difficult. Again, these results point to the importance of performance-based indicators and contractual agreements with conditions of transparency.

Intervention 3: Commercial Linkages.

The efforts to build commercial linkages were expected to result in new market channels, increased orders and ultimately increased exports. As seen in Table 3, however, there was no increase in the number of foreign clients or exports. The main reason for not achieving expected outcomes stems from the macro-economic context. The depreciation of the US Dollar made exporting cashews unattractive for the Barreira mini-mills (Figure 2), whose financial situation was too vulnerable to absorb the losses that came with exporting a commodity.

FIGURE 2: EVOLUTION OF EXCHANGE RATE (BRL:USD)



While the supported mini-mill directors reported that the Project-hired consultant and trips to trade fairs were useful for understanding the demands of the US market, they ultimately could not offer the differentiated product demanded by this market, since the organic certification process was not concluded. It is noteworthy that one mill did manage to close a contract with a US importer thanks to the Project’s efforts, but it subsequently defaulted on payment.

3.1.2.3 Impact on producers

All three interventions were expected to increase producers’ income. Given few of the expected outcomes were achieved, it is not surprising that FGDs revealed no increased in income. Indeed, participants indicated a decrease in income. Moreover, in the current context of a depreciated dollar, it is improbable that producer income would increase, even if sales volumes had increased. This is because the large cashew processors lowered the price they pay for cashews *in natura* in order to minimize their own losses due to the exchange rate.

It is possible, however, that once the organic certification process is completed and PA-Rural starts processing with its new equipment, some impact will be felt on jobs and income. The Project timeframe was simply too short to observe these potential effects.

3.1.3 CONCLUSIONS

In light of these findings, what can be said in response to the key questions guiding this impact assessment and the hypotheses that underline the Project design?

3.1.3.1 Answering the Key Questions

With regard to the key questions, neither the quantitative or qualitative analysis the indicate that the Project was successful in promoting access to the global market or in generating jobs and income, at least among the supported firms during observation period. Three factors explain the lack of observed success: (1) macro-economic context, (2) governance issues and (3) project timeframe.

Box 4: Key Questions

- To what extent is the Project successful in promoting access to the global market?
- What, if any, are the eventual impacts on job and income creation?

- The considerable and unexpected **depreciation of the dollar** was a major issue for the Barreira mini-mills. Although the trend for statewide cashew exports was positive in 2006/2007, it is possible that those exporting were larger firms with sufficient profit margins to absorb the losses incurred by the lower dollar. As the baseline report details, all the mills interviewed in Barreira faced capital constraints even before the dollar began to fall. They were unable to increase their processing volume for lack of working capital, let alone absorb losses involved in export transactions. The depreciation of the exchange rate created an even tougher financial environment for the firms. Unable to cover costs with export revenues, the firms' financial health further deteriorated, which in turn made it impossible for them to benefit from the credit opportunities the Project team had facilitated.
- Perhaps even more significant than that exchange rate, however, was the **issue of governance** in the Barreira cashew sub-sector. The nature and dynamics of the relationships between the key actors in the Barreira value chain (mini-mill leaders, Project staff, government partners) have impeded positive outcomes, reinforced power asymmetries, reduced chances for transmitting knowledge and created barriers for smaller mills and producers to integrate more fully in the sector. Personal rivalry between the leader of PA-Rural (also owner of Barreira Amêndoas) and the owner of Única,¹³ the profit-maximizing and nepotistic behavior of Barreira Amêndoas, and the lack of commitment of both parties to the Project ultimately penalized both the smaller mini-mills that pre-process for the larger ones and the cashew producers, who lost out on the chance to produce, process and export a differentiated product at differentiated prices—at least in the short-term.¹⁴

It is noteworthy that the negative spiral effect of the depreciation of the dollar influenced governance issues as well. The deterioration of the PA-Rural's and Unicas' respective financial situations exacerbated tensions between the two and further eroded any trust that existed when the Project began.¹⁵

The Project could not control these issues. While the impact evaluation team detected a lack of transparency during Round 1, it was impossible to decipher the power relationships and rivalry early on, or foresee the change to the economic context. Nonetheless, performance-based contractual agreements with specified milestones might have mitigated the governance problems.

- The **short duration** of the Project combined with the seasonality of the sector made it difficult to observe impacts that are likely to appear over time (e.g. PA-Rural's new equipment purchase).

Nonetheless, the Project's indirect impacts (Box 3) should not be forgotten in this analysis. The Project was particularly successful in creating synergies among key development players. Moreover, attracting IBD to Fortaleza and increasing awareness regarding the importance of adding value to agricultural produce has resulted in geographic expansion of organic certification and a positive demonstration effect in Ceará. IBD itself recognizes the role of the Project in providing impetus to the accelerated development of organics in the state. Despite the lack of quantitative data to support these impacts, they are considerable and, more importantly, show strong signs of being sustainable.

¹³ A rivalry stemming from the fact that the firms work in the same region and thus compete in the same markets (for both buying cashews *in natura* and selling processed nuts).

¹⁴ In the second phase of this Project, approved by USAID in 2007, the cashew sub-sector was dropped for lack of commitment.

¹⁵ This is further complicated by the fact that one of the firms defaulted on a sizeable (US\$ 100,000+) personal loan made by the other.

3.1.3.2 Confirming the Hypotheses

In the case of cashews, horizontal targeted assistance in the form of organic certification appears to have **led to increased growth and exports**, although for processors outside the supported group. Without this assistance, organic certification would probably have grown as it has in the state of Ceará.

At the same time, the experience with the Barriera cashew sub-sector also demonstrates that **activities aiming at product adjustment, marketing, commercial linkages, access to finance and increased productivity are not enough to increase global market access**. Other issues like macro-economic context and value chain governance must be considered, and, when possible, their associated risks mitigated.

While macro-economic fluctuations are uncontrollable, it is possible to have contingency plans if worst-case scenario economic events occur. The Project could have achieved greater direct impact on the supported firms had it been able to change its orientation mid-course and focus on domestic markets. As for value chain governance, it appears essential to formalize the terms of the relationships among project actors. The success of this Project was predicated on transparent information sharing, commitment to the overall goal and a clear willingness to work with other sector leaders—yet supported firms respected none of these conditions. The indirect Project impacts show that it is possible to achieve results even in adverse circumstances, but the governance problems no doubt diluted the Project's impact.

Because there is no indication of increased access to export markets or sales during the period observed, and also because the cashew intervention did not target producers, it is **impossible to affirm whether increasing MSE access to export markets ultimately increases employment and income** through expanded opportunities to supply goods and services. The case of beachwear offers a clearer perspective on this aspect.

Overall, the direct impact of the interventions in the cashew sub-sector was smaller than expected. However, the extent and potential sustainability of the indirect impacts, thanks to the solid partnerships set up during the Project period, have surpassed expectations. Moreover, it is likely that direct results of some of the activities will only appear in the year to come, and the indirect results on the agricultural sector as a whole will continue to multiply.

Several adjustments to the design of similar projects may result in stronger results, such as performance-based agreements binding project partners to reach specific milestones and a longer project timeframe. At the same time, there is no guarantee that such agreements would have fundamentally changed the dynamics of *assistencialismo* that underlie the behaviors of the key cashew sub-sector players. The Brazilian Northeast, due to its high incidence of poverty, has historically been the object of more subsidized initiatives (governmental and non-governmental alike) than other regions in the country.¹⁶ This has created a mentality of entitlement that is hard to overcome, even in the private sector. While the key supported firms did not necessarily expect “hand-outs,” there was an expectation that the Project should have, above all, provided *dinheiro in vivo*, i.e.: cash in hand. When it became apparent that this was not the *modus operandi* of the Project team, commitment diminished.

