

**Participation and sustainability in social projects:
The experience of the Local Development Program (PRODEL) in Nicaragua**

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Executive Summary

This document analyses the experience of community participation and sustainability in the Local Development Programme (PRODEL) in Nicaragua. The goal of PRODEL is to improve the physical and socio-economic conditions of families living in poor communities in eight small and mid-size cities. This is achieved through the involvement of poor families in the co-financing and co-management of small infrastructure and urban improvement projects and by lending small loans for housing improvement and financing micro-enterprises. The consequences of the civil war in the 1980s, the profound economic crisis experienced by the country in the early 1990s, and Hurricane Mitch's sequels in November 1998 have severely affected these eight cities in the past two decades.

PRODEL's first phase began operations in April 1994 and lasted until December 1997. A second phase started in January 1998 and will carry out operations until December of the year 2001. As of December 31 1998, a total of 260 small infrastructure and community development projects had been carried out in 155 different neighbourhoods. About 4,168 loans were given for the improvement and expansion of homes, along with approximately 12,451 loans for the financing of some 2,409 micro-enterprises. A revolving fund was established with the money collected from the repayment of the loans. The fund has a very low default rate and is financially sustainable. In total, some 38,000 families (about 48% of the total population of the eight cities) have benefited from the programme.

These positive results are due to the innovative methods employed in Nicaragua to promote and to provide incentives for the participation of communities and end users in the co-financing, co-management, and operation of the infrastructure projects as well as the housing improvement and micro-enterprise loans. Through participatory micro-planning exercises, the communities and families involved have identified, prioritised, negotiated, and co-ordinated their projects with local governments, and the loans with a commercial bank. Likewise, project committees and community working groups have been established to participate directly in the building, administration, supervision, and maintenance of the infrastructure works. Special emphasis has been given to the involvement of women in these processes.

A substantial mobilisation of local public and private resources for the development of the various components of the programme has occurred. Beneficiary families have contributed more than 155,000 days of voluntary labour. Contributions of the local government and the communities have exceeded 43% of the value of infrastructure projects costing less than US\$50,000. The analysis suggests that the direct and indirect costs of construction and preventive maintenance of these projects may be up to 20% below the cost of similar projects carried out by local governments without community participation. These savings are due primarily to the contributions of the families in cash, building materials, administration, and labour for project construction and maintenance.

Financial assistance for the design, execution, and administration of PRODEL has been provided by the Swedish International Development Co-operation Agency (Sida). By the end of 1998 external resources totalled US\$ 5.6 million. More than US\$5 million in local resources from the communities and the municipal governments for the execution of infrastructure projects, housing improvements, and reinvestments of the repayments of the loans were mobilised.

Experience suggests that the introduction, operation, and sustainability of urban services and infrastructure in established poor neighbourhoods can be accomplished more effectively and more efficiently if the end users are involved in the processes of decision-making, management of resources and execution of the projects. This approach creates a positive atmosphere that mobilises the internal savings of poor families, improves the transparency and accountability of local government vis-à-vis their constituency, and facilitates the identification of creative solutions, thereby creating an environment that promotes national reconciliation and consensus building.

Table of Contents

Executive Summary

- 1. Introduction**
- 2. Background**
- 3. Description of the areas in which PRODEL operates**
- 4. The Local Development Program (PRODEL)**
 - 4.1 Objectives and strategies**
 - 4.2 Main actors**
 - 4.3 Achievements**
 - 4.3.1 Infrastructure and community projects component**
 - 4.3.2 Housing improvement and Micro-enterprise loan components**
- 5. The PRODEL Community participation model**
 - 5.1 Infrastructure Component**
 - 5.2 Evaluation of the participatory process in the infrastructure component**
 - 5.3 Housing improvement and micro-enterprise loan component**
 - 5.4 Evaluation of Community Participation in the Housing Improvement Component**
- 6. Lessons Learned**

Appendix

List of Abbreviations

ATV	Asistencia Técnica en Vivienda (Housing Technical Assistance)
BCP	Banco de Crédito Popular (Popular Credit Bank)
BID	Banco Interamericano de Desarrollo (Inter-American Development Bank)
CPAC	Community Project Administration Committee
ENEL	Empresa Nicaragüense de Electricidad (Nicaraguan Electric Company)
FDL	Fondo de Desarrollo Local – NITLAPAN (Local Development Fund Nitlapan)
FISE	Fondo de Inversión Social y Emergencia (Social Emergency Investment Fund)
INAA	Instituto Nicaragüense de Agua y Alcantarillado (Nicaraguan Water and Sewage Institute)
INATEC	Instituto Nacional Tecnológico (National Institute of Technology)
INIFOM	Instituto Nicaragüense de Fomento Municipal (Nicaraguan Institute for Municipal Development)
MED	Ministerio de Educación (Ministry of Education)
MINSA	Ministerio de Salud (Ministry of Health)
PRODEL	Programa de Desarrollo Local (Local Development Programme)
Sida	Swedish International Development Co-operation Agency
SILAIS	Servicios Integrales Locales de Atención en Salud (Integrated Local Health Services)
UTE	Unidad Técnica Ejecutora de la Alcaldía (Municipal Technical Unit)

1. Introduction

This document analyses the experience of community participation of the Local Development Programme in Nicaragua during the period 1994-1998 in the provision of urban services, infrastructure, housing improvement and micro-enterprises lending and its implications for sustainability of social programmes.²

The first section of the document describes the socio-economic conditions prevailing in the cities where PRODEL works. Afterwards, it summarises the objectives, strategy, and rationality used to involve communities and end users in the different phases of the components of the programme. The document evaluates the efficiency and effectiveness of community participation in the infrastructure and in housing-improvement and micro-enterprise lending components. Finally, it outlines some of the lessons learned in terms of sustainability and participation in social programmes.

The document stresses that in a relatively short period of time, PRODEL's model of community participation produced positive results in terms of improving the living conditions of poor families, increased the efficiency in the management of public resources, and the generation of positive attitudes among the beneficiaries. More than 38,000 families benefited from infrastructure and community works projects, housing-improvement loans, and loans to micro-enterprises. For each US\$1.00 of external financing provided by Sida through a central government agency for infrastructure projects, local resources mobilised, including contributions by the communities, totalled US\$0.66. In the housing-improvement component, for each US\$1.00 given as a loan, families mobilised at least an additional US\$0.30 of their own resources. Financial analysis shows that the breaking point in the operation of small loans has been reached and allows a profit of 15% per annum after paying the commission to the commercial Bank that is managing the revolving fund.

These figures show the existence of a large quantity of resources and local internal savings that can be mobilised for the construction, operation, and maintenance of basic urban services, as well as housing and income generation in spite of the prevailing poverty conditions in these cities.

Experience shows that technical solutions defined with the direct participation of the end-users have certain comparative advantages which can be competitive with solutions offered by the market, not only in terms of costs, but also in satisfaction and the intangible benefits generated during the process. Projects costing up to US\$50,000 and carried out by the programme with community participation may cost up to 20% less than projects carried out by the local governments either directly or by way of contracts through private companies without community participation.

Finally, the report suggests that an effective process of participation requires an environment that does not impede the decentralisation and devolution of functions, resources, and decision-making authority from the higher hierarchical levels of government to the local level. The experience of PRODEL shows that the scarcity of State financial resources is not the principal obstacle encountered by poor groups in solving their problems. To the extent that the institutionalised systems make families participants in the processes of co-management, the possibility increases that these users will assume greater responsibility and commitment in the financing and management of the services. The process of community participation via the exercises of micro-planning and administration of projects allows local governments to more effectively focus public investments in infrastructure, equipment, and housing based on real, co-ordinated, and negotiated demands where the poorest groups live.

² The author expresses its appreciation to Ruth Sobalvarro, Co-ordinator of the Infrastructure and Housing Component of PRODEL, for her assistance in the preparation of a previous version of this document. The paper was presented at the international seminar "Social Programs, Poverty and Citizen Participation" organised by the Inter-American Development Bank (IDB) on its Annual Governor Meeting held in Cartagena, Colombia on the 12-15 of March, 1998.

2. Background³

Nicaraguan society has experienced major changes during the 1990s. From a situation of war and political polarisation, progress was made in the process of national reconciliation and democratisation. From a collapsed, centrally managed economy with record levels of hyper-inflation and the highest foreign debt in the region (700% of its GDP), it was transformed into a market economy with incipient growth, relative financial stability, and a significant reduction of the fiscal deficit.⁴ This economic transformation required the adoption of a series of structural adjustment measures, which had a negative impact on the poorest sectors of society. Unemployment and under-employment increased. Wages, which already had little purchasing power, were frozen, and access to basic services and infrastructure was reduced.⁵

In this context, the governments of Sweden and Nicaragua signed a Co-operation Agreement in July 1993 for the implementation of the Local Development Programme (PRODEL). The two governments were interested in creating a decentralised, participatory, and sustainable programme which would contribute to mitigate the negative impacts of structural adjustment policies, specially in urban areas and facilitate the process of pacification, national reconciliation, and democratisation.

3. Description of the areas in which PRODEL operates

During the first phase (1994-1997), the programme operated in three mid-size (León, Chinandega and Estelí) and two small size cities (Somoto and Ocotal). These cities had experienced serious problems associated with rapid population growth as a result of the internal displacements caused by the civil war and the return of refugees from neighbouring countries, increased levels of unemployment and under-employment, poverty, and the lack of basic services and infrastructure. During the second phase (1998-2001), two new mid-size cities (Matagalpa and Jinotega) and one small city (Chichigalpa) were incorporated.

According to the 1995 National Census, the population of the eight municipalities was about 650,000. Approximately 451,000 lived in urban areas, which means that the level of urbanisation was 69.4% (i.e., higher than the national average of 54.4%). The total population of these municipalities represented 15% of the total population of the country and 19% of the total urban population in Nicaragua (see Table No. 1).

Official statistics estimate that 32% of the total urban population of the country (758,400 people) live below the poverty line.⁶ Of the total, approximately 25.5% are in the eight cities where PRODEL works (see Table No. 1). In terms of unsatisfied basic necessities, the five cities attended during the first phase, with the exception of León, are below the national average in terms of the availability of drinking water, sanitary sewage, road repair, electric power, and waste collection services (see Table No. 2).

Of the 150 neighbourhoods served by PRODEL during the first phase, 27 neighbourhoods in León had more than two basic requirements unsatisfied, 25 in Chinandega, 17 in Estelí, 8 in Somoto, and 10 in Ocotal (see Table No. 2). According to different methods to measure poverty (see Appendix No. 2), 73% of the population of León and Chinandega consists of chronically and recent poor. In Ocotal, Somoto, and

³ This section is based on PRODEL (1997) "Documento de Proyecto para la Segunda Fase de PRODEL" [PRODEL Phase Two Project Document], INIFOM, Managua.

⁴ Inflation was reduced from 30,000% per annum in 1989 to 12% in 1995. The GDP per capita was US\$418 in 1995, while it had been equivalent to US\$739 in 1979 and to US\$979 in 1970. Between 1990 and 1995, the Government reduced the number of public employees from 284,800 to 95,600, including 84,000 members of the armed forces (Villalta, Luis, "Proceso de Modernización" UCRECEP, Managua 1997).

⁵ According to the United Nations annual report on human development, Nicaragua is the second-poorest country in Latin America. In 1993, the rate of unemployment was 22%. In 1996, the rate of total unemployment had decreased to 16%, but the rate of under-employment was fluctuating between 35% and 55%.

⁶ The poverty line defines the level of per capita monthly expenses required for food to meet a minimum daily caloric requirement. In 1993, the poverty line was approximately US\$430 per year, and the extreme poverty line was US\$202 per year (World Bank, 1995).

Estelí, the figure is 77%. Compared with Managua, where the figure is 55% and Nicaragua as a whole, where it is 66%. These figures indicate that the area in which PRODEL operates possesses higher rates of chronic and recent poor than the national average. When compared with the 33% figure in El Salvador, the level of poverty in the cities of Nicaragua and those served by the programme becomes evident (see Annex No.2).

The poverty indicators help to understand the type of urban population PRODEL is working with. On one hand, there are major segments of population, which have unsatisfied basic needs and low-income levels. On the other hand, there are households with income levels above the poverty line, but live in neighbourhoods, which are considered marginal as a result of the lack of one or more basic services. There are also households located in the inner cities (where all the basic services may be available) but which do not have income levels sufficient to meet the nutritional requirements established in the basic "basket." In some of these neighbourhoods, it is easy to find a mixed population consisting of professionals with higher levels of education living next to unskilled labourers, self-employed workers and families employed in the informal economy.

