

# 10. Nicaragua: Study of Past Investments

## I. Background

The Nicaraguan industrial sector is considered the least competitive in Central America. Employment in this sector decreased from 170,000 in 1992 to 157,000 in 1995 reflecting a large number of small business failures. The participation of the sector in GDP went down by 10 percentage points over the past two decades (from 25% in 1978 to 15% in 1994). Trade liberalisation and structural adjustment policies, which were initiated only in 1990, have had the least positive effect in Nicaragua as compared to other countries in the region, due to the extremely bad shape in which the economic crisis of the 1980's had left the sector (high prices for imported inputs, depressed local demand for manufactured products). There are three Industrial Chambers in Nicaragua, which count ca. 500 SMEs and large enterprises. The most important sub-sectors are food products, textiles, chemical products, metal products and wood products.

Industry in Nicaragua is not strong enough to be competitive in the international market. Micro, Small and Medium Enterprises (SMEs, i.e. with less than 100 workers), that represent 99% of the enterprises, are faced with competitiveness problems in both the domestic and the external markets due to high production costs, low production volumes, relatively low quality of products and lack of entrepreneurial management. Enterprises generally sell their products in the domestic market and compete strongly with imported products. They have their own sale forces and distribution channels to the retailers. Since 1990, some enterprises began to develop commercial relationships with foreign counterparts to export. Enterprises that possess an international license have a better and more stable access to international markets.

Micro and SMEs are dispersed all over the national territory with a major concentration in the Pacific area. They tend to operate individually and are normally not organized in industrial chains, network, associations or clusters.

As regards the environment, deforestation and increasing contamination of the Managua Lake are amongst the major issues. Industrial pollution, caused mainly by micro- and SMEs is a major cause of the latter problem, while making the possible treatment of municipal waste-waters more difficult.

Concerning environmental legislation, Nicaragua has some of the strictest regulations in Central America. However, their enforcement is still rather limited.

The Ministry for Natural Resources and Environment (MARENA) has been promoting cleaner production, through dedicated activities and institutions (e.g. "Instituto de la Pequeña y Micro Empresa").

## II. Overview of projects

Eight Nicaraguan enterprises agreed to participate in this study. They have been in business for 30 years, on the average (one has been operational for 9 years only). Legally, they all are registered (6 Anonymous Societies, 1 Limited Company and 1 as "Natural Person"). It was found that all these enterprises have been operating with the same originally installed production processes which were not designed to take environmental issues into account. These processes underwent some improvements (e.g. expansion or incorporation of new production lines) since 1990. In all cases waste management has been carried out through the use of the Municipal Trash Collection Service, of the National System of Pluvial Water Drainage and/or System of Sewage, and in some cases with end-of-pipe treatment

Only four out of eight respondents have obtained financing for their projects, with interest rates between 13% and 18% and loan terms between six months and four years. One of the enterprises obtained credit from an international bank at an interest rate of the 6% and a four-year term. The form of loan repayment is generally monthly.

Respondent enterprises implemented their projects based on general studies, focussing mainly on investment calculations and justification of the financing, without conducting a deep technical analysis, nor an evaluation of the environmental and marketing issues. It was not possible to see the respondents' business plans, nor to access the information provided in the questionnaire. Hence, the information reported in this study reflects what the interviewees wished to offer. In Nicaragua there is still mistrust, and sometimes indifference, to offer business related information.

An overview of the respondents is given below.

<b>Respondents according to sector</b>	
<b>Sector</b>	<b>Respondents</b>
Food processing	2
Wood & Furniture	3
Leather & Shoes	3
<b>Total</b>	<b>8</b>

### *Project venture*

The projects are categorised according to three types of ventures. These are:

- New construction sites (greenfield or brownfield)
- Plant expansions
- Retrofits.

Four projects involved plant expansions while three were retrofits. Only one project involved a new construction site.

### *Environmental characteristics*

Environmental characteristics of the projects fall into three groups. They include:

- Cleaner production
- End-of-pipe
- Other general industrial projects.