Goals and milestones, moreover, can only partially mitigate the larger governance issues in the cashew value chain as a whole (such as the concentration of power in the hands of few large processors and the

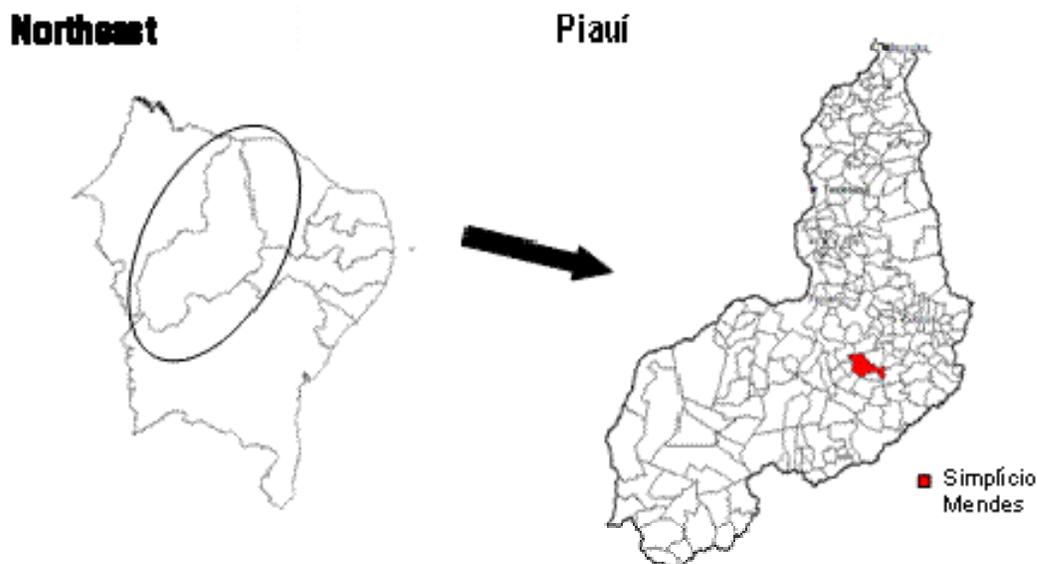
¹⁶ Indeed, the number one source of monetary revenue in the Northeast is direct government transfers from various welfare and social programs, including Zero Hunger, gas and school vouchers, and retirement benefits.

transfer of their inefficiency to the producers, who lack any sort of bargaining power). Addressing these issues require long-term actions. Furthermore, by their very nature, value chain interventions require a considerable amount of financial resources. To be effective, the various links in the chain must be addressed, not just one or two. This implies both time and money.

3.2 HONEY

The honey sub-sector is of growing importance in Northeast Brazil due to its potential for considerable social impact. Brazilian apiculture is based on small productive units, generally family farmers who keep bees in addition to a multitude of other agricultural activities. The highly isolated region of Simplício Mendes in the state of Piauí (some 420 km from the capital) is home to a particularly well-organized apiculture cooperative, AAPI (Simplício Mendes Micro Region Apicultures Association) (Figure 3). AAPI is comprised of some 1,000 members from roughly 17 communities throughout the region. It is a non-profit entity that processes, markets and commercializes the honey of its producer members. Producers are remunerated according to pre-established price list, even in the event of price fluctuations.

FIGURE 3: MAP SHOWING LOCATION OF THE MUNICIPALITY OF SIMPLÍCIO MENDES, PIAUÍ



AAPI operates in a highly promising area for apicultural activities thanks to its flora. Nonetheless, the vagaries of weather (mainly rainfall levels) influence production considerably. Although the association has the capacity to process some 300 tons of honey/year, the highest volume attained to date is 114 tons in 2005 when rains were reasonably regular. Furthermore, processing volume is limited by the members' production capacity, because AAPI does not process honey from third parties.

Until 2003, most production was marketed and sold in bulk in the domestic market to exporting companies, or, on occasion, bottled and sold through representatives in smaller quantities to other Northeastern states. In 2002, AAPI started to export in bulk first to Italy and then to North America. The importer manages the exportation process, thus AAPI's own experience is somewhat limited. At present,

100% of AAPI's exports are sold as a commodity in bulk. The USAID/Brazil program chose to support AAPI due to its high level of organization, previous albeit limited exporting experience and the strong commitment showed by membership to the association.

3.2.1 INTERVENTIONS

A sector analysis highlighted a number of challenges facing the Simplício Mendes honey sub-sector, but underlined that most are due to current market and economic conditions: over-supply of honey, price instability in the international market, exchange rate risks (USD-BRL) and the low consumption rate of honey per capita in Brazil (hence limited domestic commercialization potential). The Project set out to increase AAPI's competitiveness by focusing on the following:

- **Process and production adjustment** to improve productivity and quality by introducing new techniques with specialized TA and adjusting packaging and labeling.
- **Access to finance** by assisting AAPI to complete loan applications and negotiate with financial institutions for credit lines.
- **Commercial linkages** by seeking out new market channels and identifying distributors of packed honey.
- **Management capacity** by developing a management information system (MIS) adapted to AAPI with local partners. This final activity was added after the Project was underway and does not appear on the causal model (Appendix 1b).
- **Production and logistics** involving monitoring and troubleshooting to ensure order fulfillment and on-time delivery.

Process and product adjustment. The Project first conducted a thorough evaluation of AAPI's honey production to define the adjustments needed to improve quality and productivity. The local partner, the public agricultural technical assistance body EMBRAPA, examined the honey's physical and chemical properties, while a panel of honey experts and American and Brazilian exporters analyzed the honey from a market perspective. The diagnosis identified low productivity per hive, the need to reduce levels of humidity (measured in terms of hexametilfurfural, or HMF) and the need to produce a lighter, mono-floral type of honey, the latter two being important criteria for reaching the American market as "grade A" or premium honey. The Project brought in a team of technical advisors who worked with the AAPI producers for nine months to address these aspects.

Concurrently, the Project made significant changes to the package and labels for AAPI's honey on the basis of studies carried out with American consumers and brokers. The focus was on creating a bottled honey product that could be sold with higher value added in foreign markets than the bulk honey AAPI was currently exporting.

Access to finance. The Project sought to increase AAPI's access to credit lines so that the association could buy more honey from its producers and invest in equipment. The Project team helped AAPI fill out loan requests from the government credit program to support family farmers (PRONAF) and looked for new sources of credit from the national development bank and other financial institutions.

Commercial linkages. To improve market access, the Project appointed an American advisor specialized in international food trade to carry out an analysis of the relevant market segments, consumer preferences

and potential purchasers. This analysis yielded key information on the main features of the wholesale and retail markets for bottled honey. A list of importers inclined to purchase AAPI's production was drafted on the basis of visits in loco and direct contact with potential clients.

The Project introduced AAPI's bottled honey to potential international clients in February 2006 at the Natural Products Expo West, a trade fair for natural products in California. A trader from a company specializing in international agro-food trade was also appointed to act as AAPI's representative during a Trade Mission to the US in April 2006. The trader worked directly with the AAPI's management and incorporated marketing activities into AAPI's operational routines. New promotional materials were designed.

Management capacity. AAPI's weaknesses in terms of management capacity became increasingly evident with the extension of its commercial activities. The Project sought out SME support institution SEBRAE to adapt to AAPI a MIS software designed specifically to improve managerial capacity of cooperatives and producers' associations. The Project team also introduced a series of tables to enable pricing on the basis of real production cost.

Production and logistics. During 2006, the Project assisted AAPI deliver export orders, by monitoring the issuance of documents and overseeing daily commercial procedures prior to shipping. Support was also provided to fulfill orders and follow-up with buyers.

3.2.2 FINDINGS

This section presents the key indicators collected for the impact analysis. Two honey cooperatives from the neighboring municipality of Picos—*Cooperativa Apícola da Microrregião de Picos Apiculture* (CAMPIL) and *Cooperativa Apícola da Microrregião de Picos Apiculture* (COOAPI)—form the control group. During the course of the Project, both of these cooperatives joined the Casa Apis initiative. Created in July 2005 by six regional cooperatives, Casa Apis is a production unit for processing and commercializing organic honey.¹⁷ While processing activities did not officially begin until September 2007, one of the comparison firms was heavily involved in getting the initiative going, and it slowed down its own processing in order to dedicate time to the initiative. The evaluation team was aware of Casa Apis prior to conducting the baseline, but the absence of other possible comparison firms led the team to keep the two cooperatives in the control group.

3.2.2.1 Comparative quantitative data

Table 4 presents the key quantitative indicators from Round 1 (data collection in October 2005), and Round 2 (August 2007). Unlike the cashew and beachwear sectors whose production seasons are towards the end of the year, honey is produced by June. Therefore, data was reported for three selling seasons. Sales from 2005 were negotiated prior to the Project; it is the baseline data. Data from 2006 reflects sales that occurred during the Project timeframe, while data from 2007 gives the situation of production and sales seven months after the Project's close.

Productivity. Table 4 shows a drop in production in 2006 and an increase in 2007 for AAPI, while one comparison firm dropped dramatically in 2006 and maintained low levels of production in 2007 and the other increased in 2006 and dropped in 2007. The drop in 2006 for AAPI was due to lack of rain, which

¹⁷ USAID/Brazil became a partner of the Casa Apis initiative in April 2007.

led to low production levels. The return to typical levels reflects the good weather in 2007. The dramatic decrease of CAMPIL's production (from 300 tons to 18.8), however, was not due to lack of rain, but the cooperative's decision to diminish its own processing activities in order to dedicate time to launching Casa Apis. For its part, COOAPI saw a significant increase in 2006 because it processed honey from neighboring states, due to the low levels of production in Piauí. Production for COOAPI then leveled off in 2007 as it returned to processing honey from Piauí.