The absence of adequate housing policies and programmes aimed at these sectors means that the majority of the housing solutions have been constructed by the population on its own initiative and efforts, as a function of their capabilities and resources. Many times these houses do not meet the minimum safety and environmental measures required for a healthy habitat.

These municipalities were also particularly affected during Hurricane Mitch at the end of October 1998. About 10% of the total housing stock of the eight cities were partially or totally damaged. The majority of these houses were located in poor neighbourhoods that lacked basic services. About 3% of the micro-enterprises also located in these areas had severe losses.

It is in this socio-economic context that the community participation processes promoted by PRODEL must be understood.

Table No. 1

Urban population, number of houses, and households below the poverty line in the eight municipalities in which PRODEL has operated during Phase I and Phase II.

Municipality	Total population	Urban population	Rural population	Average inhabitants per urban household	Urban households per city	% of urban population below the poverty line	Urban poor, as defined by the poverty line	Urban households below the poverty line
León	161,530	123,865	37,665	5.76	21,906	16%	19,818	3,441
Chinandega	117,037	97,387	19,650	5.76	16,935	37%	36,033	6,256
Estelí	92,988	71,550	21,438	5.42	13,383	42%	30,051	5,544
Somoto	28,821	14,218	14,603	5.95	2,546	83%	11,801	1,983
Ocotal	26,076	25,264	812	5.58	4,549	68%	17,179	3,068
Matagalpa	104,381	59,397	44,984	5.74	10,703	31%	18,413	3,208
Jinotega	77,222	30,824	46,398	5.70	5,607	50%	15,412	2,704
Chichigalpa	41,903	28,823	13,080	5.58	5,240	25%	7,208	1,292
Total	649,958	451,328	198,630	5.69	80,869	35%	155,915	27,496
Total Nicaragua	4,357,099	2,370,810	1,986,289	5.80	427,485	32%	758,400	130,758
PRODEL's cities as % of country's total	15%	19%	10%		19%		25.5%	21%

Source: Prepared by the author based on INEC (1997) "Censo Nacional de Población, 1995" [1995 National Census], Managua, and FISE (1996), "Metodología para determinar la línea de pobreza en Nicaragua" [Methodology used to determine the poverty line in Nicaragua], Managua.

Table No. 2

Number of neighbourhoods served per city and coverage of basic services in the urban areas of the municipalities where PRODEL operated during Phase I (1994-1997)

City	Number of Communities	Communities served by PRODEL	% communities served	% average coverage of basic services per city				
				Potable water	Sewage	Streets	Electricity	Garbage collection
León	126	30	24%	90	60	70	85	75
Chinandega	52	32	62%	74	38	75	75	51
Estelí	54	30	56%	78	35	15	75	55
Somoto	22	12	55%	72	43	60	85	30
Ocotal	18	9	50%	80	10	45	78	65
Total	272	113	42%					
Average coverage in urban areas at the national level including Managua				90	44	37	93	78

Source: PRODEL (1997) "Proyecto de la Segunda Fase" and reports from the municipalities served by PRODEL and the Social Action Ministry (1995) "Medición de la Pobreza en Nicaragua" [Measurement of Poverty in Nicaragua], MAS/UNDP, Managua.

4. The Local Development Programme (PRODEL)

4.1 Objectives and Strategy

Since it began operations in April 1994, the development objective of the Programme has been to improve the physical environment and the socio-economic conditions of the poor population, especially of women and other vulnerable groups in the cities where it operates through methods that can be sustainable in time. To achieve these goals three investment components and a technical assistance and institutional development component have been structured (see Box No.1 for a summary of the principal characteristics of the investment components of PRODEL):

Infrastructure and community works: Includes the introduction, expansion, repair, and improvement of infrastructure and community works through small-scale projects up to US\$50,000. These include potable water, sewage, and storm sewers systems; treatment plants; pedestrian and vehicular road systems, including side-walks, roads, gutters, and pedestrian by-passes; public and household electrification; health centres, day-care centres, multi-use centres, school rooms, playgrounds, sporting facilities and sites for the collection, disposal and treatment of waste);

Housing improvement: Small loans (between US\$200 and US\$1,400) targeted to poor families who can afford to repay their loans. Loans are used to enlarge and improve their houses (including indoor plumbing, construction of additional rooms, repair and replacement of roofs, repair and reinforcement of walls; construction and/or improvement of floors, interior walls, installation of indoor plumbing and sewage facilities, electrification, upgrading kitchens and outdoor walls);

Financial assistance to micro-enterprises in the neighbourhoods in the form of small short-term loans (between US\$300 and US\$1,500) for fix and working capital, as well as for the creation of new micro-enterprises for services, trade, and manufacturing. These loans are directed in particular to micro-enterprises owned and operated by women;

Technical assistance and institutional development to strengthen the capacities of local governments in the administration and management of social investments with community participation, as well as encouraging institutionalised financial entities to become involved in non-conventional lending programs for housing improvements and micro-enterprise loans to poor families.

4.2 Main Actors

The programme bases its implementation strategy on the formation of broad but clear co-operative alliances between the various institutions involved. A system of incentives and co-financing has been designed for the participation at the local level in the management and contribution of resources, but also in the decision-making process. The purpose of the combination of activities is to have flexible responses to the urgent basic social problems in the neighbourhoods, and at the same time to stimulate longer-term development processes. In this sense, PRODEL supports the decentralisation process by means of promoting citizen participation, assisting local governments, and creating a financial and institutional framework that is sustainable over the long term. The principal entities involved in these processes are:

The Instituto Nicaragüense de Fomento Municipal (INIFOM - Nicaraguan Municipal Development Institute): a central government institution that administers the funds provided by the Swedish International Development Co-operation Agency (Sida) and is responsible for the execution and supervision of the programme. INIFOM has formed a Central Executive Unit to promote and co-ordinate actions at a central and local level.⁷ INIFOM's primary interest in the programme has been the possibility of establishing innovative methods to promote and enhance the local government's capacities through

⁷ The Central Unit is conformed by a National Co-ordinator, two persons in charge of co-ordinating the infrastructure component and the housing and micro-enterprise components, respectively, as well as four persons responsible for co-ordinating the activities in the municipalities where the program operates.

decentralised processes. The PRODEL participation model has been used by INIFOM to promote additional decentralisation programmes using resources from other international funding agencies.

The municipal governments in the cities where the programme operates: Local authorities are responsible for administering the infrastructure component and providing technical assistance to the beneficiaries of the housing improvement loans. The municipal governments are responsible for administering the funds that PRODEL transfers to them and for supervising activities at a local level. These are co-ordinated by a Municipal Commission formed by representatives of the various institutions participating in the programme and are chaired by the mayor. Each city has created an Executive Technical Unit (UTE) composed of personnel from the municipal government (a technical person, a social promoter, two technical experts in housing construction, and one administrative-financial specialist). A framework agreement is signed between INIFOM and the municipal governments for the implementation of the Programme.

The Consultative Council: The eight mayors, together with the Executive Director of INIFOM and one representative from the funding agency Sida, form a Consultative Council responsible for defining the strategic guidelines and supervising the implementation of the programme, as well as complying with the Co-operation Agreement between Sweden and Nicaragua. In addition to its interest in improving the living conditions of the population in their respective municipalities, the experience of managing, investing, and administering the funds for the infrastructure and community projects has given the municipal governments a greater sense of involvement and appropriation in the process of providing services.

Banco de Crédito Popular: A State commercial bank responsible for screening, approving and disbursing the loans and supervising their correct utilisation. The bank is also responsible for the collection of payments for the home-improvement and micro-enterprise loans and for administrative, pre-judicial, and judicial arrangements for foreclosure of collateral security and guarantees. INIFOM and the Bank have signed a trust fund agreement for the administration of the revolving funds. The Bank offers the programme additional banking services for the administration of the infrastructure components and technical assistance. The Bank benefits from its participation in a programme of this type from the following factors: the commissions it earns for placing and servicing the loans represent a significant additional revenue, which helps it to meet its operating costs. The micro-enterprise loans also include a mandatory savings component in an account at the Bank, which has increased the Bank's liquidity for the promotion of its own loan programmes. Finally, its awareness of a new segment of the market has provided it with increased opportunities for new business.

NGOs: PRODEL is interested in expanding the use of new financial intermediaries as a way to create a more competitive environment in the field of non-conventional lending in the cities where it operates. In November 1998, the programme decided to expand the use of non-conventional financial intermediaries to allocate loans to those poor sectors of the cities where it operates that were severely affected by Hurricane Mitch. Two NGOs, ACODEP and Nitlapán-FDL were selected after a tender and bidding process to handle loans for housing improvements and micro-enterprises. The NGOs are interested in diversifying their portfolio. Both of them are catalogued among the best performance NGOs working with micro-enterprises. In early 1999 they started operations in the eight cities, mainly in neighbourhoods where the Bank is still not operating. No figure of the number of loans given by NGOs is shown in the current document since their incorporation to the programme is relatively new and after the period being analysed.

The families in the selected neighbourhoods: participate in the definition, execution, financing, and maintenance of the infrastructure projects, and are also the recipients of the housing and micro-enterprise loans. The principal benefit they derive from their participation in the programme is the improvement in their living conditions, in addition to the fact that they acquire new skills in negotiating with public and private sectors to identify solutions to their problems. The families participate either directly or via Community Project Committees — entities established for the organisation and internal representation of the neighbourhoods — which are responsible for the administration, execution, and maintenance of the

infrastructure and community projects. Community meetings elect the commissions, and their representatives are members of the Municipal Commission, which the municipal government establishes for the co-ordination and supervision of the components of PRODEL.

Box No. 1
Characteristics of PRODEL's components

Component	Infrastructure	Housing	Micro-enterprises
Objective	Improve, expand, and maintain basic services and social equipment at the community level.	Improve the habitat conditions of individual families.	Income and employment generation in family-owned micro-enterprises specially headed by women.
Seeks to	Promote community participation and strengthen local governments.	Demonstrate the potential for the generation of participatory lending and housing improvement programmes in the country.	Financial sustainability of the fund based on loans outside the traditional areas of activity of banks and other non-conventional lenders.
How does it work	Local government with community participation defines, co-administers, executes and maintains the projects.	A Commercial Bank screens, selects and issues loans and recovers from individual families. Technical assistance provided by local government. Technicians. In 1999 two NGOs were incorporated to a similar scheme.	Commercial bank and individual families. In some cases, technical assistance for the creation of new micro-enterprises. In 1999 two NGOs have been incorporated in a similar scheme.
Financial basis	Costs shared between the programme, the local government and the community.	The families repay the loans. The Bank is paid a fee from the positive collected interest rates. NGOs also operate in a similar arrangement.	Loans repaid to the Bank by micro-enterprises, based on positive and market collected interest rates. The NGOs also operate in a similar arrangement.
Type of fund	Conditional and participatory fund with an element of subsidy.	Rotating fund with long-term turnover (four years per loan).	Rotating fund with high turnover, high interest rates and short repayment periods (six months).
Target population and users	Families of the neighbourhood where the project is to be carried out.	Neighbourhood families, based on ability to pay (monthly family income US\$60 - 500).	Micro-enterprises, the majority of them established, with monthly family incomes between US\$60 - 500.
Administrative responsibility	Local government is responsible and accountable to PRODEL for the funds provided.	Local government (technical assistance), the Commercial Bank and two NGOs (financial aspects).	Commercial Bank and two NGOs (financing activity).
Implications for local development	Solutions are prioritised and negotiated between the communities and local governments.	End user families define solutions with technical assistance from local government. The loans are given directly by the Bank and the NGOs to the families. High mobilisation of family resources.	Local governments establish areas of action, but the Bank, NGOs, and the users of the loans establish their relationship without the intervention of local government. The result is a strengthening of the local economy.
Role of the Central Government	To facilitate, promote, and establish standards and procedures, strengthen local government, supervise and monitor the execution of the project, and learn lessons	To facilitate, establish procedures, strengthen the capability of local governments, a commercial bank and NGOs in participatory programmes,	To facilitate the processes, stimulate the participation of financial intermediaries, supervise the process, and make it possible to repeat the process on a larger scale.

Component	Infrastructure	Housing	Micro-enterprises
	that can be applied in future programs.	supervise, and learn lessons that can be applied in other programs and cities.	
Requirements for success	Forum for the decentralisation of responsibilities, functions and resources from the central government to the local government and to the communities.	Clear division of functions between the financial entities and those that are providing technical assistance.	Administrative ability of the financing intermediary to work with small, short-term loans.
Sites of greatest impact	Poor and peripheral areas of small and medium-size cities.	Poor and peripheral areas of small and medium-size cities.	Poor and peripheral areas of small and medium-size cities.