<b>Environmental characteristics according to sector</b>			
	<b>CP</b>	<b>End-of-pipe</b>	<b>General industries</b>
Food processing	1	-	1
Wood & Furniture	1	-	2
Leather & Shoes	2	-	1
<b>No. of projects</b>	<b>4</b>	<b>-</b>	<b>4</b>

### *Project description (including economic, environmental and social considerations)*

#### *Food processing*

<b>Overview</b>	
<b>Number of enterprises</b>	2
<b>Project description*</b>	<ul style="list-style-type: none"><li>• Transportation equipment</li><li>• Production line design</li></ul>
<b>Known drivers for change</b>	<ul style="list-style-type: none"><li>• Production efficiency (i.e. cost savings)</li><li>• Meet local environmental regulatory standards</li><li>• Minimisation of environmental and occupational risks</li></ul>

\* Companies can have more than one project carried out simultaneously, many of which are inter-related.

The food processing industry is represented by 2 enterprises, which produce tomato sauce and cookies.

One company re-designed and constructed a new production line. It also invested in new transportation equipment for distribution. The measure was considered to be a general industrial project. The company did not consider CP measures.

The second company installed measures relating to industrial hygiene, occupational and product safety and environmental protection. The measures adopted by the company were considered to have CP characteristics.

Both companies had prior experience in the type of technologies and techniques they implemented.

In terms of environmental considerations, energy efficiency and regulation were the main drivers for change. Social aspects related to occupational safety and health were also considered.

### ***Wood & Furniture***

<b>Overview</b>	
<b>Number of enterprises</b>	3
<b>Project description*</b>	<ul style="list-style-type: none"> <li>• Wood-drying oven</li> <li>• Production line design</li> </ul>
<b>Known drivers for change</b>	<ul style="list-style-type: none"> <li>• Production efficiency (i.e. cost savings)</li> <li>• Energy efficiency</li> <li>• Meet local environmental regulatory standards</li> <li>• Dust, waste and noise reduction</li> </ul>

\* Companies can have more than one project carried out simultaneously, many of which are inter-related.

Three companies represent the wood & furniture sector. They produce raw material and wood products for household, residential and building construction use.

Two companies constructed a wood-drying oven as part of the production process. One company installed an oven, which uses solar energy and redundant heat from a boiler, while the other company opted for an electricity-powered model. The former considered alternative designs, such as a traditional electrically powered oven.

Both companies invested in the ovens to achieve energy efficiency and waste reduction. It is not known to what extent the solar oven compared to the electricity model is more efficient in terms of energy savings.

The third company installed a new production line to achieve production efficiency and cost savings.

For all three companies, occupational safety and hygiene were the most prominent considerations.

### ***Leather & Shoes***

<b>Overview</b>	
<b>Number of enterprises</b>	3
<b>Project description*</b>	<ul style="list-style-type: none"> <li>• Water treatment plant</li> <li>• Production line design</li> </ul>
<b>Known drivers for change</b>	<ul style="list-style-type: none"> <li>• Production efficiency (i.e. cost savings)</li> <li>• Energy efficiency</li> <li>• Waste reduction</li> </ul>

\* Companies can have more than one project carried out simultaneously, many of which are inter-related.

The leather and shoe sector is represented by three companies, which produce footwear and general leather products.

All three companies introduced new production lines which involved relocation. One of the companies is also considering installing a water treatment plant in order to minimise solid waste and reduce toxic odours.

Only two of the companies took into account social considerations relating to occupational health and safety, in accordance with Nicaragua's Ministry of Labour.

### III. Type of financing

Out of the eight projects assessed, only three companies disclosed financial information. With the exception of the size of the investment, little more is known about the other five projects. The table below indicates the size of investment according to the sector.