Humidity levels did not change for AAPI during the 2006 or 2007 production seasons. This is because the primary way to influence humidity is by cooling stored honey in refrigerated units, which AAPI was only able to acquire in August 2007 (for reasons detailed in the next section). Thus, the honey produced in 2008 will likely benefit from decreased levels of humidity. The comparison cooperatives did not see any change to humidity levels, as they made no attempt to reduce these indicators.

AAPI did not increase the percentage of the higher-valued light honey sold, since the buyers did not specifically request a lighter honey (thus efforts were not made during the extraction process to separate light and dark honey). Among the comparison firms, CAMPIL reported an increase in its proportion of light honey from 50% to 70%, but considered this a typical fluctuation. COOAPI saw a slight drop in the amount of light colored honey it produced. Like AAPI, these cooperatives had no reason to ask producers to separate light and dark honey during collection, since the domestic market it supplies does not differentiate between the two.

Exports. AAPI diversified its international client base, exporting to three new clients in 2006. It did not, however, maintain these clients in 2007. Neither comparison cooperative managed to export in 2006 or 2007. CAMPIL acknowledged that it did not look for export markets, but rather preferred to focus on launching the Casa Apis initiative. As COOAPI exports via CAMPIL, it too did not register exports in 2006 or 2007, but rather chose to focus on domestic markets.

Employment. No significant change was registered in employment data in any of the three comparison organizations, which is consistent with the fact that production levels did not increase significantly between 2005 and 2007.

Finance. AAPI increased its access to finance during 2006 and 2007, taking loans from the public bank *Banco do Brasil* and the regional development bank *Banco do Nordeste*, to acquire processing equipment to complement its existing infrastructure. It also received financing from *Fundação Banco do Brasil* to purchase refrigeration equipment. In the comparison group, only one cooperative accessed public financing to purchase stock in 2006-7.

TABLE 4: COMPARATIVE DATA FROM SUPPORTED AND UNSUPPORTED HONEY PROCESSORS

		2005			2006			2007		
		Supported	Comparison		Supported	Comparison		Supported	Comparison	
		AAPI	CAMPIL	COOAPI	AAPI	CAMPIL	COOAPI	AAPI	CAMPIL	COOAPI
Productivity	Honey processed (in tons)	115.7	300	180	73.2	16.8	575	132	18.8	125
	HMF in July	5-8 mg/kg	15-20 mg/kg	5-8 mg/kg	5-8 mg/kg	15-20 mg/kg	5-8 mg/kg	5-8 mg/kg	15-20 mg/kg	5-8 mg/kg
	Humidity	18-20%	19-19.5%	19.5-20%	18.6-20%	18.5-19%	19-20%	18.6-20%	18.5-19%	19-20%
	Percentage of light-colored honey sold	70%	50%	50%	70%	70%	45%	70%	70%	45%
Exports	Value exported (in thousands of US\$)	102 900	-	-	75 264	-	0	-	-	0
	No. of foreign clients	1	0	0	3	0	0	0	0	0
	Destination foreign markets	USA	-	-	USA	-	-	-	-	-
	Avg. export price	US\$ 1.05	-	-	US\$ 1.40	-	-	-	-	-
	Avg. national price	R\$ 4.83 (US\$ 1.88/kg)	R\$ 2.40 (US\$ 0.93/kg)	R\$ 2.00 (US\$ 0.78/kg)	R\$ 2.20 (US\$ 1.00kg)	R\$ 2.20 (US\$ 1.00kg)	R\$ 2.20 (US\$ 1.00kg)	R\$ 2.00 (US\$ 0.98kg)	R\$ 2.00 (US\$ 0.98kg)	R\$ 2.00 (US\$ 0.98kg)
Employment	Avg. no. of people employed throughout the year	6	7	7	6	8	6	6	8	6
Finance	Access to financing sources	0	0	0	2	1	0	1	0	0

3.2.2.2 Analysis by intervention

Intervention 1: Process and product adjustment.

The efforts to upgrade honey processing and adjust AAPI's product were expected to improve productivity, thereby increasing sales and ultimately increasing producers' income. While production was low in 2006 due to poor weather conditions, it did not increase dramatically in 2007 when precipitation levels returned to normal. Rather, it returned to 2005 levels. The absence of a marked increase in productivity was likely due to the fact that one of the main techniques influencing hive productivity, substitution of queen bees, was only starting to be implemented during the latter half of 2007. This is because the local partners who were committed to setting up the Project-proposed "queen bee bank" did not follow through, creating delays and leaving the Project alone to implement the bank. Furthermore, AAPI staff acknowledges that in their experience, it takes time for widespread adoption of new techniques. Generally a handful of more "active" beekeepers will try out new techniques immediately, and if the results are good, others will adopt them. Hence, it is probable that production increases will be more noticeable in several years time. Similarly, time is needed to see a decrease in humidity levels (expected to occur once the refrigeration equipment is operational).

As part of the product adjustment process, the Project sought to help AAPI package honey with lower HMF and humidity levels in order to increase export prices and shift sales from bulk honey to the more lucrative channels offered to packaged honey. The strategy was modified six months into the Project when it became apparent during the Californian trade fair that the marmeleiro flower honey in bottled form crystallized very quickly, making it undesirable for the American market. AAPI would have to filter the honey before bottling to avoid crystallization. However, this process denatures the honey of its distinguishing properties, which means the honey would not pass the required analysis conducted by US Department of Agriculture authorities on arrival. Because this discovery was made after the new bottle and label had already been designed, the Project opted to target the domestic market with bottled honey and continue targeting the US market with bulk honey.

Intervention 2: Access to finance.

The finance component sought to increase AAPI's access to working capital (to buy more honey from producers) and investment capacity. While the Project successfully negotiated increased credit lines at AAPI's habitual banks, there was no need to access them due to the lack of production increases. The most significant outcome of this intervention was that AAPI was able to secure a loan from the *Fundação Banco do Brasil* (FBB) in 2006 to purchase refrigeration equipment. Disbursement delays on the part of the FBB resulted in AAPI not being able to acquire and install the equipment until the second semester of 2007.

Intervention 3: Commercial linkages.

By brokering new commercial linkages, the Project sought to increase market access for AAPI and ultimately increase orders for packaged honey. The 2006 trade fair and trade mission, led by the agro-food specialist appointed to help AAPI understand the American market, proved critical to introducing AAPI to new markets. Three contracts were signed as a result of the fair and mission, and AAPI exported 80% of its 2006 production in bulk to new clients.

The lack of exports in 2007 suggests that these contacts did not prove sustainable. AAPI affirms that no contracts were closed in 2007 because the prices offered by buyers were too low. AAPI pays its producers prior to commercializing the honey and fixes the price on the basis of the national average. This situation is favorable for the producers (who receive cash in hand on delivering the honey) but not necessarily financially viable for AAPI. As a result of this strategy, AAPI had not commercialized any honey as of August 2007 (prices being particularly low due to the depreciation of the US dollar) at the time of data collection. It is “holding out” for a buyer that will cover what it has already paid to its producers. With the continued depreciation of the dollar, however, there is a risk that AAPI will not find this buyer.

With regard to the domestic market, the Project team further developed a commercial contact that was made prior to the interventions in late 2005. The Brazilian supermarket chain Pão de Açúcar’s fair trade program contacted AAPI in early 2005 to explore the possibility of selling AAPI’s product in stores. While a small contract was closed in 2005, AAPI did not have appropriate packaging to pursue the relationship. Once the new packaging and label were in place, AAPI was able to close the deal with Pão de Açúcar and sold the remaining 20% of its 2006 production to the chain. Sales to Pão de Açúcar were maintained in 2007.

Intervention 4: Management capacity.

Efforts to enhance AAPI’s management capacity did not move forward because the SME support entity SEBRAE, which had agreed to implement an MIS, did not follow through on its commitment. The Project team contacted SEBRAE repeatedly but was given no explanation for the lack of action. With regard to the pricing and costing tool introduced by the Project, AAPI made no mention of using the new tool at the time of this impact assessment.

Intervention 5: Production and logistics.

This intervention sought to improve AAPI’s on-time delivery and customer service in view of developing buyer loyalty and sustainable export clients. Thanks to the Project team’s monitoring and support, the contracts closed in 2006 were all delivered on time according to agreed terms and without complaints from the buyers.