Source: Prepared by the author on the basis of progress reports from PRODEL (1997) and Project Documents for the Execution of Phase I (1994) and Phase II (1997).

4.3 Achievements

The achievements and limitations of PRODEL's participatory model must be understood in the context of a society which for years was politically polarised and which took its first steps toward national reconciliation and reconstruction only in the early 1990s. In addition to the economic and social crisis experienced, the programme has faced changes in local and central governments. In January 1997, there was a 90% turnover of the personnel in the institutions directly involved in the administration and execution of the components, and even in the management of PRODEL. The following section analyses the achievement of each of the components of the programme.

a) Infrastructure and Community Projects Component

Between April 1994 and December 1998, 260 infrastructure and community projects were carried out in 155 different neighbourhoods. These projects benefited more than 38,000 families. Total investment was US\$4.4 million (an average of US\$16,972 per project). Contributions from municipal governments and the beneficiary communities (in kind, cash, materials, tools, labour, administration, and supervision) totalled 43.1% and the remaining 56.9% were contributions from the programme (see Table No. 4).

35% of the total number of projects consisted of improvements to roads, gutters and sidewalks; 10% related to the improvement and expansion of potable water and sewage systems; 14% to rainwater and storm water drainage projects. Another 18% corresponded to electrification (public lighting and/or household connections) and 23% to community infrastructure (including construction, improvement, expansion and repair of primary schools, day care centres, health centres, parks and playgrounds).

In these 260 projects, the communities contributed some 132,000 days of work, both volunteer and paid, using their own resources. Because PRODEL concentrated the infrastructure component in the poorest neighbourhoods in the five cities, it can be assumed that the majority of poor people benefiting belong to groups classified as chronically poor and/or recently poor (see Appendix No. 2).

The programme accomplished 184% of the planned physical objectives of the infrastructure component. The reasons for this success are closely linked to the notion of community participation. Initially, the project document for the first phase established an objective of 64 projects to be completed in three years at an average cost of US\$20,000 to be financed by PRODEL. As a result of the requirement for local matching funds, a situation resulted in which the municipal governments decided to expand the coverage of the programme to more neighbourhoods to increase their impact, reduce the contribution on a per-project basis, and increase the level of community investment. The result was a greater number of lower-

cost projects that mobilised a greater number of people and resources in each community, and required less in the way of funds per project from the central and municipal governments.

In addition, the responsibility displayed by families in the repayment of their house improvement and micro-enterprise loans made it possible to refinance new loans and achieve, and made it unnecessary to use fresh funds destined for these components by PRODEL. Originally during the first phase of the Programme, US\$1.1 million had been budgeted for financing the housing improvement loans, and US\$1.2 million for the micro-enterprise loans, but only 50% of these amounts was used. It consequently became possible to reallocate the fresh funds not used for the loans for the financing of 57 new infrastructure projects during 1997, as a result of which the planned objectives for this component during the four-year period in question increased to 110 projects. Even so, a total of 217 infrastructure and community work projects were carried out in the first phase and other 43 on the first year of the second phase, totalling 260 projects.

b) Housing Improvement and Micro-Enterprise Loan Components

In five years, more than 4,168 loans were given for housing improvements (total disbursed funds reached US\$2.7 million), which benefited approximately the same number of families⁸. In this component the families, in addition to repaying their loan, contributed with their own resources, construction materials, labour, transportation, and project administration in a minimum amount equivalent to at least 15% of the value of the labour, transport, and building materials (see Table No. 5).

According to the Bank's figures, about 22% of the loan user families have monthly family incomes between US\$50 and US\$100; 48% between US\$101 and US\$200; 26% between US\$201 and US\$300, and 4% between US\$301 and US\$450. Thus, 70% of the families that received the loans have monthly incomes of US\$200 or below. This indicates a sector, which can afford to make monthly payments, but that is poor and have unsatisfied basic necessities at the level of services and the quality of housing construction materials. This is the segment of the population that the component aimed to address.

More than 12,451 loans for micro-entrepreneurs were given in the communities in which the programme operated, with almost US\$5.5 million disbursed, benefiting approximately 2,400 existing families (see Table No. 5). 70 new micro-enterprises were also created, which gave jobs to some 210 people. In this component, too, the ultimate results amounted to 117% of the original and adjusted goals.

More than 60% of the housing improvement loan recipients and 70% of the micro-entrepreneurs are women. Approximately 30% are women headed households. The reason for this high percentage of women with access to loans is due to the approach that PRODEL has elaborated together with the Bank. Information meetings, credit analysis and the collection of loans are made in the communities where women live and work. The same experience has been achieved in the technical assistance provided for the design and budgeting of the housing improvement loans. Thus, solutions and the amount of the loans try to be tailored according to the necessities and priorities of women.

With more than 6,500 borrowers, the default indicators of the housing improvement and micro-enterprise revolving loan funds make PRODEL one of the most successful programmes in the country. Cost recovery shows that there is a real possibility that the funds will become financially sustainable. In spite of two critical factors that have affected the programme during 1998⁹, the default rate or the portfolio at risk

⁸ Housing loans were first given in October 1994. Since the loan repayment period is of four years, only about 5% of the beneficiary families have taken a second loan for housing improvement. Thus it is possible to state that about 4,000 different families have received a loan for housing improvement.

⁹ The first factor relates to the process of privatisation of Banco de Crédito Popular. This process has forced the Bank to make some internal readjustment in its levels of operations that has affected the personnel of the Bank directly linked with PRODEL's operation. The second factor is the social and economical consequences of

in the housing improvement loan component was about 18% and 10% in the micro-enterprise component¹⁰.

An external evaluation and qualification of PRODEL's housing and micro-enterprise portfolio done at the end of 1998 showed that only 1.5% of the total of loans that have more than three payments in arrears or the portfolio at risk may be lost and never recovered. About 2.5% have to be recovered through judicial procedures and 96% through simple administrative and follow-up procedures that the Bank needs to implement.

After five years of operation, the annual recovered interests of the revolving fund are able to cover the Bank's direct costs and a good part of the costs of PRODEL's personnel whom are directly involved in monitoring the loan components. In 1998, accumulated interests recovered from loan portfolio added US\$382,507. Total annual payments to the Bank for the administration of the portfolio was US\$251,386. A provision for those loans that are not recoverable totalled US\$43,268. Thus, the sustainability indicator measured as income generated by the portfolio divided by the commission paid to the Bank and provision for unrecoverable loans equalled 1.16. This means that the revolving fund was able to generate a surplus of 16% in 1998. During four years it has an overall profit of 12% (see Table No. 3).

This success is particularly noteworthy in light of the economic crisis, which the country is experiencing, the high levels of unemployment, and the existence of a very inexperienced credit culture, as a result of the historical circumstances that have prevailed. It also effectively shows the importance and priority that poor sectors give to the repayment of their debts.

The results indicate that this is not simply an isolated project, but a pilot experience with lessons that can be learned, so that the programme can be replicated in other cities in the country and other countries of the world. In this sense, the Government of Nicaragua and Sida decided to continue financing the activities of the Programme for a second phase in the cities where it has been operating and to expand the programme to three additional cities in the country over the next four years. Lessons from the PRODEL model have also started to be applied in Honduras and South Africa. The ultimate goals are to institutionalise and define a participatory model for the provision of services, equipment, housing and income generation, which will be sustainable on a national level.

Hurricane Mitch that affected seriously the eight cities where PRODEL works, including some of the clients that work with loans of the Programme.

¹⁰ The method the Bank and PRODEL have agreed to measure the default rate is the following: the total of the outstanding capital of those loans that are in arrears divided by the total outstanding capital of the whole portfolio. A loan is considered to be in arrears the day after payment was supposed to be done and the person did not comply with its duty.

Table No. 3
Analysis of the financial sustainability of PRODEL's revolving funds in US Dollars
(1995-1998)

	1995	1996	1997	1998	Total
1. Seed Capital*					
2. Seed Capital Micro-enterprise	414,986	0	87,000	75,084	577,070
3. Seed Capital Housing	547,767	76,044	150,000	142,780	916,591
4. Total Seed Capital (2+3)	962,753	76,044	237,000	217,864	1,493,661
5. Operative Income**					
6. Perceived interests micro-enterprise	82,289	122,813	197,709	253,977	656,788
7. Perceived interests housing	65,252	69,134	101,761	128,530	364,677
8. Total Interests (6+7)	147,541	191,947	299,470	382,507	1,021,465
9. Direct Costs of Bank	102,448	134,598	183,004	245,591	665,641
10. Financial Margin (8-9)	45,093	57,349	116,466	136,916	355,824
11. Provision for non-recoverable loans	17,322	23,054	36,480	43,268	120,124
12. Operative profit (10-11)	27,771	34,295	112,818	93,648	235,700
13. Indirect Costs PRODEL	25,000	30,000	35,000	40,000	98,000
14. Total Costs (9+11+13)	144,770	187,652	254,484	328,859	915,765
15. Sustainability indicator (8/13)	1.02	1.02	1.18	1.16	1.12

Notes:

* Refers to the fresh funds from Sida transferred by PRODEL to the Bank each year for the housing and micro-entrepreneur revolving funds. For 1994 there are no data available.

** Refers only to the accumulated real interests obtained as a result of monthly collections

Source: Analysis based on PRODEL (1999) "Evaluation 1998 and Operative Plan 1999", Managua, March 1999.

Table No. 4**Number of infrastructure projects per city and contributions from PRODEL, the municipal governments and the commun**

City	Projects planned (a)	Projects Executed	% Execution	Programmed contributions (US\$) (a)	PRODEL's Contributions US\$	% Execution	Municipal Contribut. US\$
León	28	49	175%	584,127	507,436	86.9%	305,911
Chinandega	39	72	185%	608,127	605,296	99.5%	423,320
Estelí	31	49	158%	592,127	537,574	90.8%	285,526
Somoto	19	36	189%	336,064	320,829	95.5%	128,517
Ocotal	8	39	486%	344,064	362,678	105.2%	160,914
Chichigalpa	5	5	100%	60,000	59,894	99.8%	31,035
Matagalpa	5	5	100%	70,000	48,849	69.8%	40,351
Jinotega	6	5	83%	70,000	67,325	96.2%	47,204
Total	141	260	184%	2,664,509	2,509,881	94.2%	1,422,778
Contributions (%)					56.9%		32.2%

Source: Based on PRODEL (1997) "Final year report", mimeo, Managua and PRODEL (1998) Final year report, mimeo Managua.

Notes: (a) The PRODEL First Phase Project Document had as its objective 64 projects to be carried out in 3 years in 5 cities. The pro, thus 46 projects were added, and the amount budgeted was US\$2.16 million. 3 more municipalities were added in 1998, thus the am five years totals US\$2.66 million.

Table No. 5**Number of housing improvement and micro-enterprise loans, and families benefiting per city (1994-1998)**

City	Number of loans Program.	Total housing improvement loans	Disbursed Amount In US\$ (a)	Average contribution by families US\$	Outstanding portfolio in US\$	Budgeted micro-enterprise loans	Total micro-enterprise loans given (b)	Micro-enterprise owners benefited	Dist amo loa U
León	1,112	944	613,265	138,255	200,344	2,777	2,824	513	1,20
Chinandega	1,088	930	600,958	102,162	260,272	2,588	3,264	593	1,39
Estelí	1,120	1,029	659,734	112,155	257,065	2,500	3,532	640	1,68
Somoto	574	497	310,161	52,727	132,559	1,061	1,218	225	50
Ocotal	715	574	376,025	63,943	143,767	1,441	1,398	260	59
Chichigalpa	140	63	43,634	7,417	34,938	106	45	33	?
Matagalpa	120	64	47,777	8,122	41,824	95	73	68	?
Jinotega	120	67	56,896	9,672	47,016	95	97	77	?
Total	4,989	4,168	2,708,450	494,453	1,117,785	10,663	12,451	2,409	5,49

Source: PRODEL (1997) "Program Progress Report", mimeo, Managua and PRODEL (1999) "Evaluación 1999", mimeo, Managua.

Notes: (a) Estimated average loan of US\$650.00; (b) It was calculated that 25% of the urban households have micro-enterprise as their only sou approximately 13,000 micro-enterprises in the five cities in which PRODEL operated during the first phase. Therefore, PRODEL has reached ap enterprises in the five cities. For the second phase in the other three cities is too early to establish the overall impact.