<b>Size of projects according to industry (US Dollars)</b>			
<b>Industry</b>	<b>500,000 &amp; more</b>	<b>100,000 to 500,000</b>	<b>100,000 &amp; less</b>
Food Processing	-	1	1
Wood & Furniture	-	-	3
Leather & Shoes	-	1	2
<b>TOTAL</b>	<b>-</b>	<b>2</b>	<b>6</b>

As indicated above, the scale of the projects is considered small which reduces the number of financing options available to the companies. There are few private financial institutions in Nicaragua specially devoted to micro or small-scale investments. Project finance and leasing, although in theory accessible to CP investments, serves mostly large-scale, short-term projects. Therefore, most projects incorporating CP measures are likely to require a long-term oriented investor (sometimes up to 10 years). The capital appraisal process needs to incorporate the potentially higher up-front costs and lower running costs.

The table below outlines the financial information provided by the three companies noted above.

<b>Sector</b>	<b>Size</b>	<b>Type</b>	<b>Rate</b>
Leather & Shoes	\$36,000	loan	15%
Food Processing	\$200,000	loan	6%
Food Processing	\$60,000	loan	18%

Two local banks provided loans at a rate of 15% and 18%, while an international bank provided a loan of 6%. The terms of the loans are not known.

## **IV. Conclusions**

### ***General business context***

The industrial policy of the government over the last 10 years, has been focused on the creation of favourable conditions to foster the development of the private sector, particularly through the reduction of the inflation rate, as well as tariff and taxes; deregulation and support to industrial reconversion (modernization); promotion of exports, as well as incentives to foreign investment; the creation of Free Trade Zones (FTZ); development of programmes to support to Micro, and Small Enterprises, promotion and introduction of incentives to investments in the tourism sector.

Within this context, export-oriented industrial enterprises and companies with an international license, are those that improved their productive processes with the specific aim to achieve ISO Certification, and compliance with the Hazard Analysis Critical Control Point System (HACCP), which helps in gaining easier access to international markets.

The study highlighted that very few industrial enterprises include the environmental variable in their investment projects. Furthermore, when environmentally-related investments occur, they often are in end-of-pipe measures, and taken more to respond to legal regulations than to a real environmental conscience or social responsibility.

Along these lines, plant sanitation as well as the adoption of some hygiene and occupational safety measures are traditional legal obligations requested by the Ministry of Health and Ministry of Labour, respectively.

The study observed that financial institutions do not use environmental criteria in the due diligence process and entrepreneurs seeking funds are only asked to fill general loan application forms.

### ***Access to and availability of finance***

Industrial enterprises have generally limited access to financing. This is reported both for small and large-scale investments. In the latter case, the banks demand the applying enterprises mortgage guarantees for a value of 1.5 or more of the amount of credit requested. Additionally, banks tend to prefer lending to the trade sector, which guarantees short-term, higher interests and more secure clients, which is also in line with the nature of the banks' main sources of funds: fixed-term deposits of one to three years.

As a general observation, the cost of financing is relatively high in Nicaragua, mainly due to high interests on deposits, the existence of a legal deposit reserve, high credit risks and transaction costs. High cost of financing and not favourable lending requirements are therefore still major barriers to access finance.

### ***Organizations and networks in Nicaragua that may be relevant to CP investments***

Within the Nicaraguan National Financial System, the most viable source of funds for investments in CP appears to be financial intermediation through the "Financiera Nicaragüense de Inversiones, S. A. (FNI, S. A.)", a second tier development bank, which is regulated under specific political and credit bylaws.

Alternatively, credit funds could be handled as a Fideicommissum or other similar legal instruments, directly by one or more local banks.

### ***Special finance schemes provided by government or agencies***

Government or state agencies do not appear to have special financing mechanisms, nor such plans.

Potential sources of funding come from some international technical cooperation projects implemented by government agencies, that have special credit components, e.g. to support SME production in rural and urban areas.

## 11. Nicaragua: Survey of Financial Institutions

The Nicaraguan financial and banking system is relatively recent. It was not until 1991, that the development of the private commercial banking and the decrease of the state banking system began. Out of the four state-owned banks which existed in the early nineties, only the Banco Nicaragüense de Industria y de Comercio (BANIC) was privatised, with 49% of the shares belonging to the state.