3.2.2.3 Impact on producers

All the interventions had the ultimate goal of increasing the income of beekeepers. While new techniques have not yet led to increases in productivity and thus higher incomes, many producers testified that beekeeping had gone from being a “complementary” activity to their main production systems (corn and bean crops) to a “main activity”. The drought of 2006 left many farmers with no harvest at all, making honey the primary source of household income. The producers affirmed having acquired greater knowledge and expertise thanks to the training program, and some testified to already seeing increases in productivity due to new techniques like dividing hives and feeding the bees. They all expressed high expectations for the queen bee bank. Once operational, the bank would enable them to substitute the queen bees, a technique they expected to influence production levels considerably. In sum, while the impacts in terms of income generation have not yet been deeply felt by the producers, the Project appears to have had positive effects in terms of increasing knowledge levels and confidence in honey as a worthy alternative to the traditional production systems that offer food security rather than revenue.

3.2.3 CONCLUSIONS

Because the production season falls early in the year, the honey sub-sector offers a view of Project impacts over three seasons. This broader perspective highlights an important finding: while the Project achieved impact on some levels, the sustainability of this success is questionable.

3.2.3.1 Answering the Key Questions

The 2006 selling season—with three new international buyers and one new domestic buyer—indicates that the Project was successful in promoting access to markets for the supported firm. The absence of sales in the 2007 season, however, calls into question the sustainability of this success. The continuing depreciation of the dollar has made it difficult for AAPI to sell production. AAPI's only options are to bring down its own operational costs or adjust its way of functioning (modify its current practice of providing upfront cash payment to producers prior to sale) to adapt to this new context, something it has not been able to accomplish. This assessment did not find any impact on job and income creation.

Box 5: Key Questions

- To what extent is the Project successful in promoting access to the global market?
- What, if any, are the eventual impacts on job and income creation?

3.2.3.2 Confirming the Hypotheses

The horizontal and vertical TA provided to link AAPI to importers led to new export markets, but not necessarily growth of the sub-sector. Uncontrollable factors like weather and exchange rates play a major role in facilitating the growth of agricultural commodities, and neither was favorable in the case of honey.

As in the case of cashews, activities like product adjustment, marketing, promoting market linkages, improving access to finance and increasing productivity alone are not enough to increase market access and sales, at least in a timeframe of three years. Risks related to weather and economic context must be mitigated for these activities to have an impact. And, in the case of AAPI, it would appear that specific efforts are needed to increase competitiveness by bringing down operational costs, an objective not included in the Project's activities (although steps were made in this direction with the proposed MIS software). Finally, it is important to consider that some activities, like those targeting productivity increases and product adjustment, are likely to bear fruit in the years to come. In this respect, it is difficult to fully confirm to what extent certain activities will lead to increased market access and sales.

The increased access to export markets in 2006 was not sufficient to stimulate sales and thus did not lead to job creation within AAPI. Likewise, identifying new clients was not enough to increase income among the producers. This is in part because production was low in 2006 and in part because commercial linkages were not maintained in 2007.

In conclusion, the case of honey presents a situation where several Project activities were ostensibly successful—new export markets, increased access to finance, knowledge acquisition on the part of producers—but other issues such as the drop in prices, depreciation of the dollar, weather and a business

model that has not proven adaptable to the new market situation have overpowered these successes, at least in the short term.

3.3 BEACHWEAR

The beachwear industry in Brazil represents some US\$ 24 million in exports. It is characterized by fast growth, thanks to the positive image of Brazilian bikinis in a number of international markets. The beachwear sector in Bahia presents great job-generating potential because of its intensive production periods and a largely outsourced workforce, dominated by low-income women workers. The highly seasonal nature of the sub-sector makes exporting attractive for capable beachwear firms: by exporting to northern hemisphere markets where the summer season falls during Brazil's low season, firms can keep production levels high year-round.

The Bahia capital Salvador was chosen for Project intervention because of the existence of a consortium with some export experience and a number of companies with a keen interest in penetrating the global market. In all, fifteen enterprises were supported comprising three consortiums—Bahia Beach consortium, Sol Bahia consortium, Ubá consortium—and two individual firms, Martinica and Coco Doce. This group encompasses enterprises with exporting experience (Coco Doce, Martinica and Bahia Beach) and firms that sell in the domestic market only, with little knowledge of exporting. Two of the four partners in the Bahia Beach consortium had to phase out their participation early on due to personal problems, but the Project continued to support the remaining thirteen enterprises.

3.3.1 INTERVENTIONS

An assessment of the Bahian beachwear sub-sector identified low operational efficiency as a key constraint. The result of such low efficiency—stemming from an un-automated production line, the lack of production planning and control and a poorly qualified labor force—has been delivery delays and difficulties establishing client loyalty. While the supported firms presented different maturity levels in terms of exporting experience, all faced the operational efficiency constraint and were judged lacking in competitiveness. The Project thus defined the following areas for action:

- **Development of an export strategy**, for the firms that had never exported;
- **Product upgrading** for all the firms, involving the development of new, export-oriented product lines and higher quality products;
- **Commercial linkages** for all the firms, involving creating promotional materials, identifying new market channels, and participation in trade shows.

Activities were developed and financed in conjunction with a number of local partners, including the Federation of Industries in Bahia, SEBRAE (Brazilian Small Business Agency), the Bahian Promotion Agency (PROMO), SENAI/BA (National Service of Industrial Learning/Bahia) and PROGEX (Program of Technological Support to the Exportation). The buy-in and commitment of these partners exceeded expectations, and resulted in substantial in-kind cost sharing. The participation of local partners was key to making interventions possible. The Salvador beachwear sub-sector is characterized by high levels of distrust among firms that are unaccustomed to coming together even when the overall sector progress is the goal. Having the support of local MSME actors was important for lending credibility to the Project and creating an environment of trust for the firms.

Export strategy. The Project conducted a detailed analysis of the beachwear market in view of preparing business plans. In early 2005, two consultants were hired, in partnership with SEBRAE, to develop the plans, and others were brought in to provide market information via workshops, meetings and written reports to help the consortia entrepreneurs make strategic decisions. On the basis of these business plans, a sales consultant was hired in early 2006 to help the two consortia lacking export experience to enter the international market.

Product upgrading. The Project and its partners organized a workshop in early 2006 for local entrepreneurs and designers on how to improve their products' design and fit to better meet international demands. One of the workshop facilitators was subsequently contracted by a Project partner (SENAI/BA) to provide individual TA in view of optimizing processes and reducing production costs of the inexperienced consortia and one of the exporting firms. This design expert visited the factories accompanied by a technician from SENAI in view of transmitting her knowledge to this SENAI consultant.

During the same period, one of the most prominent embroiderers in Brazil was brought in from São Paulo to administer a week-long course to the embroiderers of the firm with most exporting experience, Coco Doce. The objective of the course was to increase productivity and diminish production costs.

Finally, the Project and its partners launched a beachwear design contest with the local fashion school to help build a critical mass of designers and discover new talent.

Commercial linkages. The Project spent considerable time spent researching and selecting the beachwear shows that would be most relevant to the Bahian companies. Selected firms with export experience (firms from Bahia Beach Consortium and Coco Doce) participated in the 2005 Miami Swim Show in Florida—the most important beachwear tradeshow in the United States and second most important in the world. The Project helped the firms prepare for the show by setting up appointments with U.S. buyers, designing an exclusive beachwear collection and developing marketing materials (linking firms with professional photographers, stylists, and marketing agencies). Post-trade show support was also provided to help close deals and guarantee delivery.

The Project team took advantage of the trip to the Miami Swim Show to visit retail stores, showrooms, wholesalers and representatives in New York and Miami. These visits made it clear that highly specialized assistance was needed to enter this competitive market. Consequently, the Project hired an international beachwear specialist from a New York fashion consulting firm to guide entry into the U.S. market.

The specialist contributed to the Project in a number of ways: offering feedback on the newly designed collections of Coco Doce and Martinica; providing high-quality examples of national and international catalogues, developing line sheets and websites; and identifying potential sales representatives in the United States. The Project team pursued these contacts, linking them with the supported firms.

Two of the less-experienced consortia also participated in an international trade show in France in September 2006. The target market for these less experienced companies was Europe, known to be slightly less competitive than the United States. The firms prepared for the show under the guidance of two trade specialist firms introduced to the consortia by the Project.

3.3.2 FINDINGS

Table 5 presents the key quantitative indicators collected for the impact analysis according to each domain of impact. Data is cumulative for all the firms interviewed.

The evaluation team analyzed the data with caution due to data collection issues discussed in Box 6. In Round 1, evaluators faced strong resistance from both supported and comparison firms to share data they considered confidential (volume and value of sales, access to finance). The data that was supplied usually came in the form of haphazard guesses. These firms all lack reliable management information systems and are generally disorganized in documenting performance. These same issues surfaced in Round 2, but were further exacerbated by feelings of disappointment that the Project had ended (in the case of the supported firms) and feelings of jealousy for not having participated in the Project (in the case of the comparison firms). Many firms simply refused to respond to the evaluators' requests. A footnote is provided in Table 5 where data was not supplied by all the firms interviewed.