5. The PRODEL Community Participation Model

The PRODEL community participation model is based on the premise that families, which participate in the decision-making processes, administration, and execution of infrastructure and housing improvement works, increase their commitment to co-finance and maintain the projects. This ensures the sustainability of the social investments over the long term. The following section describes and analyses the process of participation in the infrastructure component and in the housing improvement component (see Appendix No. 1 for a summary of the model and its evaluation).

5.1 Infrastructure Component

INIFOM signs a framework agreement with the municipal governments defining the incentives, responsibilities, and the contributions of each party for the execution of the different components. INIFOM is responsible for the transfer of funds to the municipal governments under certain conditions. First, there must be community participation in the identification, execution and maintenance of projects. Second, there must be a commitment on behalf of the Municipal Council to allocate resources for the execution of the infrastructure projects. Third, municipalities must provide technical assistance to those families that are entitled to a housing improvement loan, and finally, they need to form an Executing Technical Unit to manage the projects.

At the initiative of the Municipal Council, under the leadership of the Mayor, a Municipal Commission is formed with representatives of the main entities involved in the programme (INIFOM, the municipal government, Banco de Crédito Popular, and other public services institutions). Every year, based on a set of eligible criteria established by PRODEL, the Municipal Commission defines and selects the action areas of the programme in the city¹¹. The Commission also provides follow-up on the physical and financial progress of the operative plan of each of component.

Representatives of the communities selected are invited to attend the monthly meetings of this Municipal Commission, although their functions are limited. The idea is that community leaders should be given the opportunity to participate in the discussion and decision-making processes at the level of the municipality, and be aware of how the areas of action are defined and selected.

Once it has been decided to include a community as a potential participant in the programme, the municipal government holds a micro-planning workshop, with the participation of at least 20 members of the community, the majority women. In general, the existing community organisation makes the co-ordination and the arrangements for the workshop (finding a location, sending invitations, and arranging refreshments). During the micro-planning exercise, the participants (the 20 community members, the technicians from the municipal government and from other government institutions) visit the community in small groups to talk with the neighbours and to acquire *in-situ* a series of impressions about the concerns of the community. Special emphasis is placed on interviews with women and children. Then a group exercise is conducted to identify and prioritise the main problems of the community; priorities are assigned, the solutions proposed are discussed and negotiated, and the potential project to be financed by PRODEL is identified. Cleanup actions are also planned, in particular, trash collection. At the end of the workshop, the representatives of the municipal government and the community organisation sign an agreement with the principal results of the micro-planning exercise.¹²

¹¹ Those communities with the highest levels of poverty, lowest levels of basic services and social equipment and with good community organisation are usually selected.

¹² PRODEL has adapted the micro-planning method developed by Goethert, Hamdi et al. (1992) "La Microplanificación. Un proceso de programación y desarrollo con base en la Comunidad" [Micro-planning. A community-based planning and development process], IDE of the World Bank, FICONG, Washington, to the Nicaraguan context.

In Estelí, Ococtol and Somoto, the methodology of micro-planning to identify social investment projects has been extended to the rest of the projects being carried out by the municipal government with other sources of financing, including its own resources. The majority of the social investment projects in these cities are currently being identified in this manner and presented for ratification in the annual public meetings of the City Council, as stipulated by the Municipal Law. This practice is also becoming more common in the rest of municipalities where PRODEL operates and adopted by other funding institutions also. In the aftermath of Hurricane Mitch, in December 1998, the micro-planning methodology was used in the majority of the eight cities as a means to identify the type of reconstruction projects that local governments and communities had to face.

A General Assembly of the community is then organised. In this meeting a report on the results of the workshop is presented. Technical personnel from the local government also present advances in the design of the project. They explain the procedure to execute the projects and define the contributions of both the municipal government and the community in the execution of the project. Decisions are made regarding the contributions of the community to the various activities described in the budget. This information must be annexed to the project profile presented by the municipality to PRODEL for approval.

In 1996, the micro-planning workshops in Somoto identified and prioritised annual floods as the problem, which had the greatest impact on the peripheral and central communities of the city. This exercise forced the local authorities to use PRODEL's resources, municipal funds, and funds from other sources, to plan a series of projects located not only in the neighbourhoods in which the programme was active, but also at other locations in the city which were necessary to solve the problem. People living in the communities affected worked on the construction of a dike and a long storm water system located several kilometres outside the area in which the programme was active, but which were necessary to prevent the sewers from overflowing. The experience demonstrated to the municipal government the potentiality of community investments if they are given the opportunity to participate and negotiate solutions together with the local government. During Hurricane Mitch in November 1998, several of these infrastructure works were critical assets that prevented major landslides and flooding in the city.

In this general assembly, a formal structure consisting of seven persons from the community is elected (the Community Project Administration Committee - CPAC). The specific functions of this committee are to review the budget and design prepared by the technicians from the municipal government, in particular the general characteristics regarding the location and dimensions of the project. The committee also co-ordinates the management of the project, administers the stocks of materials, equipment and labour supplied both by the municipal government and by the community. The committee reports and explains to the community the progress of the project and the use of the funds. Finally they participate in the financial and physical audit of the project which is conducted by the municipal government and PRODEL. Likewise, this Committee is required to participate in the annual evaluations of the component performed by the Municipal Commission.

The CPAC organises the rest of the community for the physical execution of the project. Depending on the type and complexity of the project, the municipal government makes an initial proposal for the organisation, which can be done by block or by house. The social services office of the municipal government trains the Committee in the management and administration of the building materials warehouse and the methods used to control the human resources employed in the project. The CPAC and the municipal technicians select the area where the materials will be stored. When the contribution is monetary, they initiate the recollection among the community.

Once the project has been approved, PRODEL signs a specific contract with the municipal government and disburses the funds to a special account to begin the execution of the project. This contract clearly stipulates the contributions by the parties for each of the construction activities in the

process. PRODEL pays up to 60% of the amount of the project. The rest of the money comes from local contributions (in the form of investments in materials, skilled and unskilled labour, machinery and tools, administration and cash) from the community and from the municipal government, and may generally not be less than 40% of the total cost of the project. The programme will not finance the execution of the project unless the community is prepared to make its own contribution.

When the project starts, the CPAC controls the warehouse, the materials, tools, and equipment, and sweat equity labour contribution by the community. The community participates directly in the physical execution of the project in the form of skilled and unskilled labour, depending on the type of project, either as volunteer labour or as contract labour hired by the community.

The general procedure by which the community participates in the execution of the project depends on whether the infrastructure being built is for public or private use. In the case of the installation of in-site infrastructure, each family participates individually. In improvement of schools, skilled labour is hired. In the construction of sewage systems, each family excavates the section in front of its house. When gutters are built, teams are formed which work weekly. Combined teams do projects, which involve the construction of a sewage system, the excavations and manholes.

The CPAC and other members of the community participate with technical staff from the municipal government and employees of PRODEL in auditing the project. They prepare an inventory of the existing materials and tools at the warehouse (entries and withdrawals), comparing them with the purchase vouchers from the municipal government. They also keep track of the total amount of labour provided. The purpose of this activity is to increase social control over the utilisation of the funds and to establish a routine and more direct procedure for the municipal government to report directly to their constituency.

Members of the CPAC and other community members participate in the evaluation of the projects carried out by the Municipal Commission. These evaluations analyse the experience, the level of organisation and community participation achieved, as well as the quality of the completed project. This process can also be used to identify other requirements related to the project, to resell any surplus materials, and to transfer any surplus funds to the municipal accounts for use in other projects. In some of the cities, the organisational experience acquired facilitated the subsequent management and administration of other projects by the communities. The municipal governments are learning to apply the participatory methodology to other projects, which are not financed by PRODEL. Their positive effects are also reflected in the processes of tax collection in the city.

The need to allocate funds as counterpart to PRODEL's resources had a positive impact on the system of tax collections in Ocotlán. In 1996, the municipal government was able to increase its tax collections by 30%. This achievement was the result of the interest of the municipal authorities to manage directly the programme resources. However, it also reflects the fact that the population was prepared to pay taxes when they see results. According to one of the leaders of the Barrio Hermanos Zamora, where the programme upgraded streets and constructed a contention wall, "we realised that our taxes were being invested in works in which we ourselves had participated in the identification, definition, execution, and auditing of the projects". These situation has continued even after Hurricane Mitch, in spite that family income diminished as a result of the economic crisis.

5.2 Evaluation of the participatory process in the infrastructure component

The quantitative results (see Table No. 4) show that with a limited amount of outside financial resources, benefits could be generated for a large number of people in marginal neighbourhoods by means of the infrastructure component. In total, 38,000 families in the marginal communities benefited and contributed more than 155,000 days of labour. The per capita investment over five years was US\$22.00, of which 57% came from outside resources and 43% from local resources. In terms of effectiveness, the objectives defined in the project documents for both phases have been achieved, in particular with

regard to work with the poorest groups, the mobilisation of local resources and the establishment of a participatory methodology which has already been replicated in eight cities.

Key to this process has been the ability of the Programme to mobilise matching municipal and community funds. The purpose of introducing participatory financial and administrative procedures was to improve the efficiency and transparency in the management of funds by municipal governments, and to improve their relations with communities. The community participates throughout the project cycle, from the definition of the areas of action and the identification of problems and projects to the management and administration of funds. This has created a significant capacity to target resources and to identify and plan infrastructure and urban projects.

The following section presents an evaluation of the community participation in the different phases of the project cycle.

Municipal Commissions: the participation of community representatives has been more formal and relatively passive, and other members of the Commission have in general made the decisions. Nevertheless, the presence of representatives has legitimised the actions of the municipal government vis-à-vis the communities. It has also given the community representatives the opportunity to become familiar and contribute to the process by which the municipality establishes annual operating budgets and general development work out plans. It has also given the community leaders an opportunity to become acquainted with the most important variables involved in the decision-making process at the level of the central and local institutions for the provision of infrastructure and urban services.

Micro-planning workshops: Participation by community leaders and other members of the community is more active and intense. The mechanism allows participants to gain a greater understanding of their problems, the solutions to these problems and the type of infrastructure and community projects, which can be carried out. Communities understand the criteria to assess projects such as urgency, the cost of the solution, the sequence of work required, the time required for the design and execution of the construction work, the technical complexity and the contributions from each party involved. On more than one occasion, there have been serious discrepancies between the urgency assigned to a problem by the municipal government and by the community. The micro-planning methodology makes it possible to create consensus, so that the technicians can gain a thorough understanding of the real problems facing the community, and so that the community understands the financial and technical complexities of a project.

As part of its urban development plan, Estelí's local government wanted to build a children playground in Barrio "La Union". The micro-planning exercise revealed that the community had different priorities. Many inhabitants of the barrio, disabled as a consequence of the civil war, urgently demanded the construction, upgrading and repair of the streets which would allow them to move in their wheelchairs without fear of getting stuck in the mud during winter. The repair of the streets in the neighbourhood and the construction of a pedestrian sidewalk of more than one kilometre long that connects the centre of the city with the community were the projects that were carried out. With the community participation not only of Barrio "La Union", but of other communities the access road was improved, and the sidewalk is currently being used by hundreds of families who live in the adjacent neighbourhoods.

The micro-planning workshop and its subsequent explanation to the General Assembly Meeting provide an opportunity for the community to earmark their contributions for the design phase, the execution and the subsequent preventive maintenance of the project. On some occasions, these contributions exceed the minimum required by the Programme.

In Chinandega, the savings achieved by community supervision and labour amounted to more than 10% of the total cost of the work on each project. Day-to-day supervision by CPAC's members increased the productivity of the skilled and unskilled labour, and the project was completed in less time than scheduled. In the latrine project in the "Carlos Fonseca" neighbourhood, community participation accounted for more than 18% of the value of the work. Community contributions

amounted to 19% of the project for the electrification of the “Carlos Nuñez” neighbourhood, and 24% in the construction of the gutters and sewers in the “Pedro Joaquín Chamorro” neighbourhood.

Nevertheless, the negotiation of the community contributions also depends on the attitude of the municipal government’s project manager. If the signals he or she sends to define the involvement of the community counterparts are unclear, people tend to expect greater contributions from the Programme and from the local government, but not from the community. The problem in Nicaragua is exacerbated because in recent years, a number of social infrastructure projects have been entirely subsidised by foreign aid and did not require any active participation from beneficiaries. In some local governments, and also within the central government, this has generated the notion of a paternalistic government and the citizens as clients, resulting in a passive, “wait and see” attitude in many communities.