The Nicaraguan national financial system is composed of eleven private banks, four financial institutions (including two leasing companies) and a second tier bank: the "Financiera Nicaragüense de Inversiones, S. A. (FNI, S. A.)", all supervised by the Banks Superintendence of Nicaragua. There are no state-owned banks.

The total assets of the national financial system equal to US\$ 1,903.8 million; the total passive equals to US\$ 1,732.9 thousands, while the total equity is US\$ 170.9 million representing 9% of the total assets. The total deposits of the financial system are equal to US\$ 1,441.9 million, i.e. 83% of the total assets.

### *Commercial banks*

Private Commercial Banks capture public money through deposits, which represent 83% of the total assets of the national financial system. These banks are requested by the Central Bank of Nicaragua (BCN) to maintain a legal deposit reserve at the Bank (16.25% of the "Saving Accounts to Undefined Term" and "Saving Certificates to Fixed Term").

The structure of the deposits of the national financial system is the following:

Type of deposits	# Accounts	Amounts US\$ (000)	%
Current accounts	48,408	222,498.00	15.43%
Saving accounts	382,048	455,423.35	31.58%
Fixed Term Deposits	28,901	690,389.90	47.88%
Others	3,096	73,617.20	5.11%
<b>TOTAL</b>	<b>462,453</b>	<b>1,441,928.45</b>	<b>100.00%</b>

To collect fixed-term deposits (47.88%), banks pay annual interest rates varying from 11.80% to 13.84% (national currency) and from 8.93% to 10.64% (foreign currency).

Long-term credits are granted at interest rates that range from 15.78 % to 22.36%, if in national currency, and from 14.10% to 21.10%, if foreign currency.

Interest rates are fixed by banks, normally by adding six to ten percentage points to the real cost of money, a criterion applied for financial money intermediation not originated from public deposits.

Private commercial banks operate mainly with public financial resources. Of these resources, 68.3% are in foreign currency, divided among "Current Accounts modalities", "Saving Accounts

to Undefined Term" and "Saving Certificates to Fixed Term", for a total of 462,463 accounts of the three types. The greater concentration of accounts is reported under the "Saving Certificates to Fixed Term", 47.9% of the total deposits.

Banks and Financial Institutions direct their funding mainly to trade activities, services and individual deposits, the industrial sector representing hardly 1% of the clients of the whole system and 12.3% of the total credit portfolio.

### ***Financial institutions***

Four financial institutions were surveyed, including two leasing companies.

The "Financiera Nicaragüense de Inversiones, S. A. (FNI, S. A.)", a second tier development bank, can channel short and long term resources also to environmentally related investments, through commercial banks.

FNI, S. A. has a total portfolio of US\$ 75.6 million (as of 31 March 2000) divided as follows: 56% destined to the agricultural sector, 34% to the industrial sector and 10% to trade and other sectors. Funds are normally reserved to Micro and Small Enterprises, the promotion of exports and various productive activities, with terms of 5 to 12 years.

Typically, a bank would subscribe a "General Contract of Financial Intermediation" with FNI, S. A., subject to previous evaluation of its financial situation, according to criteria and parameters established in the "Bylaw of Eligibility of Intermediate Financial Institutions". Upon positive evaluation, the bank is declared eligible by FNI.

The two leasing companies, Financiera Arrendadora Centroamericana (Finarca) and Arrendadora Financiera (LAFISE) lease industrial, communications and construction equipment under 3-5 year terms.

As the study revealed, typically loan granting is based on the financial analysis of the applicant project, verifying the existence of environmental "permits" (issued by the Ministry of Natural Resources and Environment, MARENA) of projects with important budgets. It was further noted that credit to small enterprises is dependent to a great extent on the personal profile of the entrepreneur.

The study also highlighted that commercial banks in Nicaragua do not normally consider environmental aspects in their due-diligence process and when they do, this occurs mainly with a view to complying with relevant laws and rules. A lack of bank personnel skilled in analysing environmental cost and benefits associated in a project was also reported.