Box 5: Data Collection Difficulties in Beachwear

- **Disorganization and lack of MIS.** No firm was able to present a formal register of basic production or sales data.
- **Unwillingness to share information.** Firm owners were extremely reticent to provide even mere estimates on production and sales data citing the importance of maintaining trade secrets in a highly competitive, restricted environment.
- **Disappointment.** Firm owners were frustrated and disappointed about the Project's end, and declared they saw no reason to cooperate with the evaluators, as they felt the Project team had "abandoned" them. In fact, the firms had expectations a second phase would begin in early 2007. These expectations were founded: the beachwear sector was under consideration for the second phase of the USAID MSE Program. Inclusion of this sub-sector was predicated on local partners making a financial commitment to activities. A change in state government in October 2006, however, compromised the involvement of one of the main local partners, SEBRAE, whose budget is dependent on government allocation. By January 2007, it became apparent that SEBRAE could not commit financially to the Project, and the beachwear sector was cut. Firm owners were informed of this after several months of expectant waiting and expressed great disappointment.

TABLE 5: COMPARATIVE DATA FROM SUPPORTED AND UNSUPPORTED BEACHWEAR FIRMS

		2004		2006	
		Supported firms	Comparison firms	Supported firms	Comparison firms ¹⁸
Exports	No. of firms that exported	1 out of 12 ¹⁹	5 out of 18	9 out of 13	3 out of 12
	No. of swimsuits exported per year	14,200	42,100	19,990 ²⁰	13,400
	Average sales price per suit	US\$ 5.8	US\$ 10.8	US\$ 5.83 ²¹	US\$ 19.81
	Total value exported	US\$ 83,000	US\$ 457,200	US\$ 116,542 ²²	US\$ 45,694
	Markets	Italy, Portugal, USA	Italy, Portugal, Spain, Germany, USA, Australia, Mexico, Chile, Uruguay	Spain, Italy, Portugal, USA, Chile, France, Cyprus, England ^{23 24}	NA
	No. of regular clients	5	20	4025	126
Employment	Total interviews	12 out of 12	18 out of 18	13 out of 13	12 out of 12
	No. regular employees	260	277	311 ²⁷	375 ²⁸
	-Women	209	229	300	354
	-Registered	217	260	306	375
	No. companies w/ pieceworkers	5	5	0	0
	No. pieceworkers	26	31 ²⁹	0	0
	No. companies w/ day laborers	4	6	5	5
	No. day laborers	10	12	NA	NA
	No. companies w/ embroiderers	6	8	6	5
	No. embroiderers ³⁰	94	35	145	31

¹⁸ As noted in the introduction, only 12 of the 18 comparison companies participated in the round 2: two had changed sectors, two were unreachable, and one was traveling during the interview period.

¹⁹ In the Baseline Report, two firms were reported, referring to Bahia Beach consortium and Coco Doce. The Bahia Beach Consortium eventually dropped out of the Project and thus the data is excluded here.

²⁰ Only 4 of the 9 exporting firms responded.

²¹ Only 3 of the 9 exporting firms responded.

²² No firms responded. This figure was calculated based on the average sales price per suit.

²³ Although the Project consultant confirmed export orders were closed and completed with these two countries in italics, the firms did not mention them during the round 2 interviews.

²⁴ Only 4 of 9 exporting firms responded.

²⁵ Only 8 of the 9 exporting firms responded.

²⁶ Only 1 of 3 exporting firms responded.

²⁷ Employment data was provided by all 9 exporting firms plus 2 of the supported firms that did not export. Two non-exporting supported firms did not respond.

²⁸ Employment data provided by 11 of the 12 firms interviewed in the comparison group.

²⁹ Two firms did not supply this data. In round 1.

³⁰ This is an estimate. Companies do not know exactly how many embroiderers are contracted, being that they generally work through one leader who hires a team of workers to work under her.

Exports. The above table shows a small increase in the number of pieces exported by supported firms between 2004 and 2006, and a dramatic drop among comparison firms during the same period. At the same time, the number of regular clients jumped dramatically from five to forty among the supported firms during the same period compared to a decrease from 20 to one among control firms. One explanation for relatively small increase in volume, despite the increase in clients, is that new orders may have been small due to their highly specialized nature (fancy embroidery, use of native Brazilian seeds, shells, etc.), which takes more time to produce.

In terms of value of exports, the average price per piece reported among supported firms was the same, while it was considerably higher in the comparison group. There is reason to doubt the accuracy of the average export price reported by the supported firms. Informal crosschecking during data collection found that price per piece can be much higher than US\$ 5.80.³¹

Interestingly, between 2005 and 2006, the state of Bahia saw the total value of beachwear exports increase some 31%, while the national trend showed a drop of 17%. Bahia also went against the national trend in terms of number of pieces exported, increasing 27% between 2005 and 2006 compared to a national decrease of 37%.

TABLE 6: EVOLUTION OF BEACHWEAR EXPORTS BAHIA VS. BRAZIL 2004-2006

	Beachwear exports BAHIA	Beachwear exports BRAZIL	No. of pieces BAHIA	No. of pieces BRAZIL
Jan-Dec/04	US\$ 318,644	US\$ 24,807,723	47,023	4,742,255
Jan-Dec/05	US\$ 582,526	US\$ 27,000,057	78,937	5,021,217
Jan-Dec/06	US\$ 762,512	US\$ 22,509,497	100,587	3,168,924

Source: www.aliceweb.gov.br

Only a more in-depth analysis requiring the full data set (with the names of firms) would confirm causality between the Project’s interventions and Bahia’s good performance compared to the national trend, however, it is not improbable that the supported firms export successes (albeit undeclared in the quantitative data table above) helped boost Bahia’s numbers, considering these firms are key players in the primary beachwear production center of the greater metropolitan Salvador.

Employment. Overall, the employment trend is positive. The number of regular employees increased in both groups. The rise in employment figures for comparison firms is more marked than that of supported firms.

The seemingly paradoxical data for the comparison firms (a dramatic drop in volume and value of exports compared to 2004 and yet an increase in employment) seems to have to do with sample bias. One comparison firm accounts for the jump in employment (representing 302 of the 375 employees in 2007) and claims to have stopped outsourcing its pieceworkers and taken them on as “regular” workers. This trend was observed in both groups: the number of outsourced workers (with the exception of embroiderers, discussed below) decreased as part of an effort to maintain workers that had received training (among the supported firms). Firms sector-wide were also under pressure from Garment Industry Labor Union to “regularize” workers and reduce precarious work conditions.

³¹ For example, the evaluator would ask, in passing, the cost of different pieces sitting on the firm manager’s desk or laying around at an embroiderers’ work station.

The most marked difference in the employment data is the significant increase in the number of embroiders hired by the supported firms (54%), especially compared to the control group, which saw a reduction of 11%. While the production data in terms of volume of pieces produced offers no basis for this increase, the evaluators' observations during data collection (activity on the factory floor, documents on a desk) combined with Project team's knowledge of new contracts suggests that some of the support firms increased production levels to respond to increased orders, which explains the multiplication of embroiderers.³² Moreover, the in-depth interviews with outsourced workers (detailed below) confirm an increased workload for these women.

3.3.2.1 Analysis by intervention

Because of the aforementioned data collection issues pertaining to the quantitative information, the qualitative findings are particularly key to providing a more complete picture of project impacts.

Intervention 1: Export Strategy

The Project sought to help firms with no export experience create an export strategy to build capacity and prepare for the international market. Although it is not obvious from the data, Project team members affirmed that several export contracts were concluded despite firms' declarations to the contrary. These efforts yielded positive results during the Project timeframe and have the potential for even greater impact in the years to come.

After six months of preparatory work with the trade specialist hired in early 2006 and with the feedback from the design and production engineer that facilitated the design and fit workshop, the two novice consortia attended their first international trade show in Lyon, France. The Project-initiated TA enabled the firms to promote competitively-priced collections in Lyon. The result was a total of 10,000 Euros in orders for the two consortia. Building on this momentum, the same two consortia also, with Project assistance, contacted a Los Angeles-based Brazilian sales representative. The LA representative requested samples and catalogues and planned to visit the consortia in 2007.

Because these contacts were made at the end of the Project (end 2006), Project consultants could not perform any direct follow-up. However, the firms indicated in interviews that thanks to Project interventions, they are now capable of producing higher quality beachwear at competitive prices that meet the demands of international markets. Nonetheless, the novice exporters still feel they need assistance identifying clients in the very competitive US market.