One of the barrio leaders of a community in Chinandega was asked to explain the reasons behind the rejection of the community to participate in the PRODEL projects. He stated, “Why should we get into something so complicated when we know that there are other programmes which have a great deal of money and we can get them without requiring anything in exchange and effort!”

Experience shows that family income is not an impediment to obtaining substantial financial contributions from very poor communities when projects are executed. When confronted with the blunt alternatives resulting from the scarcity of tax revenues and budget cuts, the communities have demonstrated an ability to overcome habits and traditions of paternalism, without necessarily threatening their low family incomes.

Low income levels of the residents of the barrio “Mauricio Cajina” in Somoto, one of the poorest areas of the city (60% of its economically active population is unemployed), did not prevent them from participating by providing labour and making financial contributions for the development of their project. In four months, US\$5,000 was collected through the organisation of raffles, community dinners, parties, dances and other activities all over the city. The money was used as their contribution for the construction of 285 meters of a sewer line, one of the key projects to prevent floods in the community.

In the design and preparation for the execution of the project participation is intense at the level of the project committee, but not necessarily so in the rest of the community. The advantage of the process is that the community and leaders gain an increased understanding of the technical and financial complexities of the design and preparation for the execution of the infrastructure projects. An awareness of the local factors which affect the population assists the technical staff in overcoming the obstacles which are generally encountered in the introduction of public services and infrastructure in existing squatter areas, and which can slow down the development of the project. Participation in the design phase is greater in the case of schools, parks and recreational facilities. For projects which involve the introduction or expansion of roads, electrification, sewage and water, the participation is less, and the municipal technical staff must work harder to explain the aspects of the design and operation of the service. Participation in these phases means that local authorities must develop negotiating capacities to arrive to practical solutions to concrete problems that cannot be solved only by the municipal government. This requires a willingness to empower local communities to assume certain functions, which requires giving the communities more space to participate in the decision-making process, and a transfer of more control in the administration of the resources provided by the municipal government.

In addition to optimising resources, participation is an important vehicle of social communication to improve neighbourhood relations. That was the case of an electrification project financed by PRODEL in three communities in Ocotal. In the early 1990s, these communities were formed with ex- Sandinista soldiers, former soldiers of the Nicaraguan Resistance (‘Contras’) and refugee families who returned from neighbouring countries. The level of mistrust between them these groups was high.

As part of the project the groups formed a single Community Project Committee which managed and completed the project with a high level of participation from their respective communities.

Project execution: This is the most delicate phase, and requires considerable training and empowerment from the municipal government. Tensions frequently generated are related to the fact that the technical and financial officers from the municipal government believe that the empowerment process is an activity which is exclusively for a social worker, and they do not become involved in the process of transferring know-how to the community. On more than one occasion, this phase has also rekindled acute conflicts within the neighbourhoods that affect the ability to prioritise the problems, define possible solutions and to form the project committee. On average, 3% of the families in each neighbourhood do not want to contribute and can generate obstacles to the execution of the project. Nevertheless, this process can also produce situations of positive competition within the neighbouring communities.

In the Barrio “Primero de Mayo” in the city of León, the identification of a paving project generated a “competition” between two sections of the same neighbourhood to determine in which of the sections the project would be carried out. The section that raised more matching funds and had a better community organisation for the execution was awarded the project. The result was a community contribution of close to 15% of the amount of the project, greater than the 10% generally required by the Programme. The municipal government also conditioned the execution of the project to the connection of all the families to the recently constructed sewage system. This had a favourable impact on the maintenance of the project once it was completed. The competition to gain access to projects by means of matching funds has spread to other communities in the city.

If the approval of the project is not rapidly done, and if the municipal government is not prepared for the physical execution of the project, the enthusiasm of the CPAC can decline. In this sense, the quantity of information, which is available at the level of the community on delays, is important. This period of time can be used to define with greater precision the contributions to be made by the community. Ultimately, however, the community organisation may turn out to be problematic if the time required by PRODEL, the municipal government and the community are not compatible. Projects, which take longer to complete, can also reduce the level of participation by the families. Such projects require effective channels of promotion, communication, and understanding of the complexity of administering the organisation and community participation in established squatter areas.

Participation in the execution and administration of the project makes possible improved control of the municipal resources. By combining the information managed by the municipal government with the information available in the community, it becomes possible to determine how and where the resources are being used, which gives greater transparency to the management of the project by the local government vis-à-vis the community. Concerns by local governments that they may not be able to meet the objectives set in its annual construction plans can lead them to limit the participation of the community and training for the execution. Consequently, this phase requires clear methods that minimise the conflicts between the traditional ways in which the municipal government take decisions and administers resources. The auditing procedure, in the presence of the community members, has also increased the level of trust between the community and the local government.

“We previously had an erroneous idea of what community participation was. We knew that it was a key element with a great deal of economic and human potential for municipal development, but in fact we were not providing any space in which it could take place. We are now convinced that it is essential to have community participation in all possible processes and all stages of the projects. This participation has facilitated the creation of co-ordinating committees and the identification of opportunities between the communities and the local government, which has been beneficial to both sides. Involving the communities has given the ‘barrios’ greater confidence in the management and transparency of the funds by the Municipal Government. There is now improved communication and understanding between the members of the communities and the municipal government, and a higher level of satisfaction on the part of the population with the projects which have been carried out.”

Manuel Maldonado, Mayor of Somoto

“Previously, participation by the communities was limited to the public sessions of the City Council. These are generally merely informative and requirements are planned in a very general context. PRODEL’s methodology has made possible a more active participation by the communities, their leaders and the families in the decision-making process, and has created a forum for negotiation between the municipal government and the community for the prioritisation of problems. The communities have also participated in solving their problems by a more direct involvement and by the contribution of resources. This process has changed attitudes on both sides. Previously, the community thought that the solution of problems was exclusively the obligation of the local government. For its part, the municipal government thought that the community only knew how to make demands, and did not have the capacity to co-administer projects and to contribute resources for project execution.”

Marlon Oliva, Former Coordinator of the Ocotal Technical Unit

The administration of a project with community participation also results in decreased loss and waste in the use of construction materials. This is one of the areas where the building costs of projects carried out directly by municipal governments probably increase without community participation or under the terms of contracts with construction companies hired through public or private tender offers.

Although costs of projects carried out with community participation are not necessarily lower, the costs involved are more realistic, and some of the resources saved can be allocated to the execution of physical extensions of the project. The cost of project supervision, if shared, is minimal. The costs of administration and supervision of projects carried out using PRODEL’s methodology fluctuate between 3% and 5% of the total cost of the project. Depending on the type of project, at least one-fourth of these costs is contributed by the community and the remainder by the municipal government. The low cost of project supervision is due to the fact that one or two engineers from the municipal government can supervise 5 projects at the same time, which can result in greater efficiency of each project.

A comparative analysis between paving projects carried out with and without community participation in the City of León shows that the cost of the project carried out by a private company was 23% higher than the cost of the project carried out using the PRODEL methodology (see Box No. 2).

Box No. 2
Comparative analysis of two paving projects carried out with and without community participation in the city of León in 1997

Characteristics	Without community participation	With community participation
Name of the Community	Pedro José Avendaño	Primero de Mayo
Origin of the funds	External, via the Nicaraguan social Investment Fund (FISE)	External, via PRODEL, supplemented with funds from the municipal government and community contributions
Project carried out by	Private construction company selected on the basis of a competitive tender offer	Municipal government of León and the community
Cost of the project charged to the external resource	100% of the total (for labour, materials, equipment and administration)	65% of the amount (for construction materials and specialised labour)
Contribution from the Local Government	Activities of design and supervision (not counted in the cost of the project)	23% of the total amount of the project in equipment, administration, design, supervision and skilled labour
Contribution from the Community	None (only FISE-approved companies eligible to carry out the project)	12% of the cost of the project (labour, administration and supervision)
Project priority determined by	Local government	Local government and the community
Users' perception of the benefits generated by the project	Economic, for the private contractor	Social, for the community
Responsibility for project maintenance	Local government	Local government and the community
Management of resources	FISE transfers resources directly to the contractor	PRODEL transfers resources to the municipal government
Verification of correct use of the funds	FISE, municipal government and external auditor	PRODEL, outside auditor and Community
Unit price per square meter of construction	US\$16.00	US\$13.00
Volume and amount of the project	4,700 square meters (US\$75,200, not counting the design and supervision by the municipal government)	2,747 square meters (US\$35,711, including costs of design and supervision by the municipal government)
Time between presentation, design, approval, contracting, and completion of the construction projects	Approximately four years	One year
Cost of administration and supervision	15% of the total amount	5% of the total amount
Quality of the project	Good	Good
Users familiarity with the project	Poor	Good
Better conditions in the neighbourhood	Yes	Yes
Principal problem identified by the users	Delay in starting the project and interference with access to the neighbourhood during the construction phase	The resources were not sufficient to pave all the streets in the neighbourhood.

Source: Information provided by the Executive Technical Unit of the City of León and interviews with residents of the "Pedro J. Avendaño" and "Primero de Mayo" neighbourhoods.

The reduction of the costs per square meter in the paving project which involved community participation compared with the project which did not include community participation occurs in those activities in which the contribution in labour and administration by the community can be more intensive. Such activities include, for example, earth moving (hauling of selected material, cutting, filling, landscaping and compacting, and removal of the excess dirt from the excavation); the laying the cobble stones, compacting pavement, cleaning, and the administration and supervision of the project.

The participation in the execution of projects also requires clear signals, which help to establish the links between the community services introduced and the value of the individual home. This helps the families to appreciate the sense of savings and investment made by their contribution to the community project overall.

“A community leader in Chinandega, who was making his contribution to the community construction of deep trenches for the installation of pipelines that would connect to the city’s sewer system was asked how the value of his house would change as a result of the project. He did not hesitate to respond with the calculation he had previously done in his head: the value of his home would more than double as an immediate result of this improvement to his own house and the barrio.”

Interview conducted in November 1996, with leaders of PRODEL’s projects in the city of Chinandega. Fernando Rojas (1997) “Maintenance Fund”, Managua, FISE-IADB.

The type, amount, urgency, and complexity of the project are obviously factors that the municipal governments must take into consideration to determine the participation procedures. Many times project managers are reluctant to promote participation, because they consider it a drag on the correct and timely completion of the projects. The need for compliance with the UTE requirements and continuous supervision and control of the implementation of the program have made the employees of the departments of the municipal governments realise the variables involved in participatory projects.

The method of project approval and contracting generally employed by local governments or by state entities for works that require private tender offers can lead to significant delays in their execution. The joint execution of the project with the community, involves the families in the negotiations with the central and local government entities, which helps to speed up the approval process as well as the disbursement of funds for project execution. Sometimes, the absence of reference costs means that local governments and community members will not have any criteria to determine whether the costs being described are realistic. At least in Nicaragua, the unit costs are high, even if the costs of the supervision remain hidden. Moreover, those who award the contract generally invite the bidder, which means that the process can be manipulated. Finally, the traditional methods of issuing calls for bids and awarding contracts entail additional costs, which can reduce the amount of money available for investment in the physical project. This does not mean that bidding and tender processes should be eliminated but shows that transparency in the bidding process can be greater if communities are also involved.

Maintenance and operation of the project When the actual construction of the project has been completed, it is expected that it will leave behind a community structure with the ability to manage and negotiate with the municipal government. PRODEL, the municipal government and the communities evaluate the community contribution, the organisation which has been established during the execution, the quality of the work, and any unresolved needs which are indicated in the micro-planning workshop and address them accordingly. In terms of post project preventive maintenance PRODEL’s experience is relatively recent. Yet, it has produced important lessons used as an example for the establishment of a national preventive maintenance fund by the Nicaraguan Social Investment Fund (FISE) for the maintenance of the primary health and educational system. As in the case of PRODEL, the goal is to create a fund provided with resources, which promotes local and community contributions.

The communities participate in the payment of the water, sewage, and electric power services provided, along with additional contributions in the form of labour for the preventive maintenance of the schools, roads, health facilities, recreational facilities, and parks. The link with the Sistemas Integrales de Salud (SILAIS - Integrated Health Systems) has made possible the development of landfills for garbage collection and the cleaning of sewers, which has resulted in improved maintenance of the projects. In Phase II of PRODEL, the municipal governments and communities will contribute *ex-ante* resources for the creation of a preventive maintenance fund before the completion of a project. One of the critical problems which has been identified in terms of the operation and maintenance of the services relates to the connection of households to the established systems, in particular when there is no financing for this process. PRODEL has established information campaigns and incentives for the municipal governments so that, together with the community leaders, they can promote the process of connection by means of a home improvement loan, or with the families' own resources.

A comparative analysis of two children care centres being operated by members of two communities in the City of Ocotal showed the following. The physical condition of the installations of the site located in barrio "Santa Ana", in which the community participated in the identification of the project and its construction (through labour and financial resources) was better than in the "Nora Astorga" neighbourhood. In the latter, there was no community involvement in the phases of identification and execution of the project, nor was there any requirement for contributions from the community for its maintenance. In the former, there is a sense of ownership of the project, the community has made a census of the children in the neighbourhood, and has been able to negotiate agreements with the municipal government and other government institutions to provide food for the children. In the latter, there is very little assistance provided to children, there is no information about the number of children in the barrio, nor any agreements with private and government institutions which financed and supported the construction of the care centre at the time.

Women participation has been successful because measures are taken to promote their involvement in all phases of the infrastructure project cycle, and to encourage their participation in the other two loan components. The Programme has dealt with the gender issue in a pragmatic manner, giving preference to projects which addressed basic needs of women, and also involved women in the process of evaluating their needs, making decisions, as well as planning and administration of projects. It also attempted to provide incentives for men to participate more in the construction of the projects, while the women had greater roles in management and administration. The methodology increased the role of women not only as physical builders of projects (some 25% of the unskilled labour are women, although no progress has been made in the incorporation of skilled female workers), but also in administrative and supervisory capacities. In the micro-planning workshops, the situation is quite different— more than half of those attending the meetings are women. In management and supervision, 50% are women, and team leaders, the figure is 75%.

"The role played by women in other programmes has changed since PRODEL gave them equality in participation in the various stages of the project, something which had never been done before. Previously, woman's role was to prepare coffee, cold drinks and food. PRODEL represented a major change, because women were present in every stage, from the identification of projects to their completion. The tasks performed by the women in our city included warehouse managers, finance managers, and even carrying building material in the various parts of the project. It has been shown that a woman can do anything a man can, which has allowed women to assume a new role."

Manuel Maldonado, Mayor of Somoto, and Osmín Torres, Coordinator of the Technical Unit of the Somoto Municipal Government

5.3 Housing Improvement and micro-enterprise loans

In the neighbourhoods in which the programme is active, the municipal government, PRODEL's Local Co-ordinator and the loan officers from the Banco de Crédito Popular (BCP) prepare a joint strategy for the promotion of the housing improvement and micro-enterprise loans. In the case of micro-enterprise loans, the loan officers from the Bank visit the houses where the businesses and workshops, which are generally family-owned, are located. The analysis is based strictly on the financial viability of the business in accordance with a cash flow statement, which is discussed between the loan officer from the Bank and the owner of the micro-enterprise.¹³ In some cases the programme has promoted the creation of new micro-enterprises, especially for women.

In the case of housing loans, the end-users participate in a series of informal meetings (at community centres or schools). Representatives of the Bank, the municipal government, and PRODEL explain the terms of the loans¹⁴, the technical assistance which will be provided by the municipal government and the commitments which must be assumed by the families (in terms of the use of the loan and repayment). Interested families complete a preliminary application, which contains basic information on the location and condition of the home, the employment status of the potential borrower, and the socio-economic characteristics of the other members of the family.

The loan officers from the bank visit the family's home and conduct a preliminary credit analysis to determine the need for the improvement, the potential sources of family income, the family's borrowing capacity and affordability and whether a loan can be made. The purpose of this visit is to determine the maximum amount affordable by the families. The loan officer takes into consideration the monthly family income and expenses. It also analyses the situation of land tenure, the type of collateral that may be offered by the borrower (mortgage, pawns, lien, and even title to the construction materials) and the source of income. The sex of the borrower, the type of improvement to be made, and the track record credit history, as well as personal references of the borrower which may be provided by the neighbours are also taken into consideration.

The loan officer from the Bank informs the Technical Housing Assistance Office (ATV¹⁵) of the municipality the potential maximum amount, which may be approved for each borrower. In some cases, the loan officer from the Bank and the official from the municipal government visit the house together. The ATV employee inspects the house, identifying the location of the various spaces and utilities on the property, the type of materials used any potential structural problems and the need for expansion, repair and/or improvement of the house.

During this visit, the technical consultant identifies problems and establishes priorities for solutions with the members of the family. In general, the household head and his or her spouse or living companion are present during the inspection, along with their children. The idea is to take into consideration the problems, needs, and priorities of all the people living in the house, but in particular those of the women and children. The purpose of the technical assistance is to guide and provide criteria for the family so that they can give priority to solving problems of overcrowding and environmental risks. Emphasis is given to kitchen stoves close to the children's bedrooms, unventilated rooms, absence of drinking water systems, sewage systems, improper disposal of grey waters, and garbage collection). Ultimately,

¹³ Loans fluctuate between US\$300 and US\$1,500 and are recovered over a maximum of six-month period. Interests are high (upt to 36% per annum) plus maintenance of value (i.e. the indexing of the local currency compared to the US Dollar) (about 12% per annum). The average loan is about US\$400.

¹⁴ Loans fluctuate between US\$200 and US\$1,200.00, repayable in four years at interest rates of 12% per annum plus an adjustment for inflation (i.e. the indexing of the local currency compared to the U.S. dollar), which gives an effective annual interest rate of 24% on the outstanding balance. The average loan is for US\$650 and the monthly payments vary between US\$20 and US\$35, depending on the financial capabilities of the families in question.

¹⁵ The technical consultant is generally a young professional in the field of architecture or construction who is a direct employee of the municipal government. 1% of the amount of the loan is added to the wages and allowances this employee receives from the municipal government.

however, it is the family which decides its priorities and requirements, but in an organised manner, and the decision is subject to a weighting system applied by the technical consultant on the basis of criteria such as urgency, cost, sequence, and time required to do the improvement.

Just as in the micro-planning exercise for the infrastructure component, the purpose of this housing improvement exercise is to conduct a comparative analysis of the different possible prioritised solutions based on criteria of urgency, cost of labour, time of execution, and sequence of execution. The result is the identification of the type of improvement that has the highest priority. The technical assistance orients the family towards the establishment of a plan of action for a gradual improvement of the house. The technician takes into consideration the costs that can be covered by the loan and the resources the family already has (accumulated construction materials, volunteer labour, project supervision tasks, and the money which can be used to pay for skilled labour and the transport of the materials).

Once the priorities are established and the family's available resources have been analysed, the technical consultant prepares a budget, a schedule of activities and a brief report describing the current situation and the type of improvements which can be made. The budget also describes what activities the loan and the family contributions can cover. The plan also defines the possible improvements to be made in the future on the basis of the current loan. The borrower, who thereby agrees to carry out the improvement defined with the technical consultant from the municipal government, signs the budget. An additional purpose of the budget is to make it possible for the borrower to maintain some economic control over the improvement construction process, assuming that the costs in the budget are close to the real costs.¹⁶

On the basis of the prepared budget, the beneficiary proceeds to formalise the loan at the Bank, providing the collateral and submitting the forms required by the Bank. The Bank generally issues a single check which the borrower uses to buy the materials and, in some cases, to hire labour. The invoices for the materials remain in the borrower's file at the Bank. Five to ten days after the loan has been made, the Bank's loan officers visit the home to verify whether the family has bought the materials and begun the construction process.

The Technical Assistance Department makes at least one more visit to supervise the construction process and to provide guidance to the borrower's family and/or to the masons who are working on the project. In general, projects do not take more than 30 days. When the head of the household is a woman, the technician tries to maintain closer monitoring to assist her in the process of supervising and administering hired labour. The families participate in the construction process in different ways, by estimating the required quantities and buying the construction materials, hauling the materials to the site, mixing and laying bricks, and supervising the bricklayers if they themselves do not participate in the process.

One month after receiving the check, the borrower begins to repay the loan over a period of up to four years. The Bank services the loan and monitors the placements and collections of the rotating fund. If the loan is not repaid and the normal administrative collection procedures have failed, legal action is taken to exercise the guarantee. Although the loans are individual, on some occasions the Bank has had recourse to the community project committees to ask their assistance in collecting payments from defaulting borrowers.

5.4 Evaluation of participation in the housing improvement loan component¹⁷

The system of housing improvement loans is based on the premise that the great majority of poor families build their houses in an informal way, without any support or assistance from central and local governments or the private sector. They usually achieve this through a long and complicated process of

¹⁶ This is one of the issues the technicians sometimes fail to take into consideration, and which makes it impossible to determine the actual cost of the improvement and the actual weight of the loan in the total cost of the improvement project.

¹⁷ This section is based on Morales, Ninette and Edgard Herrera, "Evaluación: prestación de servicios de asistencia técnica en mejoramiento habitacional en cinco Municipios" [Evaluation of technical assistance services in home improvement projects in five cities], Programa PRODEL, Managua, December 1997.

hard and difficult savings process and mobilisation of family and inter-family contributions. The programme tries to create the conditions so that families living in marginal squatter areas, generally not regarded as part of the loan market, can have access to resources from the institutionalised financial system. It also tries to give technical assistance in a fast and easy manner that will allow them to accelerate their housing consolidation process. The programme is based on the fact that a good part of the population in the cities where the programme operates owns a plot of land or is in the process of legalising land tenure. Assistance therefore contributes to the process of self-help construction, with a defined and guaranteed participation by the users in the process of the administration and construction of the home. The impact of the participation of the user families in the housing component can be appreciated on the basis of the following parameters:

The programme represents a massive approach to the housing problem in the municipalities where it operates. It has created healthier environments, a reduction of overcrowding and improvements in the standards and systems of construction in at least 4,000 houses that represent approximately 4.5% of the total housing stock in the cities, and 14.5% of the households classified as poor.

A sample of 69 houses studied in the five cities of PRODEL's First Phase shows that the creation and improvement of healthy environments and attending to the problems of overcrowding in the houses was the users' first priority. In second place, attention was directed toward the structural safety of the houses and the security of the house perimeter to protect against external theft and crime. Finally, attention was paid to improving the levels of comfort in the building.

This process increased the administrative capabilities of the local governments and communities in general, but in particular the capacity of women with regard to problems relating to their households.

In 10 cases selected at random for study in the cities of Somoto Estelí and Chinandega, when the question was asked who in the family performed the administrative tasks involved in the construction process, the following results were obtained: in five cases, the wife did the administrative tasks directly. In one case, the tasks of buying the materials, hiring the labour, supplying the materials and supervising the work were shared with the husband. In the other four cases, the women participated only in the procurement of the construction materials.

The assisted self-help construction and access to credit provided a major impetus to the local economies, mobilising more than US\$2.5 million in purchases of construction materials, many of them produced locally in small micro-enterprises (cement and clay blocks, adobe, cement tiles, and bricks) in the five cities.

Three years ago, Carlos Mungia's micro-enterprise, which produces cement blocks and is located in one of the barrios in the city of León, had two employees (Mr. Mungia and one assistant). The increasing demand for building materials from the recipients of the housing improvement loans in the neighbouring communities has been such that he currently has six full-time and seven part-time employees. His success is also partly due to the micro-enterprise loans, which Mr. Mungia has received from the micro-enterprise component of PRODEL via the Bank.

The housing improvement loan component has also generated indirect employment for some 270 persons in the construction sector. This means about 40 jobs per city in the municipalities of the First Phase. Family contributions, which add to 15% of the value of labour and transport, may represent up to 36% of the actual cost of each housing improvement.¹⁸

The technical assistance constitutes a new service, which gives the local governments the opportunity to acquire major lessons for the definition of housing improvement and urban development policies in the

¹⁸ Calculation is based on average labour of three persons: one skilled worker and two unskilled assistants, for an average period of one month for each house that is improved).

country. The programme has generated a base knowledge of ideas, standards, and methodologies for Technical Assistance to user families. Obviously, this process required a major effort by PRODEL to train technicians from local governments and the loan officers and other employees of the Bank. The idea is that they can understand the complexities of the loan operations and manage the design, planning and definition of solutions in a process, which involves the participation of the target population.

Some of the principal weaknesses detected in the efficiency of the programme relate to the manner in which the financial and technical-construction aspects must be defined simultaneously with thousands of user families. Many times, the informal introductory meetings are insufficient to explain the type of participatory work between the technician and the end-user, or for the family to understand the complexities of the financial terms of the loan. Sometimes the incorrect preparation of project plans, budgets and schedules can affect the progressive development of the home. In all the cities, the site visits for supervision have also been insufficient, late, or even caused errors in the construction itself. Nor were sufficient efforts always made to train the available labour. On some occasions, the beneficiary families do not see the link between the technical assistance and the opportunity to obtain a better quality of design and construction of the house at reasonable costs, and to repay the loan in accordance with their affordability to pay.