Interventions 2 & 3: Product Upgrading & Access to Export Markets

The Project expected product upgrading and market access activities to lead to increased productivity and competitiveness of the supported firms' products, increased exports, buyer loyalty, increased employment and increased income of outsourced embroiderers and seamstresses. Despite the paltry production and export figures in Table 5, interviews with firms and outsourced producers point to positive impacts on most of these fronts.

³² Brazilian beachwear is especially attractive to foreign clients for its level of specialization, i.e. detail in terms of use of seeds, beads, and intricate threadwork. Embroiderers are responsible for creating this type of detail.

In interviews, the firms affirmed that the consultants hired by the Project and its partners provided high-quality and extremely useful assistance. The production and design engineer enabled them to organize their production line and standardize processes, thereby contributing to an increase in productivity. All the supported companies were able to develop commercial contacts thanks to the specialized assistance of the US-based fashion consultant and trade fairs, which led to promising commercial relationships. In addition, the fashion consultant proved instrumental to product upgrading, offering feedback on collections targeting the US market (i.e. the firms with previous export experience) and providing high-quality examples of national and international promotional materials.

Box 6: Project-inspired commercial relationships

At the time of writing, Coco Doce was negotiating with a New York-based showroom, which also represents a high-end Brazilian beachwear brand Rosa Cha in the United States. In April 2006, the director of the showroom visited the Coco Doce factory in Salvador at the invitation of the Project. Together with Coco Doce, they developed a collection for the American market. In July 2006, the showroom presented Coco Doce's line at the Miami Trade Show (without any cost to the Brazilian entrepreneurs). The showroom has several important clients in the American market, such as Saks Fifth Avenue and Victoria's Secret.

Thanks to a contact made by Project consultants during a NY trade show, Cilly Kids met with a U.S. kid's beachwear representative in Sao Paulo. The representative approved the Cilly Kid's line and agreed to take it to the main children's fashion fair in the United States. Samples were well received by representatives and buyers attending the event in August 2006. The pieces needed a few pattern adjustments, but the feedback was positive enough for the representative to take Cilly Kids line again to another edition of the same trade show in October 2006.

During this period the program also identified a U.S.-based European representative for the Martinica company whose market niche was high-end clients. Conversations were started but prematurely interrupted when after three months of negotiations the representative decided to accept a job offer in Italy and shut down her showroom. As soon as the program was informed, another representative based in NY was introduced to Martinica. Negotiations led to the signing of an exclusive contract between this new representative, Victoria Croce, owner of Victoria's Closet and Martinica.

Although no specific data was collected to measure competitiveness and the Project timeframe was too short to see effects on buyer loyalty (the first sales season that could reflect the Project's efforts was at the end of 2006), overall, the qualitative evidence points to positive, desired impacts.

3.3.2.2 Impact on producers

All the interventions were expected to increase producers' income and intensity of employment. The training program for embroiderers, however, was nonetheless the only intervention that directly targeted producers. The program was an overwhelming success. Interviewees were extremely enthusiastic about what they had learned (new techniques) and the immediate results (higher-quality pieces, reduced production time per piece, yielding increased revenues). They testified to increased "success" of their work (vis à vis the employers that outsourced them), confidence in the future,

Box 7: In their words: evidence of impact on producers

- "Sales increased, consequently, worked has increased."
- "The bikini has more value.... This year there is more work than last year.... Work load has increased because more bikinis are being embroidered."
- "The company got me trained...because I learned to perfect my work, I am more secure and have increased my production."
- "My financial situation is better, it got better with embroidery, and I was able to build my house."
- "Without a doubt, my financial situation has improved. Before, I worked as an embroiderer. Today, I am an embroider."

improved financial situations and even broadened perspectives (desire to receive more training and go to design school). Moreover, the outsourced workers attested to having more work this year than last, yet another indication that production levels increased thanks to new or bigger orders. In sum, the Project appears to have achieved expected impacts on producer income and employment.

3.3.3 CONCLUSIONS

Because of concerns about the reliability of the quantitative data, the assessment team relied more heavily than usual (given the mixed methodology) on qualitative data. By contextualizing the quantitative data with the qualitative findings, a clearer picture of impact emerges.

3.3.3.1 Answering the Key Questions

The data collection constraints made it difficult to compare the supported firms to the control group; nonetheless, the Project appears to have been successful in promoting access to the global market for the supported firms. There is evidence (Box 5) that new commercial relationships have indeed been fostered thanks to Project support. Firm owners report a greater number of export markets in 2006 than 2004. Moreover, interviews with producers indicate not only that there is more work (suggesting increased market access on the part of the firms that hired them), but that they are feeling the results on their pocketbooks in the form of higher revenues.

Box 8: Key Questions

- To what extent is the Project successful in promoting access to the global market?
- What, if any, are the eventual impacts on job and income creation?

The Project's success in terms of market access and job and income generation can be attributed to high-quality technical assistance and to the strong local partnerships built with the state-level MSME support body and the state export-promotion organization.

Not only was the key Project consultant present throughout the local interventions, a U.S.-based Project consultant was able to keep momentum going through regular contact with key sector players (importers, representatives, designers) on the international side. Furthermore, the decision to hire the U.S.-based fashion consultant was critical. While the cost a consultant abroad is expensive, in the case of beachwear, this alternative proved to be an effective and fast way to obtain information.

At the same time, the excellent buy-in from the local partners during the Project period permitted a multiplication of activities. Thanks to joint planning sessions and regular meetings with local partners, consensus was built around Project interventions at each step. Partners willingly contracted several other high-quality consultants to conduct activities (e.g.: design and fit workshop, embroiders' training, targeted TA for design and production processes) and brought in new partners, such as the local design school. This dynamic relationship with partners further served to give the Project team credibility and win over the trust of the supported firm, which initially were not entirely willing to participate in forums with fellow competitors.

3.3.3.2 Confirming the Hypotheses

The targeted assistance offered by the variety of consultants appears to have **led to increased growth and exports** among the supported firms. In the case of beachwear, this assistance was highly specialized. The consultants hired possessed very specific expertise of just a small part of the value chain. This offers the

advantage of transmitting in-depth knowledge, however it also means that not every aspect involved in the product adjustment and export process can be examined.

It is difficult to know exactly how many new Project-related export contracts were actually closed; still, the analysis indicates that the **activities targeting product adjustment, marketing, commercial linkages, and increased productivity were enough to increase readiness for global market access**. In interviews, both groups of supported firms (novices and experienced exporters) affirm they feel much more prepared to export than several years ago. They recognize improvements to production processes, acknowledge a greater understanding of the demands of foreign markets and are more confident in their ability to produce high-quality pieces. Nonetheless, they lament the short timeframe of the Project, suggesting that the results could have been greater if the TA had continued into 2007.

The case of beachwear offers a **good indication that increased MSE access to export markets ultimately can increase employment and income**. The supported firms noted an increase in outsourced embroiderers and the embroiderers themselves declared to have more work and higher incomes. It appears that the increased revenues are mostly the result of increased work intensity, but interviewees suggest that prices on selected pieces increased somewhat, as well.

In sum, the direct impact of the Project interventions in the beachwear sub-sector has been positive. The firms acknowledge a greater understanding of exporting and production processes in their factories, and they have already perceived the benefits of these in the form of new contracts and commercial contacts. Micro-producers indicate a positive evolution in terms of income and their own skills. All parties demonstrate greater confidence in their abilities to produce high-quality beachwear. The question is to what extent these impacts are sustainable and if they will have an effect on the Salvadoran beachwear sector as a whole.

In terms of creating sustainable change at the individual firm level, the Project appears to have been successful. The knowledge acquired by the firms is unlikely to be “unlearned,” especially as it appears to have yielded positive results. However, it does not appear that sustainable change has occurred at the sector level. Despite partner buy-in during the Project, the change in government in October 2006 and thus a change in priorities of one of the lead partners, SEBRAE, has proved an obstacle to sustainability. To begin with, SEBRAE’s lack of financial commitment to a second phase ultimately compromised the possibility of moving beyond the firm-level approach and focus on creating more generalized impacts at a sector level (the goal of the second phase). Second, in absence of a strong local champion for the beachwear sector—a role SEBRAE could have played—it is likely that the ambiance of distrust and competitiveness that reigns among the Salvador beachwear firms (but was mitigated by the catalyzing role of the Project) will return in force and render the continuation of sector-wide dialogue, learning and export initiatives difficult.

4. CONCLUSION

This report sought to evaluate results obtained from the Project’s interventions, validate the design of the Project and test the relevance of impact methodology for analyzing results of small projects with limited timeframe and resources.