These are not only problems of the installed capacities of the municipal technicians and the loan promoters of the Bank. They also related to the problems of administering a portfolio of thousands of small loans and coming up with technical solutions to a large number of small and widely-varied in-site improvements which are scattered over a wide geographic area, and carried out individually by the families, or by construction workers. The possibilities of control therefore are more complex.

Nevertheless, like the infrastructure component, the housing improvement component shows that the urban housing problems that the urban poor face are not fundamentally and necessarily only lack of financial resources. Making institutionalised financing systems and technical assistance accessible to poor families stimulates the internal savings of the end-users, mobilises significant family resources and improves the overall housing situation. The repayment levels are acceptable, in spite of the fact that the collateral provided is not of the conventional type. The financial sustainability of the rotating funds is a goal, which is within easy reach. In this sense, the multiplier impact of the borrowers on the economic and social level is undeniable.

A through analysis of a sample of 15% of PRODEL's portfolio found out that there is not a clear relation between the rate of default and the type of guarantees the families have given as a collateral for their micro-enterprise or housing improvement loans. More than the collateral the families can put, the pre-loan analysis and approval, the type of information given, the follow up that the Bank does, and the administrative procedures for cost recovery are key elements for an efficient administration of a portfolio like the one of PRODEL. See Consultoría, Gestión y Cobranza (1998) "Análisis de Cartera de Programa: municipios de Chinandega, León, Estelí, Ocotal y Somoto", Managua INIFOM-PRODEL December 1998.

6. Lessons Learned

The paper has tried to answer some of the issues related to the link between poverty reduction, participation and sustainability. It has shown that there are methods and processes that serve poor people and may help to lift them out of poverty. It has also illustrated that it is possible to ensure that poor groups receive support from external co-operation and get the benefits from these programmes. It has also indicated how 'poor groups' are often defined and how these definitions can be used to set up differentiated strategies to address their problems. The paper has illustrated some key preconditions that are needed for successful poverty reduction programmes. The following section tries to summarize the main lessons learnt about keeping a poverty focus and how the poor are involved in the solution of their problems.

The experience gained by PRODEL over the past five years in eight Nicaraguan municipalities has yielded important lessons regarding the potentialities and limitations of community participation and institutional and financial sustainability in social programmes aimed at providing infrastructure, social equipment, housing improvement and income generation, especially for the urban poor.

The results of the programme suggest that community participation has been a determining factor in:

- * Improving the quality of life of the poor: More than 38,000 poor families whose basic needs are not being met, and who represent 47% of the total population of the cities of León, Chinandega, Estelí, Somoto, Ocotal, Matagalpa, Jinotega and Chichigalpa improved the conditions in which they live. They improved their access to basic services and equipment by participating in the definition, execution, and maintenance of 260 infrastructure and community works projects, the improvement, expansion, and repair of some 4,168 houses, and the financing of some 2,400 micro-enterprises;
- * Targeting and focusing social investments to the poor: The involvement of community leaders in the Municipal Commissions has made it possible for local governments to more accurately identify the geographical areas of the city where there are higher levels of poverty as well as requirements for infrastructure and urban services. Participatory micro-planning exercises which were conducted in 150 different communities have made it easier to identify the type, amount and scope of projects required by each 'barrio' in particular. This dual mechanism of participation in the decision-making processes has contributed to increase the efficiency and accuracy of the diagnostic measures and the proposals prepared by the municipal governments for the design and preparation of the annual social investment plans and the longer-term municipal development plans;
- * Making more efficient use of public resources: To the extent that local governments have negotiated the projects with the communities through micro-planning workshops, public investments (including those which the central government provides via the municipal government as well as the municipal government's own tax revenues) are sounder. They reflect the priorities and preferences of the users, and the actual capacities of the municipal government in providing and financing the services. Experience shows that these preferences are not always expressed in demands for the introduction of new services, but also for the improvement, expansion, repair, and maintenance of existing services and systems. These options have a positive impact on the costs of the solutions and optimise the utilisation of the municipal government's scarce and insufficient resources for this type of works.
- * Improving accountability and transparency The participation of beneficiary families in the different phases of the operation and management of the infrastructure and social equipment projects, including their administration and financial auditing, provides an opportunity to establish new habits of control, reporting and joint responsibility of local governments with the communities. It also helps for an improved understanding of the role of the municipal

government and the real limitations of technical and financial resources that exist to address the problems of the poor;

- * Mobilising internal savings The substantive contributions by the communities in-kind, labour, and materials exceeded 10% of the direct costs of the infrastructure and community assets projects. In the case of housing improvements, this amount was sometimes even greater than 15%. This mobilisation of local and community resources also provided a positive incentive for the municipal governments to improve the tax collection processes in response to the programme requirements to come up with local matching funds. The resources mobilised over four years totalled US\$10.5 million, of which 53% represented contributions from the central government with the foreign-aid financing provided by Sida. The remaining 47% represented contributions from local governments, the communities and the user families in the development of the infrastructure projects and the community responsibility as reflected in the high levels of repayment of the loans, which were used to refinance new housing improvement solutions and micro-enterprises;
- * Reducing the costs of the projects The evidence suggests that for a certain type and complexity of project which have been financed, there can be a reduction by up to 20% in the costs of projects not exceeding a value of US\$50,000. These data result from a comparison of the costs of projects with and without community participation, and are due primarily to the contributions from the beneficiary families in the administration and supervision of the project, as well as their contributions in terms of skilled and unskilled labour;
- * Increasing social and gender equity The experience shows that community participation can help to direct the benefits of the projects and direct them toward the poor and vulnerable sectors of society. In the case of housing-improvement and micro-enterprise loans, the primary benefits have been poor sectors with certain capacity to repay their loans. The participatory methodology employed also facilitated the incorporation of women in access to the benefits of the projects and the loans. Some 70% of the participants in the decision-making and supervision processes for infrastructure and urban assets projects are women. In the case of the housing-improvement loans, 60% of the users are women, and up to 70% for the micro-enterprise loans;
- * Revitalising local economy In addition to making some 12,000 loans to finance some 2,400 micro-enterprises, the informal links established between the individual participatory initiatives for the improvement of the social infrastructure and family habitat have had a positive trickle-down effect on the local economy. In the area of housing improvements, for example, the self-help construction processes have revitalised and consolidated micro-enterprises which are active directly in the production of local construction materials. There has also been an increased utilisation of a greater number of skilled and unskilled workers who were unemployed in the areas where the programme operates. The participants in the infrastructure projects were also able to establish the economic link between the individual effort required in the construction and maintenance of the works of collective benefit, the improvement of the specific conditions of their family habitat and the future value of their houses;
- * Improving national reconciliation The changes in attitude and contributions generated among the principal participants have made the relationship between local governments and the communities more transparent. These relations are now based on incentives and the structuring of concrete alliances founded on tangible plans and solutions, and not merely on simple social demands and false promises and expectations. The methodology of participation used has also contributed to the transformation of a more favourable environment which facilitates communication between antagonistic groups, reduces political polarisation, and co-ordinates positive actions for the improvement of the living conditions in the neighbourhoods between groups which might appear to be politically and ideologically irreconcilable;

- Making programmes sustainable The system of incentives established for the contribution of national, municipal and community resources, as well as the involvement of beneficiary families in the management and administration of the project cycle, has created a solid basis for an increased commitment and division of responsibilities between participants. This facilitates the maintenance and sustainability of projects. This commitment has positive repercussions which strengthen the link between the durability of the physical project and the performance and operation of the service. Evidence also suggests that sustainability of social programmes can best be achieved when there is a clear division of labour between financial institutions and those organisations that give technical and social assistance. The fact that a Bank operates at the level of the community has also been a critical factor for achieving an important level of recovery. The revolving funds have rotated several times and levels of arrears and default rates are reasonable and allow achieving operative sustainability.

The following are some of the external factors, which facilitated the design, organisation, and implementation of the PRODEL participatory model:

- Non-partisan programmes In spite of the political changes which have occurred in the country in the last five years, authorities of the central government institution responsible for the promotion of the programme (INIFOM) and the local governments in turn (regardless of their political tendencies) have made it possible to create alliances and to utilise methodologies which provide incentives for participation of poor families, without any discrimination on the basis of political, ideological or religious factors. Evidently there has always been the temptation to make use of scarce resources for partisan purposes. If rules of the game between the funding agency and the recipient government regarding funds misuse are clear, the possibility of success is greater.
- Programmes with limited resources Experience shows that the lack of urban services and facilities in marginal neighbourhoods is not only a problem of a lack of financial resources. It also relates to the methods, which promote the involvement of communities in the processes of decision making and administration of the most important variables involved in the management of the project cycle. It is therefore important to make available, in a combined and simultaneous manner, a series of limited resources, which stimulate and provide incentives for contributions from communities. These incentives can be the introduction of urban infrastructure and facilities projects, and the possibility of individual household improvement in the form of the housing and micro-enterprise loans. By quantifying the real and positive contributions of participants (in terms of money, materials, and labour), the municipal governments gain an understanding of the importance of co-operating with and involving the communities. They enhance their legitimacy and mobilise real resources which gives the communities greater control and decision making authority over the use of the scarce tax and outside resources available to municipal governments.
- * Work with existing institutions In the case of PRODEL, it was important to identify and utilise the institutions at the local level which were closest to the demands and needs of the users of the services, and which could facilitate the process of community participation. The different actors were able to establish overall agreements and rules. Thus, local governments and a commercial bank (which is part of the national financial system) were able to promote different types of participatory solutions in the areas of the infrastructure, improvement of the housing stock and income generation. These activities obviously required a major effort in terms of training and the development of methodologies which made it possible for the municipal technicians to promote participation in established communities.
- * Streamlined and flexible mechanisms It is important to recognise that communities are heterogeneous groups of people in which there are potential beneficiaries for a series of diversified technical assistance and financial services. Participation in the introduction and upgrading of the urban infrastructure and services requires the communities to have more

information and a greater understanding of the principal technical, physical, social and financial variables which influence a construction project. At the same time, they must have rapid decision making mechanisms and access to resources. If not, the scepticism and mistrust that usually prevails in poor communities is not able to be broken.

- * Division of functions and responsibilities Important factors for the development of the Programme are the complementary nature of activities between the administrators and other parties involved in the Programme. PRODEL has been able to recognise their different corporate interests, the financial feasibility of the products and services offered, and an exact definition of what is expected from community participation in each component. Municipal governments try to involve communities to co-finance the projects and increase the life utility of the infrastructure and community assets. The commercial bank aims is to increase the commissions it will earn from managing the portfolio of housing improvement and micro-enterprise loans, and to accumulate capital for the rotating funds. In fact, the effectiveness of the relationship and co-ordination between the participants in the programme has been more effective when the sequence of the components of the programme has been discussed and planned with the community and its leaders.
- * Adequate social organisation of the community Many times in projects of this type, unrealistic expectations can be generated of what can be accomplished through community participation. Actions are based on models of community organisation which have very little to do with the requirements of the construction processes. When providing infrastructure in established communities, it is important to strengthen the participation and organisation of the beneficiaries by territorial divisions appropriate to the neighbourhoods. It is also important to promote processes of democratic election of representatives for each block to be able to do better technical work as a result of the administrative and physical design of the project. The different commission and committees formed must be in line with the complexity and nature of each project. These have been effective instruments the Programme has used to accomplish its physical and social goals.
- * Empowerment and technical assistance to the beneficiary families Community participation requires efforts to provide the families with new options, capacities and skills in different areas. These mainly relate to the identification and analysis of problems (micro-planning workshops), project planning (design, scheduling, budgeting), mobilization of internal and external resources, the specialized physical execution, the administration and supervision of the projects (inventories, audits etc.), the evaluation of projects (impact and efficiency in the use of the resources), and the maintenance of projects (cleaning campaigns, security and protection of the project constructed, and management of resources for preventive maintenance tasks).

Finally, it must be noted that in spite of its successes, PRODEL must be consolidated even further if it is to have a greater long-term impact. The first five years have been used to test various hypotheses concerning schemes of participation and administration on the local level in the context of Nicaragua.

The results obtained for the three components in eight different localities indicate that it is not simply a pilot project, and that community participation is a determining factor in the processes of introduction, improvement and maintenance of urban services and facilities.

The goal of the Programme for the next few years will consist of replicating the system in other municipalities. It will also demand improving the capabilities of the local participants, so that they can define and structure the permanent forums and spaces of negotiations, which will ensure the financial and institutional sustainability of the efforts to promote community participation in a socio-political environment that changes every four years.