The above sections address the first objective in detail. Figure 4 below summarizes the key elements of this analysis. The first column lists the interventions for each sector. The second shows expected outcomes, followed by a third column with expected impacts. The fourth column lists actual impacts: a blue checkmark refers to the impacts achieved, while the red “X” is for impacts not achieved. The final column summarizes why impacts were achieved or not.

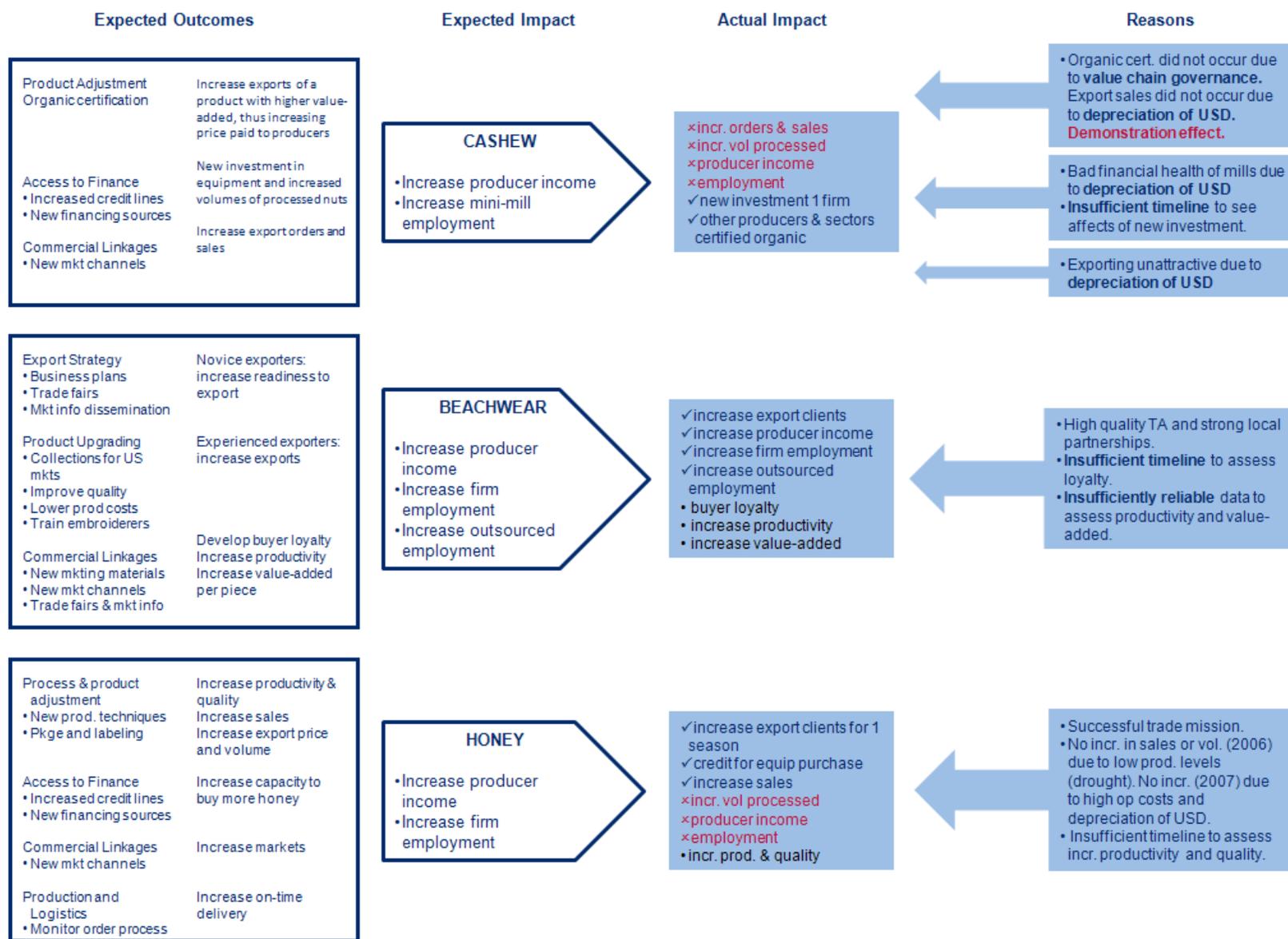
The report will conclude with some reflections on the latter two objectives: design issues surrounding the Project and relevance of the methodology.

4.1 DESIGN ISSUES

The lack of salient impact in some of the sub-sectors can be partially attributed to design issues that should be considered for future trade-led growth projects.

- The Project set out to promote the integration of MSEs into the global market by improving the business environment, promoting commercial linkages and facilitating access to financial services. The interventions undertaken appeared appropriate for reaching these goals, but in the case of the cashew and honey sub-sectors, they were not enough to mitigate the larger issue of the depreciation of the dollar. Promoting exports in commodity markets that are inherently vulnerable to economic fluctuations is risky. Only highly competitive firms can survive. Organizational efficiency (e.g.: streamlined procedures, low operational costs) is a key to increasing competitiveness and reducing vulnerability in risky environments. Improving organizational efficiency of the supported firms does not appear to have been sufficiently prioritized in this Project.
- The governance issues in the cashew sub-sector were partially attributable to the tensions created by the depreciation of the dollar, and thus uncontrollable. Nonetheless, future projects would benefit from performance- and transparency-based agreements between supported actors and Project leaders in order to mitigate commitment issues.
- The Project timeframe was too short to produce a significant impact—especially given the seasonality of the sub-sectors supported. First contacts with firms began in October 2004 and management changes to the Project team slowed down implementation in 2005; hence, the first season during which impacts could be felt was in 2006. The exception is the honey sector—due to its early production season, progress on market linkages was made in 2005. Even when interventions have rapid results, it takes time for certain impacts to become visible (buyer loyalty, value-addition, or the affects of new equipment on processing, for example). Future projects should give careful consideration to timeframe and seasonality issues when designing monitoring and evaluation elements.

FIGURE 4: KEY FINDINGS



- Finally, the overall objective—to create income and jobs at the producer level—was ambitious in light of the resources available for interventions. Many of the larger questions that require longer term, bigger budget projects—value chain governance and organizational strengthening, for instance—could not be addressed adequately, and ultimately, these issues got in the way of achieving greater impact.

4.2 RELEVANCE OF IMPACT METHODOLOGY

The methodological tools—questionnaires for quantitative and qualitative firm data and FGDs for producer data (replaced by in-depth interviews in beachwear) were largely effective for assessing and crosschecking firm impacts. The qualitative producer data proved critical in the case of beachwear, given the reliability issues with the quantitative firm data. The evaluation relied less on the focus groups in the honey and cashew sub-sectors, since explanations for the lack of impacts were apparent from the firm-level interviews.

Despite this relative effectiveness, the tools were not appropriate for accurately measuring producer income and employment intensity. Indeed, it is questionable whether any rapid appraisal tool can accurately measure income and employment, especially in rural areas where households rely on a variety of income sources in addition to their own production systems. The lack of quantitative producer data did not altogether impede analysis of producers’ income and work intensity. By crossing firm data with focus groups/interviews, it was possible to get a sense of how these indicators evolved. Given that increased producer revenues and work were the primary expected impacts of the Project, however, quantitative tools would have been useful for a more thorough analysis.

Beyond the tools, a bigger question remains: Is the **methodology relevant for measuring the impact of small Projects with short timeframes and limited resources?**

The methodology resulted in an analysis that has provided useful information on the complexity and limitations of this type of Project. It uncovered elements that impeded or contributed to successful achievement of the impacts defined in the causal model. It made it possible to determine the origin of these elements, such as project design, uncontrollable external forces or interpersonal relationships. Moreover, the analysis shows the paths not to take in similar projects in the future, and indicates some of the pitfalls to watch for. In the Brazilian Northeast, for instance, it appears that interventions targeting consensus-building and dialogue among broad group of sector actors are likely to be more effective in creating lasting change than individual, firm-specific interventions, whose results are particularly vulnerable to macro-economic fluctuations, the ebb and flow of individual relationships (between a TA consultant and firm owner, for example) and the “hand-out” mentality created by years of government subsidies to the region. In this respect, the evaluation proved to be worthwhile to Project implementers, especially in designing the second phase of the USAID/Brazil Trade-Led Growth Project that started in mid-2007.