It will also have to deal with the issue of its institutionalisation and to face difficult questions regarding the future of the Bank and the type of legal structure it needs to have for a longer-term perspective. Should it continue being a governmental programme or should it try to mix the nature of private and

public perspectives that will enable the programme to avoid the difficulties posed each year there are elections. How will it retain its staff that has been trained to promote community participation. These are some of the challenges the programme has to face in the near future.

Appendix No. 1

Functions, objectives and modalities of community participation in the infrastructure and community works projects components of the Local Development Programme (PRODEL)

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
Definition and selection of areas and communities for programme activities	Consultation and decision making processes at the municipal level	Participation of community representatives in the monthly meetings of PRODEL's Municipal Commissions (consisting of the Mayor, PRODEL's Local Coordinator, representatives of INIFOM and from State institutions which provide services such as electricity, potable water, health and education, and the Bank), in which the areas of activity of the programme and the beneficiary communities are defined. The Commissions follow up on the physical and financial progress of the implementation and rescheduling of the annual operative plan of the three components of the program (infrastructure and community facilities, housing-improvement loans and micro-enterprise loans).	<p>Formal and relatively passive for members of the Commission take legitimises the action by the municipalities. It also gives the residents the opportunity to become familiar with general development plans and to make decisions at central and municipal level.</p> <p>Municipal governments that work have begun to understand that through the formation of the commission preferences. In fact, the internal management on the basis of strict participation which is as polarised as Nicaragua on the basis of community participation requires rules, which are inclusive based on the needs of the majority.</p>
Identification and prioritisation of problems and possible solutions	Consultation, planning and decision making at the neighbourhood level	Participation in micro-planning workshops (at least 20 persons in each workshop). The community committees prepare the conditions for the workshop (identify the location, send invitations, arrange snacks). Participants identify and prioritise problems with representatives from the municipal government and from other state institutions (diagnostic phase); they prioritise, define and negotiate proposed solutions, including	Active and intensive on behalf of members of the community in through an opportunity for the community to identify their problems and the infrastructure which <u>can</u> be carried out on the basis of sequence, time, technical complexity and cost. The contributions from participants. The contributions from participants committed from the outset for the subsequent preventive maintenance have changed the manner in which

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
		<p>the potential project to be financed by PRODEL. Finally, they plan, negotiate and co-ordinate activities and counterpart contributions.</p> <p>In the case of housing-improvement projects, community organisations are used to promote the introduction of the loan component. Nevertheless, the consultation and technical assistance provided by the municipal government occurs at the level of individual families who are eligible for a loan. The Bank provides information on the characteristics of the loan and determines the maximum amount the families can borrow.</p>	<p>and economic infrastructure are shown that the preparation of municipal realisation of open meetings of the Political Constitution of Nicaragua more efficient mechanisms of participation strengthen democracy at the local level of the workshops legitimise government, and prevent the municipality from attempting to impose the type of projects and investments also increases the effectiveness of on real, co-ordinated demands in bureaucrats.</p> <p>The establishment of priorities for with the families to be benefited make it possible to incorporate elements of space, ventilation and the introduction and waste disposal services) into the co-ordination of priorities and Women play a key role in this experience problems and solutions.</p>
Design and formulation of projects	Development of local capabilities and efficiency in the management of projects	Based on the initial structure of the micro-planning workshop, a general assembly meeting is held. This meeting defines the responsibilities and commitments of PRODEL, the municipal government and the community in the execution of the project (definitions are made regarding community contributions among the various activities described in the budget, and this information is used to supplement the	Participation in the tasks of design the project is intensive at the level the rest of the community. The a community and its representative financial complexities involved in execution of infrastructure projects municipal government, is no longer demands in general. It becomes practical solutions to concrete problems the municipal government on its

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
		<p>project profile presented to PRODEL).</p> <p>In general, the project cost does not exceed US\$35,000, of which PRODEL covers US\$22,000, although there have been projects up to US\$50,000. The rest of the resources are local contributions (in materials, skilled and unskilled labour, administration and cash) from the community and the municipal government. As a general rule, the contributions must equal at least 35-40% of the total cost of the project.</p> <p>The Meeting elects a formal structure of seven persons from the community (the Community Project Committee), the specific functions of which are:</p> <ul style="list-style-type: none"> a) to review the budget and the design prepared by municipal technicians, in particular the general site characteristics and the dimensions of the projects; b) to co-ordinate the project management, to administer inventories, equipment and labour provided by the municipal government and by the community; c) to provide reports and explanations to the community on the progress of the project and the use of the budgeted funds; d) to participate in the physical and financial audit of the project conducted by 	<p>neighbourhood environment brokers helps municipal representatives which are generally encountered and infrastructure to established down the development of the project.</p> <p>The participation in the design is parks and recreational facilities. involving the introduction or expansion of electrification, sewage and water consultants must make a greater design and operation of the service.</p> <p>The process requires willingness government to empower citizens functions. Although naturally the decision-making authority, and the amount of social control, above the resources managed by the municipality.</p> <p>The tension that may be generated technicians and financial officers: that empowerment is a process, and not become actively involved in how to community representatives.</p> <p>In the case of housing improvements are not always able to follow up on can cause problems when it comes repair or upgrading projects.</p>

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
		<p>the municipal government and PRODEL;</p> <p>In the case of housing improvement loans, the technical assistance discuss the budget with the beneficiary, as well as the various alternatives and the costs of each solution.</p>	
<p>Organisation for the physical execution of the project</p>	<p>Development of capacities to manage and administer projects, and to promote community development</p>	<p>While PRODEL approves the project, the CPAC organises the rest of the community for the physical execution. Depending on the type and complexity of the project, the organisation can be by block or by individual house. The social worker from the municipal government trains the Committee in the management and administration of the warehouse and the methods to control the personnel who will work on the project. The members select the area of the depot, and in cases where the contributions are monetary, they begin the collection of the matching contributions from the members of the community.</p>	<p>This is a delicate phase. It requires on the part of the municipal government rapidity, and if the municipal government physical execution of the project may wane. The organisation of the project if the timetables of the financial government and the community required clear channels of communication of the complexity of administering communities in established neighbourhoods.</p> <p>This type of methodology increases only as the physical builders of the project as unskilled labour is provided by the community made in the incorporation of female administrative and supervisory tasks. The planning workshops is different: 50% are women. The same is true for 75% of the</p>
<p>Execution of the project</p>	<p>Contributions of resources, materials and labour, development of capabilities</p>	<p>The committee participates in the control of the inventory, the materials, tools and equipment, as well as the control of the skilled and unskilled labour. The community participates directly in the physical execution as unskilled labour,</p>	<p>Greater control of municipal resources and information provided by the municipal government available to the community shows that the resources used, which gives greater transparency to the government vis-à-vis its citizens.</p>

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
	and administration of the project	<p>depending on the type of project, either in the form of volunteer labour or as labour hired by the community itself for one-half of the salary of a construction labourer. The committee also looks for skilled labour within the community, which can work as volunteer or half-price labour. The general proposal for community participation depends on whether the project is public or private. In the case of the installation of indoor plumbing, the participation is individual. In schools, there is more hiring of skilled labour. In the construction of sewer systems, each family excavates the section in front of its house. For sewer systems, crews are organised which work weekly. Teams excavate sewage, trenches and manholes.</p> <p>The community can provide its contribution in different ways and at different times, depending on the organisation of the neighborhood. In some cases, the contributions are collected before the initial organisational step. In other cases, the funds are set aside as a guarantee and are deposited in a bank account.</p> <p>During the various phases of project execution, the financial contribution can be collected in various ways: quotas can be set for each house (depending on how close the house is to the improvement). Neither the municipal government nor PRODEL</p>	<p>The administration of a project results in decreased loss and was carried out directly by the municipal government through participation or under the terms of the companies hired through public contracts.</p> <p>Although the costs of projects carried out through community participation are not necessarily lower, the cost savings in some of the resources saved can be significant. In some cases, the cost of more extensive physical project participation, shared, is minimal.</p> <p>Comparative analyses of projects carried out through community participation show that the costs are lower than those carried out by private companies.</p> <p>On the other hand, the contracting process by municipal governments or state entities for community participation, compared to private tender offers, takes longer and higher costs means that the municipal governments themselves will not have any critical issues. The costs being described are realistic. At least in some cases, the costs are high, even if the costs of the traditional methods of bidding are reduced, which reduces the amount available for the project. Overall, the methodology of community participation eliminates many of these problems.</p>

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
		<p>intervenes in this process. The community also solicits funds and contributions from private companies and non-governmental organisations located in the neighbourhood.</p>	
<p>Conclusion of the project</p>	<p>Development of local capabilities, transparency and accountability in the use of outside resources</p>	<p>The committee and other members of the community participate in the conclusion of the project by preparing an inventory of items in the storage depot, and comparing their records with the municipal government's purchase receipts. In some cases, they also attend the physical and financial audit conducted by PRODEL with the municipal government, and also participate in the verification of the work performed. The committee and other members of the community participate in the evaluation of the project, analysing the experience, the degree of community organisation and participation achieved, and the quality of the project. Other needs are identified during this process which are less closely linked to the project (pipelines to the sewer constructed so that it works better, containment walls, additional works, street lighting projects etc., which have to do with the functional aspects of the project). In many cases, the surplus materials are resold, or the money in the municipal government account is used for these additional projects. A budget is prepared.</p> <p>The project is generally inaugurated using resources, which come almost exclusively</p>	<p>Community control is exercised administration in which the quality of the materials. What is considered to be purchased. In material left over, because the budget more than is required. They renegotiate the use of this surplus.</p> <p>The experience relative to prevention is recent, but it has already had a national scope such as those sponsored by the Investment Fund (FISE). Obvious in the payment of the services for electricity, as well as in preventing health centres, playgrounds, and</p> <p>Some of the bottlenecks relate to the project. On one hand, project participation of the families. Major family's contribution depends on municipal government's representation. Energetic, the community may not conflict between the way in which the way the community would like to solve internal conflicts in the neighbourhood problems and potential projects, committee. There are also at least</p>

Function of participation	Objective of participation	How communities participate	Modalities and results of participation
		from the community. The community prepares publicity, organises, collects and paints.	neighbourhood which do not want to represent obstacles to the project.
Operation and preventive maintenance of the services	Improving the services and making the projects sustainable	<p>The community participates in the preventive maintenance activities. It is supported in this activity by SILAIS to: perform diagnostic studies of neighbourhood sanitation, to define actions and to hold "cleanup campaigns" to remove waste, epidemiological investigations of each household, training in the operation of toilets and sewage, informal community meetings on maintaining a healthy household.</p> <p>The committees participate in these programs with the electric and water utility companies to identify community contributions, negotiate the connection of families to the utility, and maintain control over who is connected and who pays.</p>	The project leaves behind a community that can act, apply pressure and negotiate to ensure that the community is involved in the following year. The community ensures the quality of the project, and the unmet needs expressed in the micro-planning are addressed accordingly.

Annex No. 2

Comparison between levels of poverty in cities served by PRODEL and Managua, Nicaragua, and cities in El Salvador

City	Chronic Poverty (a)	Recent Poverty (b)	Borderline poor (c)	Non-poor (d)
León and Chinandega	58.9	13.0	16.3	11.9
Ocotal, Somoto and Estelí	60.3	11.6	19.4	8.6
Managua	40.4	14.1	17.4	28.2
Nicaragua	53.9	12.4	17.1	16.5
El Salvador	24.1	19.0	12.2	44.7

Notes:

(a) Households, which have more than one basic need unfulfilled and have income below the cost of a basic basket of food. These households have been in poverty for an extended period of time.

(b) Households, which have income between the cost of one and two basic baskets of food, but which are not critically lacking any basic necessities. They may be families, which have experienced a recent deterioration in income.

(c) Households with income, which is higher than the cost of two basic baskets of food, but with one or more basic needs unfulfilled. These households have achieved a very fragile economic stability. A slight increase in their income will bring little improvement to their situation, but a slight decrease would cause them to be reclassified as poor households.

(d) Households that have income that exceeds the cost of two baskets of food and no basic needs unfulfilled.

Source: Based on PRODEL (1997) "Documento de Proyecto para la Segunda Fase" [Phase 2 Project Document], and on Martínez Vega, Thelma and Joris Ghysels (1995) "El combate contra la pobreza un factor determinante ante el desarrollo" [Fighting poverty: a determining factor before development], NITLAPAN, UCA, Managua.