However, the methodology does not appear to have captured the nuances of this type of Project. Because of its small scope, its focus on sub-sectors with only one production season per year and export-orientation (thus making it vulnerable to economic fluctuations), it was foreseeable that quantitative results on income and job generation would not be visible within the evaluation’s timeframe. For this reason, the implementers approached the Project as a process-oriented, experimental initiative aimed at bringing together local development actors and not just a series of discrete activities that would generate quantitative results on jobs and revenues. The evaluation methodology was not able to measure the results

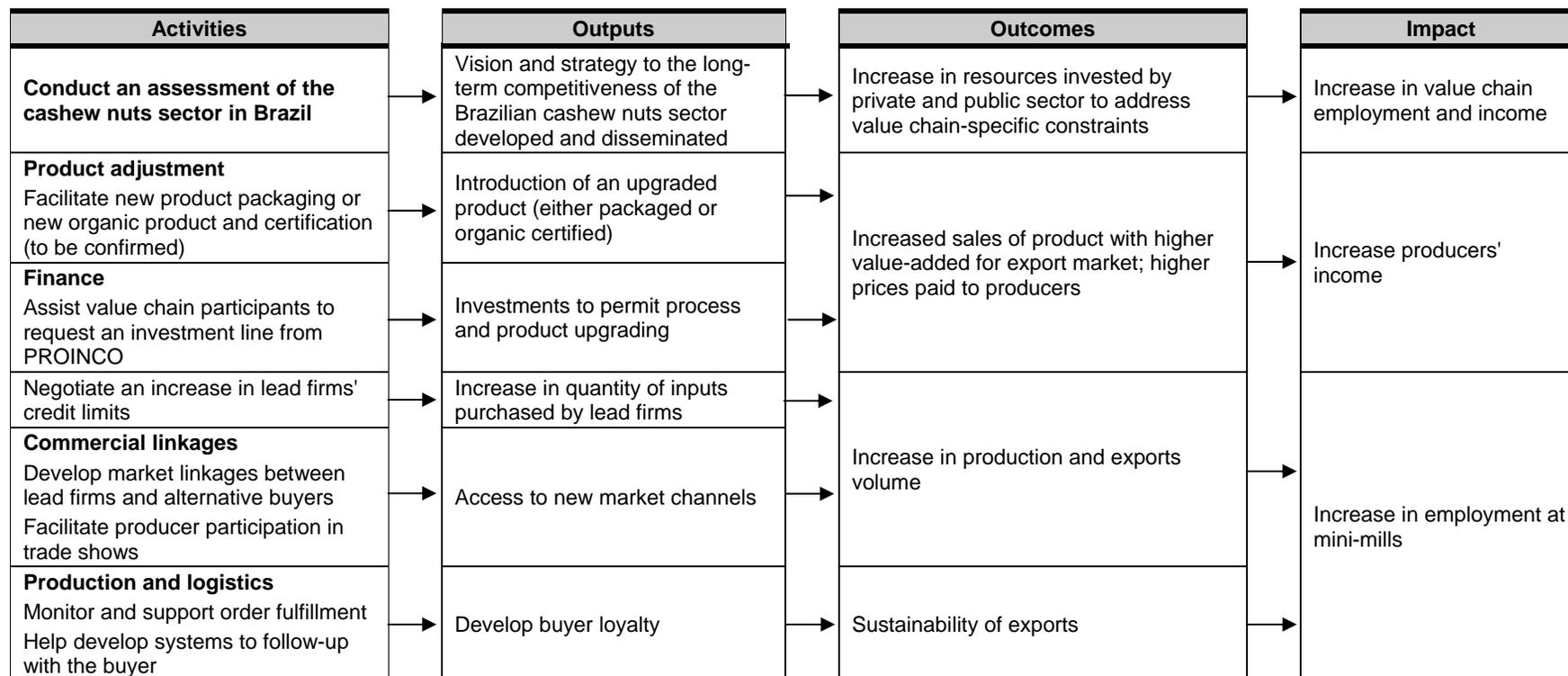
of this “process” aspect, whose impacts—dialogue among actors, new alliances, stronger interpersonal and inter-institutional relationships—are necessarily qualitative and, arguably, subjective.

In short, the evaluation offers some useful lessons that would have otherwise gone undocumented, but the methodology does not provide an adequate assessment of what the Project has truly accomplished.

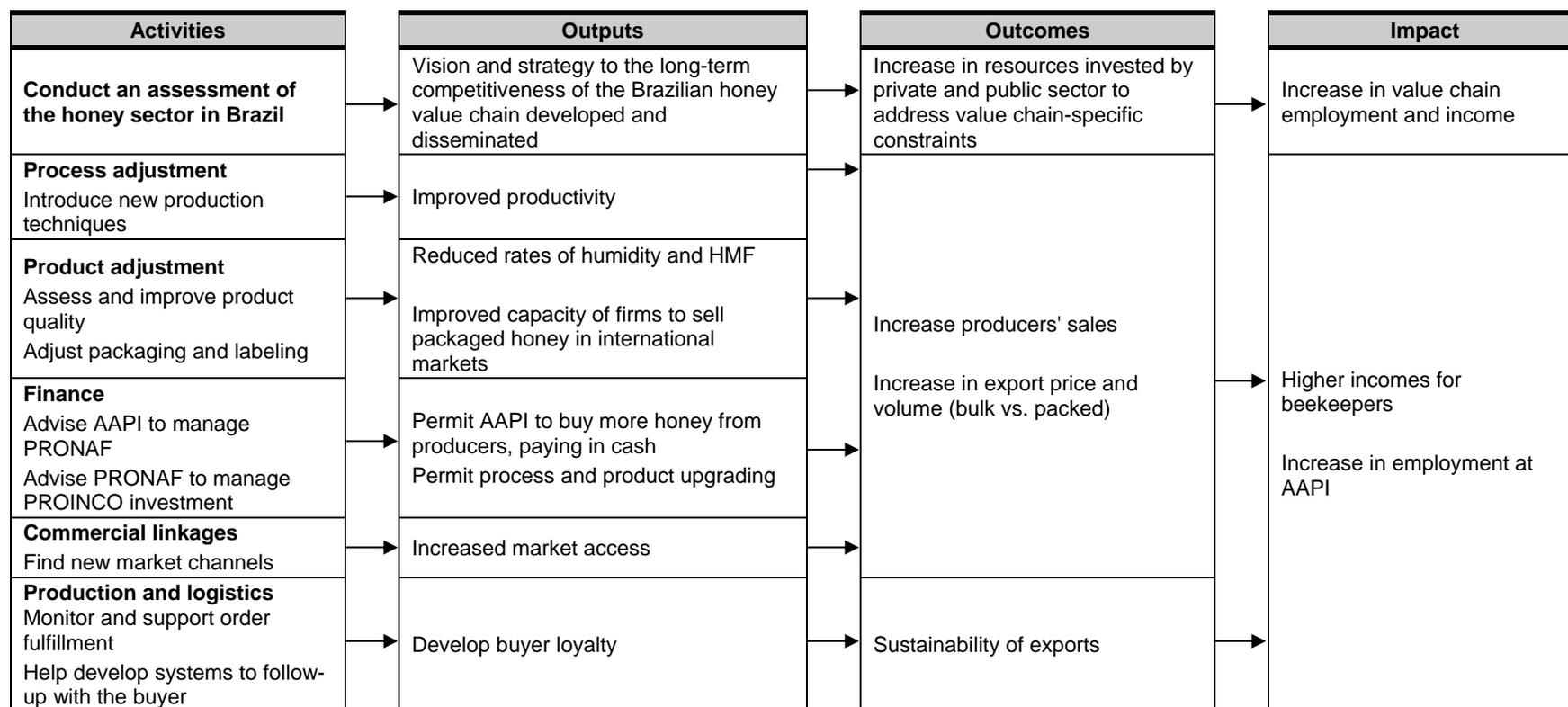
Determining whether this assessment methodology is appropriate for a certain project depends, above all, on the likelihood of the project to produce quantitatively **measurable results** within the set timeframe. This methodology would probably be most effective in sectors that do not have short, annual production and sales seasons, so that firm owners have a chance to test out and refine new knowledge and skills over a period of time. Other conditions needed for this methodology to be relevant:

- Data for the impact indicators can be collected **reliably** and **readily** (data that is already tracked and registered by firms).
- Firms accept, **as a condition** to participating in the project, to be transparent in sharing required data. Meeting conditions 1 and 2 would require the project team to conduct pre-selection interviews with potential participants and to have a clear idea of the data needed to monitor results.
- This, in turn, requires a **critical mass** of both potential support and comparison firms from which to select participants so that project teams do not have to “make do” with firms that are not fully committed to the project or its evaluation. This critical mass is also important to avoid biases that can occur in small samples and to ensure that the comparison groups are as similar to the experimental group as possible.

ANNEX A: CASHEW NUTS CAUSAL MODEL



ANNEX B: HONEY CAUSAL MODEL



ANNEX C: BEACHWEAR CAUSAL MODEL

